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Landscape Studies for Computer Games:
The Enclosure of the Valve Source Engine
Valve Source 引擎的藩籬 —
電腦遊戲風景研究

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ABSTRACT

Computer games are at the centre of academic and popular debates around technology, culture and society. Often characterised in popular discourse as a virtual experience that isolates players from the world, they appear to be separate from the 'natural' environment. Yet, computer games not only represent our relation to our surroundings, they can be studied as landscapes. Their spatial, traversal and explorative qualities raise questions similar to those that occupied art theorists in the 18th century, when oil painting became the archetypal landscape medium. Aesthetic forms such as the Romantic and the Picturesque indexed historical power structures, such as divisions across racial, economic and gender lines, as well as the geopolitical histories of enclosure and colonialism. As such, 'landscape' extends beyond its colloquial definition as 'nature', it is the lens through which the contemporary relation between the subject, the representation, and the world can be observed. While a number of studies make reference to these art-historical precedents, the contextual examination that they necessitate in art history does not often translate into a similar methodological effort in game studies. Drawing on landscape studies and game studies, this dissertation aims to amend this problem and establish a framework for analysing computer games as the paradigmatic contemporary form of landscape. Borrowing interdisciplinary insights from the field of 'landscape studies,' it defines landscapes as a historically contingent mediation of the physical environment in its economic and cultural context. However, it also argues that textual analysis alone cannot produce a landscape reading of a computer game. Using the methods of play-based phenomenological analysis, it pays equal attention to cultural meaning as it does to the experience of the player via the affordances of the medium – specifically, it singles out the Valve Source Engine, and four games created with it, as its chief case study. It is through this intersectional method that computer games reveal themselves as landscapes corresponding to the cultural logic of late capitalism and Web 2.0., not dissimilarly to how oil paintings unintentionally expressed the logic of colonial power.

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CHAPTER 1. INTRODUCTION

1.1 Motivations and contribution

The painting *Mr and Mrs Andrews* (Figure 1) by Thomas Gainsborough (c.1750) depicts a husband, wife and their dog posing in, or perhaps in front of a landscape. The painting was commissioned by the sitters to celebrate the agricultural productivity and wealth that furnished their marriage. Mr Andrews gazes at the viewer with a clear yet casual authority, reinforced by the rifle slung under his arm and the loyal attention of his hound. Mrs Andrews sits in a static pose underneath the tree, hands on her lap. In the 1970s, art historians such as John Berger challenged the formalism of leading lights such as Kenneth Clark (Clark 1949), who had previously stated that landscape paintings such as *Mr and Mrs Andrews* could be analysed according to the shared love of nature between the artist and their commissioning subject. Instead, influenced by Marxist materialism, Berger looked at the connection between the represented landscape and the painting itself as an index of property and ownership. (Berger 1972, 107) By analysing the painting as a commodity, Berger sought to redefine the intrinsic iconography of the image. Gainsborough's *Mr and Mrs Andrews*, along with much of English Picturesque landscape painting, was presented as an encapsulation of how modern capitalism transformed the social and physical structure of the environment. At the same time, feminist geographers such as Gillian Rose pointed out that Berger's material reading failed to recognise that it was only Mr Andrews who held title over the property and that the positioning of Mrs Andrews on the organic wrought iron bench, enveloped by the shade of the oak tree encoded her as the natural-feminine object, responsible for reproducing family inheritance (Rose 1993, 91-93).

The shift from formal aesthetic analysis to contextual readings was heavily influenced by cultural studies and the work of theorists such as Stuart Hall. It became common for landscape images to encode historical processes, and through the circulation and reproduction of their ways of seeing, reproduce and

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perpetuate these same processes (Hall 1980 [1973], 132). In 1994, historian Simon Schama described landscape as “a text on which generations write their recurring obsessions” (Schama 1995, 12). In doing so, he argued that landscapes would be better understood according to how they have been shaped by historical events, rather than simply according to the imposition of qualitative concepts such as ‘sublime nature’ (again in reference to Kenneth Clarke 1949). When writing about the dramatic landscape imagery of Thomas Cole’s *The Oxbow* (1836), Schama proposed that it encodes the historical process behind the American frontier and the desire to erase the trace of colonial dispossession, and replace it with an aesthetic Romantic tension between sublime nature and allusions to a biblical promised land (Schama 1995, 365-7). Philosopher Edward Casey arrives at a similar reading, albeit from a more phenomenological perspective, arguing that the formal features of this image, such as the combination of an Albertian “vanishing point” in the foreground with a Dutch “distant point” in the background encode the amalgam of perceptual influences that were unique to the development of American modernism (Casey 2002, 162).

I have recounted these two examples here in order to illustrate how the notion of landscape in art history reveals a fascinating bond between the physical environment, visual representation, and the historical context that shapes how representations are produced. In the previous two examples, the landscape encapsulates a relationship between the artist, the painting, the subject, and the historical events that have shaped the physical environment itself and how it is represented.

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Figure 1: *Mr and Mrs Andrews*. 1748. Thomas Gainsborough, oil on canvas, National Gallery, London.



Figure 2: *View from Mount Holyoke, Northampton, Massachusetts, after a Thunderstorm (The Oxbow)*. 1836. Thomas Cole, oil on canvas, The Metropolitan Museum of Art, New York.

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This type of art historical analysis was one of the initial inspirations for this dissertation. My initial undergraduate training was in fine art practice and art history, specialising in landscape painting, and my study of computer games is heavily indebted to my formative studies. Humanist geography and cultural studies positioned landscape as a concept for analysing both the physical environment and its representations, where the dynamic process of production and consumption of landscapes could be understood according to who is making a landscape, who is experiencing it, how it is being produced and experienced, and how the landscape and the individual exist in the world together becomes a signifier for contemporary relationships to the physical environment. The work of Raymond Williams (1958) was instrumental in grounding landscape studies in social, historical and economic processes, and the project of landscape hermeneutics is similarly indebted to Stuart Hall and the concept of media encoding and decoding. According to Hall, the cultural text, in this case, the landscape image or the computer game encodes and decodes significations specific to the socio-cultural context in which the work exists. At each point, these moments of signification can be characterised according to a 'dominant hegemonic position', a 'negotiated position' or an 'oppositional position' (Hall 1980 [1973], 136-8). Between my research into art history, geography and computer games, I was fascinated by the repeated references to concepts such as 'space', 'place', 'landscape' and 'representation'. What I seek to achieve in this dissertation is to build on existing research into computer games as landscapes, and to develop an approach, based on the congruencies of computer game studies and landscape studies, for analysing computer games as a paradigm media for contemporary landscape. Based on the congruency I observe between computer game studies and landscape studies, I hypothesise that if studied appropriately, computer games can reveal compelling landscape relationships.

1.2 Existing landscape studies for computer games

The desire to understand the intrinsic function of landscape within computer games, and the extrinsic significance of *how* computer games make landscapes

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has received an encouraging degree of attention within the field of computer game studies. My dissertation builds on a body of scholarship that has proposed computer games to be a medium of contemporary landscape. In this section, I introduce five examples of such scholarship. I describe how their approaches have influenced my research, and what areas I believe they have left unexplored. In Chapter 2 I give a comprehensive introduction to landscape studies, and in Chapter 3 I give a similar introduction to computer game studies. These chapters expand upon the examples of landscape studies for computer games that I discuss in this section and justify the approach I have developed for a landscape study of computer games.

The most comprehensive analysis of computer games from the perspective of landscape architecture is Bjarke Liboriussen's 2009 PhD thesis *The Mechanics of Place: Landscape and Architecture in Virtual Worlds*. (Liboriussen 2009) Liboriussen provides a schematic outline of key concepts such as the relationship between place and space, the phenomenological body as the locus of experience, and the process of cognitive mapping through which concepts such as landscape can emerge. Whilst his analysis focuses primarily on architectural theory, Liboriussen introduces landscape from a number of interesting directions and makes suggestions as to where this line of inquiry might be expanded for further research. He introduces the dichotomy of the naturalist landscape (landscape as environment) versus the culturalist landscape (landscape as image) as a means to orient the dual meanings of the term 'landscape' as both a physical environment and a representation. He argues that landscape, in environmental terms, can be conceptualised as the way in which "objects and agents are organised in space" and that the landscape image can be a cue to guide the user/viewer in decoding the logic of this organisation (Liboriussen 2009, 193). Following this, Liboriussen notes that the instrumental function of landscape representation can change in a game according to the priorities and experience of the player (Liboriussen 2009, 122-3). One of the most intriguing elements of Liboriussen's work was his use of architectural and landscape theory to deduce a notion of worldview (the principles that structure the game world) and ethos (the principles that guide player behaviour in the game world) (Liboriussen

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2009, 194). The point at which Liboriussen acknowledges that the dichotomies of the built and non-built environment, and between the landscape and image are blurred (Liboriussen 2009, 103) is where I locate my critique of his analysis and offer the contribution of my own research. Whilst Liboriussen deconstructs the notion of 'placelessness' in virtual worlds, he does not sufficiently deconstruct the notion of landscape as a layered historical construct, as one might expect in human geography and cultural studies. What I mean by this is that his discussions of landscape are largely intrinsic, and do not sufficiently engage with the problem that often appears within landscape phenomenology, that the contextual history of a place is often deliberately obscured by the logic of its representation. Put simply, whilst Liboriussen's approach of analysing landscapes in computer games is exemplary, it does not give a sufficient contextual analysis of how the landscapes of computer games exist in the world. Liboriussen identified landscape theory as a point that should be expanded in further research (Liboriussen 2009, 195) and I, therefore, contextualise my critique and my own research as a response to this invitation.

In his 2013 paper 'Games as Landscape', philosopher and game scholar C. Thi Nguyen argued that landscape theory should be thought of as a companion to the ludological study of computer game environments. Nguyen inserts a theory of landscape drawn from landscape architecture into the broader discussion of ludology and narratology, arguing that the ability of landscape architecture to construct environments that provide obstacles to human activity demonstrates the congruence of landscape theory for computer games. Whilst this comparison is undoubtedly true and has been explored at length by theorists such as Ernest W. Adams (Adams 2003), Michael Nitsche (Nitsche 2008) and Steffen P. Walz (Walz 2010), it is also a reductive application of landscape theory. Nguyen writes that "landscapes do not contain narratives; rather they are environments which encourage people to build their own narratives, and in that way, they are a very close kin to games." (Nguyen 2013) This is a more extreme version of the gap I identified in Liboriussen's research. The theoretical territory Liboriussen calls 'landscape as text' would suggest that landscapes certainly do have narratives, and are not simply a tabula rasa on which the individual can improvise a ludic

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narrative. As I will demonstrate in Chapter 2, landscape should be understood not only as the frame through which the physical environment is conceptualised but also as a historical record of how the physical environment has been changed and shaped by human activity. The landscape that is produced in representation and the landscape that is lived in, from the urban environment to the national park, as Williams and a host of geographers have shown, are shaped by generations of human activity, and as such can never be described as “without narrative”.

In his 2011 paper ‘The Pastoral and the Sublime in Elder Scrolls IV: Oblivion’, Paul Martin does a fine job of combining historical representations, such as the Burkean/Kantian sublime and Leo Marx’s account of pastoral Romanticism, with the parallel tradition of the 18th century English Picturesque (all of which will be discussed in Chapter 2). Martin uses a play-based analysis of the *Elder Scrolls IV: Oblivion* to draw a parallel between the sublime, the Romantic and the Picturesque, and the modes of landscape experience available to the player of the game. Like Liboriussen, he observes that the relationship between the player and the landscape changes according to their position and experience within the game. Martin writes “Tamriel, as a game environment, is not, as we have come to realize, the terrifyingly vast landscape promised in the game’s opening. It is, like Camoran’s paradise, merely a garden” (Martin 2011). As I introduced in the previous section, and elaborate on in Chapter 2, cultural studies, human geography and art history reveal the fascinating relationship between Romantic pastoralism and the Picturesque and the geopolitical circumstances in which they arose. In Chapter 2, I show how the relationship between Romanticism, industry and modernity, and the relationship between the Picturesque and property ownership are of profound importance for contemporary Western relationships with the physical environment. Martin’s reference to the aesthetic advice of Picturesque theorists such as Joseph Addison is indeed appropriate for the intrinsic experience of the mountain that reveals itself to the player an inaccessible game backdrop. However, without addressing the cultural and political significance of the Picturesque, any determination of ‘worldview’ will be characterised by a conspicuous absence.

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Daniel Vella's paper "The Wanderer in the Wilderness: Being in the virtual landscape in Minecraft and Proteus" (2013) used a phenomenology of being (after Heidegger) and of emplacement (after Husserl) to consider landscape-related concepts familiar to art history, such as the post-Kantian Romantic figure in the landscape and the Heideggerian conceptualisation of the physical environment as a 'standing reserve'. Vella provides an excellent rationale for how the player, the avatar and the virtual body relate to the experience of place, space and landscape in a computer game. His concluding remarks on the value of the phenomenological relationship between the player and the landscape are worth repeating in full:

This consideration of the relation between the player and the landscape in Minecraft and Proteus, then, points towards the possibility of founding a poetics of the medium upon a consideration of the mode of being-in-the-world in which the player is located. What such a poetics would bring to light as a fundamental aspect of games in virtual environments would therefore be the double movement we have described – one in which the game space is perceived as a meaningful world through its organization as the phenomenological sphere surrounding the player's subjective position, while, simultaneously, the player's subjective position, and the being-in-the-world through which it is defined, emerges in relation to this meaningful world in which the player is emplaced. (Vella 2013, 14)

The ability to study landscape via the emplaced player and their mode of being-in-the-world is a highly practical way to study computer games, and one that I am informed by in my own approach. However, this approach can result in extrinsic cultural comparisons that fail to consider broader historical relationships. Following Henri Lefebvre, I disagree with Vella's description of a new landscape as "undifferentiated space" (Vella 2013, 3). As I argue in Chapter 2, space is better understood as a conceptual product of spatial practice and engagement, rather than as a neutral or *a priori*. In both their aesthetics and their mechanics, the landscapes of Vella's case studies rely on a layered historical inheritance. When Vella makes the literary comparison between the 'standing

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reserve' landscape of *Minecraft* and the island in Daniel Defoe's *Robinson Crusoe* (1719), there are compelling historical parallels left unexplored. Principally, the re-instantiation of the hostile zombie NPC as the threat to the survival of the player can lead to a rich discussion of how this game builds upon the colonial Caribbean landscape tropes of the 18th century (as described by Gananath Obeyskere who writes about the representation of cannibalism in the Caribbean as an exaggeration deployed for the convenience of European colonisers) (2007, 96). Similarly, regarding the representation of Caribbean landscapes, Jill H. Casid describes how iconic elements such as royal palms and coconut palms were in fact transplanted to the Caribbean by European colonisers, and that the eroticised 18th-century vision of the Edenic island paradise was, in fact, another layer inscribed onto the layered text of landscape (2008, 182). All of this is simply to say that Vella's comparative juxtaposition of *Minecraft* and *Robinson Crusoe* leaves a number of compelling avenues unexplored, especially regarding a contextual analysis of how the landscape representation exists in the world.

Finally, Eric Hayot and Edward Wesp's analysis of the ludic geography of *EverQuest* in the paper "Towards a Critical Aesthetic of Virtual World Geographies" (2009) makes some interesting links between the ludic geography of *EverQuest* and how this might be understood as a landscape indicative of contemporary socio-cultural relationships. Hayot and Wesp argued that the Romantic fantasy landscape in *EverQuest*'s "Norrath" produces a "schizophrenic" contradiction that symbolises contemporary landscape relations. Its "nostalgic dream of medieval Europe" provides players with a representation of landscape that is both recognisable and desirable to inhabit, but this is contradicted by the "powerful fantasy of pure competition" that is characteristic of modernity. (Hayot and Wesp 2009) When the authors relate the intrinsic features of *EverQuest* to the socio-political context of the game as a cultural artefact, they are essentially filling the contextual gap of cultural studies that I identified in my previous examples. Hayot and Wesp examine how players experience the intrinsic features of a game landscape, how player behaviour influences the design (and geography) within the game, and how this process symbolises contemporary socio-political relationships – essentially re-instantiating Hall's

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description of hermeneutics as encoding and decoding. This examination of landscape according to both intrinsic experience and how the game and the player exist together in the world is exactly the type of contextual analysis that I believe should compliment the scholarship mentioned previously in this section.

Existing research on landscape studies for computer games has made good progress in outlining how the player exists in the game world and how this experience can be analysed according to phenomenological principles. As I demonstrate in Chapter 2, ongoing debates in landscape studies identify similar tensions, between a phenomenological approach that seeks to analyse landscape according to experience, and a cultural studies approach that seeks to contextualise this experience according to material and social factors. In Chapters 2 and 3, I will attempt to find a balance between the analysis of landscape experience and the cultural contexts by which this experience exists in the world. In doing so, I will argue that in order to realise the potential of studying computer games as landscape, a consideration of historical and material contexts that underpin a landscape representation are not only indispensable, but can shed light on the historical significance of a computer game in a broader socio-political context, in other words, how the player and the game exist together in the world.

1.3 Overview of my approach and case studies

In Chapter 2 of this dissertation, I give a review of landscape studies, from the fields of art history, geography and anthropology. I trace the departure from the formalist aesthetic analysis of landscapes typified by Kenneth Clark and E.H. Gombrich towards the Marxist materialist and feminist analysis of art historians such as John Berger and W. J. T. Mitchell and geographers such as Gillian Rose and David Harvey. I show how the influence of feminist geography leads to a focus on the body as the locus of experience, and a further dismantling of unilateral formalist perspectives on landscape. In particular, I examine how feminist and Marxist materialist approaches to landscape reveal the enduring

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importance of the concept of 'enclosure' and the conceptual division of Nature and Culture for landscape studies. I then examine the influence of philosopher Henri Lefebvre and human geographer Yi-Fu Tuan, and how a phenomenological approach to landscape can provide a practical approach to incorporating the primary experience of the body into the more cultural-studies based approaches of human geography. In particular, I look at the work of philosopher Edward Casey, anthropologist Christopher Tilley and art historian Jennifer Jane Marshall.

In Chapter 3, I give an overview of relevant concepts and approaches from the field of computer game studies. I introduce definitions of what constitutes a computer game based on the frameworks of Lars Konzack (2002), Jesper Juul (2003) and Espen Aarseth and Christian Elverdam (2007). I discuss computer game representation in reference to the dualism of rendered representations and game mechanics as well as Sara Mosberg-Iversen's work on the implied player versus situated subjectivity. I then consider how the instrumental rationality of design-based theories intersects with the subjective experience of the player (Sicart 2011) (Leino 2013) and how the extrinsic socio-economic and cultural relationships between the player, the game and the world can diversify statements of game representation (Galloway 2006) (Lammes 2007) (Bogost 2008). I then turn to areas in game studies that have a more specific relationship to the notion of landscape, such as Michael Nitsche's distinctions between notions of game spatiality compared to architectural spatiality and Olli Leino's (2015) distinction between virtual space and playable space. I derive my approach to game analysis from the methodologies of play-based developed by Konzack (Konzack 2002) and Aarseth (2003), and play-based phenomenology, namely Leino's concept of freedom, resistance and the gameplay condition (2009), Klevjer (2006), Peter Bayliss (2010) and Sara Mosberg Iversen's (2009) theories of the avatar as the primary representational affordance in first-person computer games.

At this point, I attempt to find a reasonable balance between these play-based methodologies, influenced by phenomenology, and the cultural studies narratives from Marxist and feminist geography, that situate gameplay

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experience within the extrinsic conditions that allow me to experience the game in the world. As shorthand for this, I often appropriate Juul's formulation of "the game, the player and the world" (Juul 2003). In addition to landscape narratives from cultural studies, I highlight the relevance of technology and enclosure (Cubitt 2017, the blurring of the concepts of work and play (Galloway 2006) (Pesce 2014) (Deterding 2014) and the relationship between computer game reward structures and neoliberal economics (Leino and Möring 2016). Due to the importance of computer game modding (Section 3.6.4) for my case studies, I pay particular attention to how scholars such as Tiziana Terranova (2000), Hector Postigo (2003), Julian Küchlich (2003), Hanna Wirman (2009), and Tom Apperley and Darshana Jayemanne (2012) have examined the distribution of labour and capital within the games industry. Much like the cultural factors that contextualise Picturesque and Romantic landscapes, I argue that these extrinsic structures are indispensable for forming a landscape reading of computer games.

In Chapter 4, I summarise the analytical approach that I use for my case studies, derived from the literature in Chapters 2 and 3. Chapter 4 establishes a language for discussing computer game representation and how a computer game can be analysed from a player perspective, and how the relationship between the player, the game and the world is an appropriate stance for building a landscape reading of computer games.

Chapters 5 through 8 comprise my case study analyses. In the abstract for this dissertation I pose the question, that if computer games are indeed a paradigm contemporary medium of landscape, what sort of relationships to the physical environment might they be representing? By applying my approach to these case studies, I seek to provide an answer to this question. The four case studies for this dissertation are computer games made using the Valve Source Engine. They are *Half-Life 2* (Valve Corporation, 2004), the *Counter-Strike* series (multiple developers from 2000 to the present), *Garry's Mod* (Facepunch Studios 2004) and a modification of *Counter-Strike* that I co-authored, entitled *Autosave: Redoubt*. Rather than examine a wide range of computer games that might be productively analysed as landscapes, I have selected to study the games of the

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Valve Source Engine in order to track longitudinal shifts in computer game representation, player conventions and broader socio-economic paradigms that become encoded in this technological medium. By analysing four computer games made using the same game engine over a period of ten years, I am able to explore a wide variety of landscape paradigms, unified by an evolving medium and an evolving aesthetic language. With the limitation of my case studies in mind, it would be fair to say that I am analysing only the Valve Source Engine as a paradigmatic medium of landscape. Whilst this is certainly true, I believe that the range of features and forms that I cover within this set of case studies will have relevance and applicability to a broader range of computer games.

In Chapter 5, I analyse *Half-Life 2* and consider how player experience in the single-player first-person shooter (FPS) environment can be correlated to the dual themes of alienation and the validation of the hero-protagonist as structuring factors in the landscape. I examine how the visual rendering of the landscape using photographic textures relates to broader paradigms in digital media, such as Lev Manovich's theory (2011) of the image database, Photoshop and representation as a remix. I then locate the material history of the Source Engine as deriving from proprietary licensing of the Quake Engine (Id Software 1996) to introduce the software iterations that contextualise how my case studies relate to one another, and how they exist as technological artefacts in the world.

I begin Chapter 6 by introducing the *Counter-Strike* series as one of the most enduring and commercially successful player-built modifications (mods) of *Half-Life 2* and the Valve Source Engine. I trace the transition of the game from a freely shared and community-tested mod to a licensed commercial product, and eventually to a professional e-Sport. I analyse how the experience of the player within the multiplayer FPS environment results in an entirely different landscape structure, and how the population of the game with a seemingly endless stream of amateur and professional game environments leads to a landscape reading more akin to tourism and sports geography than the romantic protagonist landscapes of *Half-Life 2*. I then conduct an extrinsic analysis of the

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socio-economic conditions that account for the relative longevity of *Counter-Strike* compared to other multiplayer computer games and show how the economies of eSports and weapon-skins trading comprise the patronage that supports these landscape representations.

In Chapter 6, I describe the process of making a landscape representation using *Counter-Strike* and the Valve Source Engine. *Autosave: Redoubt* is a recreation of a historical site in Hong Kong made as a playable *Counter-Strike* mod that I developed in collaboration with the artists Andrew Luk and Alexis Mailles. By making a site-specific landscape representation using the Valve Source Engine, I was able to understand certain biases and limit conditions inherent to this medium of representation, which then inform my overall analysis of the Valve Source Engine as a medium of landscape.

In Chapter 8, I examine how *Garry's Mod* collapses the process of modding and playing into a single activity, and in doing so, functions more like a platform for making and sharing games more than a game itself. By providing a real-time simulation for modding, *Garry's Mod* absorbed a ludological lexicon far beyond the scope of *Half-Life 2* and other Valve Source Engine games. I analyse the structure and content of *Garry's Mod* according to a number of cultural precedents, from the Spectacle (Debord) to the Postmodern (Jameson) to the Digimodern (Kirby). I analyse *Garry's Mod* as a sort of end-point in computer game design, where modding and playing collapse into a single activity, and the 'gameness' of computational entities is removed, thereby revealing the underlying representational structure of the medium itself. *Garry's Mod* becomes a sort of modular landscape that presents the world as seen through the Valve Source Engine. As my final case study, I examine how *Garry's Mod* reveals the representational logic of the Valve Source Engine, and how this atomised ludic language can be used as a tool of representation-as-play. By exploring how both the extrinsic ecosystem of modding interacts with a game system capable of continually absorbing new content from other games and popular culture, I use *Garry's Mod* to get to the heart of the type of landscape relationships that are encoded via the history of the Valve Source Engine, and I position *Garry's Mod*

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alongside other Web 2.0 platforms such as YouTube, as a sort of ludic auto-ethnography of contemporary cultural practice.

In Chapter 9, I summarise the key findings from my case studies and my analysis of the Valve Source Engine as a medium of landscape. I evaluate the efficacy of my approach relative to my stated desire to develop a language for discussing computer games as landscapes. I assess the significance of my findings and speculate on avenues of future research.

1.4 A note on the limited scope of my landscape analysis

Throughout this dissertation, the reader will notice that the landscape examples I draw upon come almost entirely from England, Europe, The United States and associated colonial territories. There are two reasons for this. The first is that the relationship between the game representations I am studying and the representational conventions they draw upon (following Jay Bolter and Richard Grusin's (2000) theory of remediation) suggests that the trajectory of visibility most applicable to my case studies is that which traces back from the subjective perspective of film, to the development of lens-based optics, and the particular objectification of landscape that was produced via the development of European landscape painting in the 17th century. The second reason follows the first, and relates to three of the nine landscape postulates developed by W. J. T. Mitchell:

1. Landscape is a medium found in all cultures
2. Landscape is a particular historical formation associated with European imperialism.

Theses 5 and 6 do not contradict one another. (Mitchell 1994, 5)

This will be expanded upon in Chapter 2, however, put simply, the particular form of objectification developed by Western landscape painting, and the historical narratives that contextualise this are the most relevant landscape narratives to apply to the forms I encounter in my case studies.

CHAPTER 2. LANDSCAPE STUDIES

This chapter introduces the corpus of landscape theory I draw from to generate my landscape reading of computer games. Landscape studies comprise the contributions of scholars from fields such as art history, geography, anthropology and cultural studies. In this chapter, I introduce the methodological debates most relevant to my study, which will contextualise how I approach my case studies. In Chapter 3, I give a similar overview of debates and methodologies from computer game studies. In Chapter 4, I give a summary condensation of Chapters 2 and 3 and describe how I use this research to make productive insights and links between landscape theory, computer game studies, and my case studies from the Valve Source Engine.

In 2006, art historians Rachel DeLue and James Elkins chaired the Landscape Theory seminar at University College Cork, and in 2008 Routledge published the transcript of this seminar along with position papers (DeLue and Elkins 2006). The repeating theme across the seminar discussions was the tension between a cultural studies approach to landscape and landscape phenomenology. In this chapter, I try to contextualise this debate and show how the transition from formalist theories of landscape to the deconstructions of Marxist materialism and feminist geography points to a type of analysis that seeks to balance the experience of the body with the social and material contexts in which this experience takes place. In the mid-20th century, Marxist materialism had a significant influence on fields such as art history and geography, where physical and represented landscapes came to be studied not just according their formal aesthetic properties, but for their ability to function as material indicators of historical events and power relationships. At the same time, feminist theory was deconstructing the position from which landscapes have been described and the claims to universality that various readings sought to achieve. The differentiation of material status, gender, access and power that these readings generated shifted landscape studies towards an engagement with how landscape is first experienced by the individual and by the body. It was not simply a matter of the

historical relationships encoded within the landscape, but who was experiencing it, and from what subjective affordances? As feminist and post-colonial studies decentred the assumed subjectivity of the white male, phenomenological geographers, philosophers and art historians turned to the relationship between the body, place and space as the locus by which a landscape could be analysed and understood, however as I have already suggested in the introduction, such approaches also risk a lack of contextual awareness. In this chapter, I introduce important milestones in how landscapes have been understood and outline the key narratives that I draw upon throughout my case studies and explain the theoretical context for how I analyse computer games as landscape.

2.1 “Landscape” as a word and a genre in European art history

The entry of the word ‘landscape’ into the English language is a common starting point for art historians writing about landscape painting (Schama 1995) (Marshall 2002). According to Schama, the German word “landschaft” originally signified a unit of human occupation that might make a pleasing subject for representation. This word entered the Dutch language as “landschap” and was used to refer to a painted representation of the physical environment, rather than the physical environment itself (Schama 1995, 10). Schama argues that the Western conception of the physical environment exists in a symbiotic relationship with the landscape image, and should be considered as a text that is constantly being reinscribed with the history of human inhabitation. He argues that understanding landscape images requires an acknowledgement that the concept of ‘nature’ is a human construction that can only exist as a counterpoint to its opposite – ‘civilisation’ (Schama 1995, 9). Similarly, according to Edward Casey, the German term ‘landschaft’ signified the meeting of the natural and the cultural, where buildings are situated amongst agricultural land, which in turn is positioned as a contrast to “wilderness”. Casey argues that the transition of the German term into the Dutch ‘landschap’ occurred at a time when nearly all proximal land had been in some way civilised, and therefore the term came to be used to refer to a site that would be represented by a painter or mapmaker. Anne

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Whiston Spirn incorporates the process of anthropocentric land-shaping more directly into her etymological reading, and highlights a connection to the Dutch word “landskab”, where “land” (the physical environment) was combined with “skabe” and “schaffen”, which mean “to shape”, and the suffixes –“-skab” and “-schaft” and “-ship” mean “in association or partnership”. Whiston Spirn writes “there is a notion, embedded in the original world, of a mutual shaping of people and place: people shape the land, and the land shapes the people” (DeLue and Elkins 2008, 92). Casey writes that the appearance of the term ‘landskip’ in 17th century English originally referred to decorative scenery painting, but as the genre of ‘landscape’ painting extended beyond the decorative, and beyond the genre of ‘history painting’, it took on a more profound function in place-making, and the encoding of cultural values (Casey 2002, 258-9).

There is a strong consilience among historians that the emergence of landscape as a primary subject matter in painting and the ascension of landscape as a popular genre in the 18th century correlates to the growth of agricultural portraits in 17th century Dutch and Flemish painting, however as I demonstrate in Section 2.3, this aesthetic exchange is also dependent on specific historical circumstances. (Fussell 1984, 10) (Daniels and Watkins 1994, 20) (Schama 1995, 10) (Macarthur 2007, 46) In the 17th century, the landscape in Dutch painting moved from the theatrical background to become the primary subject matter of the painting itself. (Macarthur 2007, 20) These Dutch paintings, dubbed ‘Landskips’ became popular collector’s items for English aristocrats. (Schama 1995, 10) The popularity of these works in England influenced the aesthetics of 18th-century garden design and painting. Art historian Mark Roskill also cites 17th-century French artists such as Claude Lorraine for expanding the dominance of the landscape in genre paintings and diminishing the role of human figures as an explication of a specific classical narrative (Roskill 1997, 74).

Overall, Roskill describes the emergence of landscape as a distinct genre in Western painting by contrasting how the physical environment was represented prior to the 17th century. Roskill writes that ancient Greek images placed trees, plants and rocks in between or behind the human figure to signify an outdoor

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environment, similar to the rotating triangular ‘periaktoi’ in Greek theatre, which contained multiple set images that could be rotated quickly in order to change the context of the drama (Roskill 1997, 14). Roskill argues that this representation of the physical world as a set of discrete objects affected Western image-making ever since, and correlated to the Aristotelian concept of matter as composed by distinct physical units and empty space as occupying the interstices (Roskill 1997, 14). Roskill writes that up until the late 16th century, the physical environment functioned in a painting as a “container or surround for actions and events” or as a symbolic representation of possible “worlds”, generally composed from the lexicon of Judeo-Christian or Ovidian symbols (Roskill 1997, 8).

From this overview of genre and etymology, it is clear that the development of “landscape” as both a word and a European artistic genre represented a particular historical relationship with the physical environment. It signified a process of anthropocentric quantification and transformation. Landscape functioned to objectify the world, and as a result, came to record the ways in which the physical environment was transformed by European habitation.

2.2 Formalist discourse in landscape theory

In this section, I introduce some of the most influential themes of Western landscape aesthetics and their key proponents, which I broadly generalise as “formalist theories” of landscape. In Section 2.3, I examine how Marxist and feminist scholarship deconstructed these formal aesthetic theories. The reason I am introducing landscape theory in this way is that similar formalist analyses of landscapes are commonly found in computer game studies. In my dissertation, I argue that such analyses are only meaningful if they are combined with a deconstruction of how such formal principals exist in the world, both historically and experientially. This connects to the broader approach I develop for computer game landscape studies.

2.2.1 The Picturesque and the Romantic

Two of the clearest examples of the relationship between formal aesthetic principles and landscape theories in European theory are the Picturesque and the Romantic. The theories of the Romantic and the Picturesque are situated within Immanuel Kant and Edmund Burke's theories of the sublime and the beautiful (Punter 1994, 226). In his 1767 text, *A Philosophical Enquiry Into The Origin Of Our Ideas Of The Sublime And The Beautiful*, Burke describes the aesthetic experience of the beautiful as opposed to the sublime in relation the human nervous system. According to Burke, beauty produces love and complacency by relaxing the nerves, whereas the sublime produces a form of shock, fear or astonishment, which tenses the nerves (Punter 1994, 220).

Romantic landscape paintings are commonly historicized in relationship to these theories. In the case of the Romantic painters such as Caspar David Friedrich, art historian Sabine Rewald argues that Friedrich's landscapes encoded his religious sentiments using the experiential event of the sublime (Rewald 2001, 36). The landscape was created as a sort of sensorial 'event' a visual confrontation with the treacherous Swiss Alps or the existential void of the blank ocean, which might provoke the nervous shock of the sublime. Art historian Beate Sonten describes the contents of the Romantic landscape as constituting vessel for the soul, one that seeks to constitute a reciprocal relationship between the viewer and the landscape, where the observing subject and the observed object are fused in a relationship dictated by Christian spirituality and the philosophical structures of the sublime. Sonten writes that "what is placed before our eyes in the landscape we observe is the potentiality of meaningfulness, a potentiality that extends from a landscape conceived as transcendental to the painting itself" (Sonten 2005, 77).

Historically concurrent but theoretically distinct from the Romantic is the theoretical construction of the Picturesque. Architectural historian John Macarthur writes that the Picturesque offered a secular rationalization of landscape as a relationship between of objects in perceived space, whereas

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Romantic artists were more concerned with religious or metaphysical experiences that could be projected onto the physical environment (Macarthur 2007, 50–51). Relative to Kant and Burke, the Picturesque was theorised as a middle category between the relaxed nerves of beauty and the tense astonishment of the sublime. According to 18th-century Picturesque theorist Sir Uvedale Price, Picturesque aesthetics leave the nerves in their neutral state and produce an aesthetic associated with the rough and the rustic (Macarthur 2007, 109). Another Picturesque theorist of the 18th century, William Gilpin, presented his landscape theory in the form of travel guides for how one should enjoy the physical environment according to the practice of outdoor sketching. By subdividing the physical environment into discrete elements such as mountains and lakes (background), valleys and woods (middle distance) and rocks, cascades, broken grounds, ruins, figures and animals (foreground), Gilpin provided a set of formal principals by which the aristocratic landowner could ‘improve’ their estate, and by which the tourist could structure their experience of landscape (Roskill 1997, 25). In 1794, Gilpin wrote, “we must ever recollect that nature is most defective in composition; and (it) must be a little assisted. Her ideas are too vast for Picturesque use, without the restraint of rules.” (Gilpin 1794) Gilpin, Price and the other Picturesque theorists such as Humphrey Repton and Horace Walpole were members of the British landowning aristocracy, and their philosophical landscape principals were subsequently critiqued according to the material circumstances from which they made them, as were the paintings associated with this period, such as those by Thomas Gainsborough (see Section 1) and Richard Wilson. In the mid-20th century, historians argued that these Romantic and Picturesque landscapes, and the theories with which they had been historicised, had relied on historical power relationships that had been excluded by an exclusive focus on the formal theoretical construct. In the next section I introduce critiques of this theoretical formalism, and in Section 2.3, I examine how Marxist and feminist geography challenged this reading of art history by deconstructing the context in which these landscapes were created.

2.3 Marxism, Feminism and the landscapes of geopolitics

When diagnosing the challenge for developing a landscape reading of computer games, I identified a tendency for some scholars to neglect the broader socio-economic context by which the player and the game exist together in the world. In the early 1970s, Marxist material analysis became instrumental in addressing a similar gap in landscape theory, by redefining landscape representations and physical environments according to the processes that had shaped them over time, thereby transforming them into signifiers of histories of power and ownership. At the same time, feminist scholarship was revealing that the status of the observer, relative to abstract concepts such as Cartesian space, typically relies on the erasure of subjectivities outside the assumed detached empiricism of the white male. It is within these shifts in scholarship that 'landscape studies' begins to emerge as an identifiable discipline, evidenced by the overlapping narratives that emerged from similar approaches being taken by geographers and art historians. In this section, I introduce a small number of key scholars and examine how the study of landscapes shifted away from formal aesthetic analyses, towards material and feminist critiques, congruent with broader trends in cultural studies.

2.3.1 The revision of space

In the early 1970s, geographer David Harvey used a Marxist analysis as a means to identify social inequality encoded in physical landscape and landscape images (Castree 2011). Harvey focuses on economic relationships and social processes in order to destabilise the notion that landscapes, both physical and represented, can be understood simply by formal relationships between objects in the neutral container of Cartesian space (as was espoused, for example by Gilpin, Section 2.1). Instead, Harvey argues that 'place' as experienced by the body, produces 'space' according to the material and historical position of the observer (Harvey 1973, 306).

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The Marxist revision of space not only challenged the notion of space as a neutral absolute container but also sought to contextualise Cartesian space as itself the result of material historical processes. In *The Production of Space* (1974) Lefebvre argues that the mathematic system of absolute space of Descartes and Spinoza obscures how space actually functions (Lefebvre 1991 [1974], 9). As an example of how Cartesian space is culturally constructed in the landscape, Lefebvre describes how perspectival representation partly derived from patterns in land ownership developed in Italian countryside during the 13th century. The *mêtayage* system of agriculture, where production was incentivised by redistributing a share of agricultural produce to *mêtayers* (former serfs) was introduced in order to meet the demand for produce coming from the increased population of town-dwellers. The local division of architectural space, from the houses of the *mêtayers* to the mansions of the landowners, and the delineation of rural properties using straight rows of cypress trees, created a particular rural space that lent itself to converging perspective lines and the Cartesian plotting of a landscape environment in two dimensions. Whilst this is only one of many contingent factors, Lefebvre argues that even the scientific invention of perspectival drawing cannot be disentangled from particular socio-economic relations within the landscape (Lefebvre 1991 [1974], 78). The following passage from Lefebvre summarises his argument for how a social space should be understood as a result of a contingent series of interactions:

A social space cannot be adequately accounted for either by nature (climate, site) or by its previous history. Nor does the growth of the forces of production give rise in any direct causal fashion to a particular space or a particular time. Mediations, and mediators have to be taken into consideration: the actions of groups, factors within knowledge, within ideology, or within the domain of representations. Social space contains a great diversity of objects, both natural and social, including the networks and pathways, which facilitate the exchange of material things and information. Such 'objects' are thus not only things but also relations. As objects, they possess discernible peculiarities, contour and form. Social labour transforms them, rearranging their positions within

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spatiotemporal configurations without necessarily affecting their materiality, their natural state (as in the case, for instance, of an island, gulf, river or mountain). (Lefebvre [1974], 77)

For Lefebvre, space is a political construction, borne out of the experience of individuals and their social practice. It is not a neutral Cartesian *res extensa*¹; it is the emergent fabric weaved from “the exchange of material things and information” (Lefebvre 1991 [1974], 77). Space is not the neutral interval between objects, it is the politically charged interval that results from social-spatial practice, and ultimately stems from the experience of the body.

Yi-Fu Tuan’s work in human geography made a similar case for space as a product of human experience and sought to position the body as the fundamental locus of this experience. In reference to the phenomenology of Maurice Merleau-Ponty, Tuan positioned the body as the anthropocentric locus around which spatial prepositions are developed (a book is on a table rather than a table being under a book due to the logical relationship both objects have with the human body) (Tuan 1974, 45) Tuan used this approach to argue that geography should be based on the shifting relationships that societies and individuals have to the notion of ‘place’ and how this shapes the political and social status of their spatial fabric. For example, Tuan describes how rectilinear architecture, whether as urban structures or the orthogonal division of rural properties correlates to the tendency of individuals to perceive shapes on a flat place, such as a parallelogram, or indeed a straight line as an extension into a hypothetical space (Tuan 1974, 76).

¹ In *The Production of Space*, Lefebvre criticises the notion of infinitely extendable abstract space implied by René Descartes’s concept of *res extensa*. In Descartes’ ontology, *res extensa* (translated as ‘extended thing’) exists in a binary opposition to *res cogitans*, which refers to consciousness or the non-physical mind, typically associated with dualist or idealist philosophy. (Lefebvre 1974, p.39)

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In *Feminism and Geography: The Limits of Geographical Knowledge* (1993), Gillian Rose points to a wealth of scholarship that undermines not only the formal theories of landscape that relied on abstractions of Cartesian space and the imposition of theoretical formulations such as 'sublime' and 'picturesque', but the totalising framework of Marxist scholarship that recast all landscapes in terms of material economic exchange and inequality. As an alternate deconstruction of formal aesthetic theories of landscape, Rose points to the work of Liz Bondi and Mona Domosh (1992), who argue that the subject position in geography, the 'detached explorer-observer' who produces "neutral truth untouched by the contexts in which they are produced" is simply a code for an exclusively white male subjectivity, evidenced both by the biographies of early 20th century geographers, as well as by their failure to consider how alternate positions of subjectivity would produce radically different readings of landscape. (Rose 1993, 7) Rose writes:

To generalize, they argue that what theorists of rationality after Descartes saw as defining rational knowledge was its independence from the social position of the knower. Masculinist rationality is a form of knowledge which assumes a knower who believes he can separate himself from his body, emotions, values, past and so on so that he and his thought are autonomous, context-free and objective. Many feminists see this desire for autonomy as typical of the master subject, but the assumption of an objectivity untainted by any particular social position allows this kind of rationality to claim itself as universal. (Rose 1993, 6-7)

By linking the deconstruction of the implicit male subject position in geography, to the removal of the body, Rose, like Tuan, re-inserts the body as a key factor for how landscapes exist as a material record of the human relationship with the physical environment. The perception of landscape as an abstract spatial relationship between objects not only requires the material ability to view the landscape with a form of detachment, as a Marxist approach might argue but also requires that one's body be considered neutral, a position typically only available to white men (Rose 1993, 6-7). As a simple example, Rose describes how the

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open space of an empty street can become an oppressive space when a sense of detached safety is replaced with feelings of threat or danger, to the point where space becomes “an enemy itself” (Rose 1993, 143). Such critiques then anyone who experiences space without the privilege of aesthetic detachment (this extends to vectors such as age, race, sexuality and social status) (Rose 1993, 30, 126). In place of a homogenous subject position, Rose argues that notions such as space, place, location, cartography and landscape should be characterised by what she calls “paradoxical space”, that which is “lived, experienced and felt” and produces “radically heterogeneous geometries” (Rose 1993, 140).

In the following two sections, I show how these critiques of space and the re-introduction of the body as a locus of analysis redefines the landscapes of the Picturesque and the Romantic. To remind the reader of my introductory critique, these deconstructions from cultural studies serve as an important example as to why it is crucial to contextualise the landscape of a computer game according to how the player and the game exist in the world.

2.3.2 The revision of the Picturesque

As mentioned in Section 1.1, Berger was notable for his use of Marxist materialism to challenge the formalist readings of landscapes that had previously dominated art historical literature. The analysis of landscape paintings, their patrons and the physical environment as being bound within a common commodity structure led to a productive re-evaluation of the aesthetic claims of the Picturesque and the Romantic. The materialist revision of the Picturesque recontextualised English landscape painting and the English countryside according to how the agricultural revolution and the enclosures of common lands altered the economic structure and the physical appearance of the English landscape. Agricultural historian G. E. Fussell describes how in 18th century England, food requirements from the growing population of London provoked what was later called the Agricultural Revolution, where new techniques for higher yielding crops were implemented *en masse* across rural England (Fussell

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1984, 58). The Enclosures Acts of the 1760s shifted production from smaller subsistence models (using common grazing areas) to larger estates that could systematically implement the more productive farming techniques. (Fussell 1984, 15) The result of these changes was the consolidation of land ownership by the rural aristocracy, who transformed subsistence farmers into their waged employees in the new agricultural industry (Fussell 1984, 15) (Copley 1994, 50) (Modiano 1994, 208) (Roskill 1997, 92) (Macarthur 2007, 7). This consolidation of land ownership led to the creation of vast private gardens that enacted in large-scale alterations of topography, from the creation of lakes and hills to the construction of fabricated ruins (or follies), all designed according to the aesthetic principles espoused by Picturesque theorists such as William Gilpin and Sir Uvedale Price. One of the more telling architectural features of these gardens was what was known as the 'ha-ha' – an earthen ditch that prevented livestock from leaving a property, but also visually obscured the property boundary from the perspective of the landowner (due to parallax, the ditch was invisible from one side, giving the landowner the visual impression of a boundless territory) (Fussell 1984, 16) (Schama 1995, 539). Fussell presents the Picturesque as a sort of circular aesthetic process, whereby the construction of gardens was influenced by the aesthetic of Dutch and Flemish landscape paintings, and as Picturesque paintings were often commissioned by the aristocracy as portraits of their gardens, the Picturesque completed the circuit from painting to garden and back to painting (Fussell 1984, 43). According to literary theorist David Punter, the Picturesque creates a landscape where “nature can be denaturalized, subjected to the framing and shuttering effect of the ego” (Punter 1994, 228). Looking more broadly at the genre of landscape, Macarthur writes that the process of assimilating a physical environment into the Western conception of landscape automatically implies a sense of property, because it requires the viewer to identify oneself as separate from what they are perceiving (rather than being engulfed, surrounded or part of it). This conception of landscape is inseparable from the process of image making, and image making implies commodification (Macarthur 2007, 195).

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The materialist revision of the Picturesque contextualised Picturesque aesthetics within the socio-economic power relations in which these theories were written. Whilst the landscape paintings of Thomas Gainsborough and the garden of *Mr and Mrs Andrews* (Figure 1) might be understood relative to William Gilpin's landscape aesthetics, these landscapes were only possible due to the upward redistribution of wealth that resulted from the Enclosures Acts. Furthermore, it can be argued that the creation of these aesthetic theories was motivated by an attempt to 'naturalise' the inequality that the Enclosures Acts produced. Comparative literature scholar Raimonda Modiano writes: [there was] "no way of ignoring the fact that the major aestheticians of the Picturesque were wealthy landowners and that their ability to reserve vast amounts of land for the enjoyment of the Picturesque views was made possible by the profits they drew from enclosures" (Modiano 1994, 208). As a further deconstruction of *Mr and Mrs Andrews*, Rose points out that it would only have been Mr Andrews who had ownership over the landscape depicted. As mentioned previously in Section 1.1, these material readings are further deconstructed when one considers the diversity of subject positions outside the white male perspective (Rose 1993, 91-3).

To return to the formalist language of Gilpin and his colleagues, it is clear that Picturesque aesthetics were only intended for a specific audience – those of the gender and status to own and control land, with the surplus wealth required to enact such aesthetic modifications and commission artworks. The Marxist and feminist revisions of the Picturesque landscape does not obviate their aesthetic principles, it simply tethers them to their contingent historical context. In the introduction to this dissertation, I argued that if the Picturesque or the Romantic is to be cited in a formal landscape analysis, these contingent historical contexts should be taken into account. In the next section, I illustrate how Romantic landscapes underwent a similar materialist revision.

2.3.3 The revision of the Romantic

The religious and historical context of Romantic landscape painting is contingent on the ways in which Romantic aesthetics appeared in different iterations around the world. Art historian Timothy Mitchell argues that the development of German Romantic theory cannot be separated from nationalistic intentions specific to the time. Whilst Philip Otto Runge's writings are mainly concerned with shifts in the spiritual landscape of the 18th century, Mitchell argues that the context of German Romanticism also derives from the French Revolution's confrontation of state institutions and the rights of man, Enlightenment shifts that challenged faith with reason and Isaac Newton's proposition of a mechanistic universe (T. F. Mitchell 1977, 79-80). Mitchell argues that the desire of artists such as Runge and Caspar David Friedrich to develop the genre of landscape painting into a spiritual language divorced from codified religious orthodoxies should also be understood in the context of a world that was becoming increasingly quantified in rational terms, and one where traditional religious symbols had to adapt to various projects of empirical inquiry. Mitchell argues that for Friedrich in particular, his work was inseparable from its nationalistic intent, which is why it was so easily absorbed into nationalistic movements, such as the Nazi party's adoption of Friedrich's landscapes as "true Germanic art" (T. F. Mitchell 1977, 9).

When studying the influence of Romanticism on artists working in colonial territories such as California and in particular the Yosemite Valley, Rebecca Solnit argues that a combination of Arcadian sentiment and burgeoning nationalism are vital for understanding how landscape imagery played a role in redefining a conquered foreign territory as a site for the projection of the British Protestant imagination. Solnit describes the rapid speed with which the Yosemite Valley was transformed from an Indigenous stronghold, to a battleground and then into a tourist spectacle characterised by Arcadian and the Utopian themes. The latter, based on Thomas Moore's neologism, projected an idealised American future onto this Californian landscape, whereas the former,

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characterised by Virgil and Plato's lost paradise, projected a nostalgic melancholy for unspoilt nature. Solnit writes:

The citizens of the United States had laboured under a mighty inferiority complex when they looked back at Europe. The European landscape was given meaning by the long history that could be read in its names and ruins and monuments. The American landscape lacked all that to its newcomers. Over the decades, a new Yankee credo arose, in which the landmarks of Europe were evidence that the place was weary, spent, used, soiled almost; the supposed newness of the U.S. demonstrated that it was fresh, young, pure, a child of promise with its history all laid out before it, a tabula rasa on which a heroic history would be inscribed. (Solnit 1994, 116-117)

Solnit continues:

The United States of America has, ever since this strange upwelling of nationalistic optimism, been distinguished by its amnesias, its sense of prodigious destiny, its looking ever forward and never back – and its frenzied transformation of landscape into real estate. (Solnit 1994, 117)

In the paintings of Albert Bierstadt (Figure 3) the photographs of Carleton Watkins (Figure 4) and *The Course of Empire* series by Thomas Cole, Solnit identifies a projection of primeval wilderness and the melancholy of a paradise lost. In works more typical of Cole's oeuvre, such as *The Oxbow* (Figure 2) and in *Walking* by Henry David Thoreau (published in 1862), Solnit identifies the Utopian optimism of a perfectible American future made possible by the promised land of the New World. Solnit charges both Arcadian and Utopian visions as suffering the same form of amnesia, characterised by the desire to naturalise the ongoing oppression of Indigenous people and to remythologise the landscape according to variants of Romantic projection. By characterising the indigenous Ahwahneechee people as extinct via disease, warfare or miscegenation, they could be silently mourned and absorbed into the burgeoning

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mythology of the landscape, whilst the region itself could be converted into a tourist spectacle for the project of American modernity (Solnit 1994, 258). The dispossession of indigenous people allowed the Yosemite Valley to become a symbol of unspoilt nature in the United States, whilst the California Gold Rush was rapidly excavating the nearby Sierra Nevada landscape. Within decades of Yosemite being opened up as a tourist destination, the 'unspoilt wilderness' began to unexpectedly change. With the interruption of the Ahwahneechee fire-farming regime, the Edenic meadows become overgrown. By the 1960s, the giant sequoias had stopped regenerating because they too had relied on regular fire to clear the underbrush, heat the pinecones and fertilise the soil (Solnit 1994, 280).



Figure 3: *Yosemite Valley, Yosemite Park*. c. 1868. Albert Bierstadt, oil on canvas, Oakland Museum, California.

What Solnit describes in the history of the Yosemite Valley demonstrates that just as Picturesque was instrumental in naturalising property relations in Britain, Romanticism has a strong connection to a similar function in colonial landscapes.

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Almost thirty years after Solnit's research, Bill Gammage's *The Biggest Estate On Earth* similarly catalogues how the Australian landscape, prior to the British invasion, was shaped by a complex regime of controlled burning by Indigenous people (Gammage 2011). Like Solnit, Gammage uses this history to point out that present-day national parks in Australia, much like Yosemite, are very different landscapes compared to when they existed under Indigenous management. In both Australia and North America, concepts such as 'wilderness' must be understood as a European projection that requires the erasure of the history of indigenous land management, and the recognition that the landscapes painted by colonial settlers often depicted the results of indigenous land management practices, not Edenic promised lands.

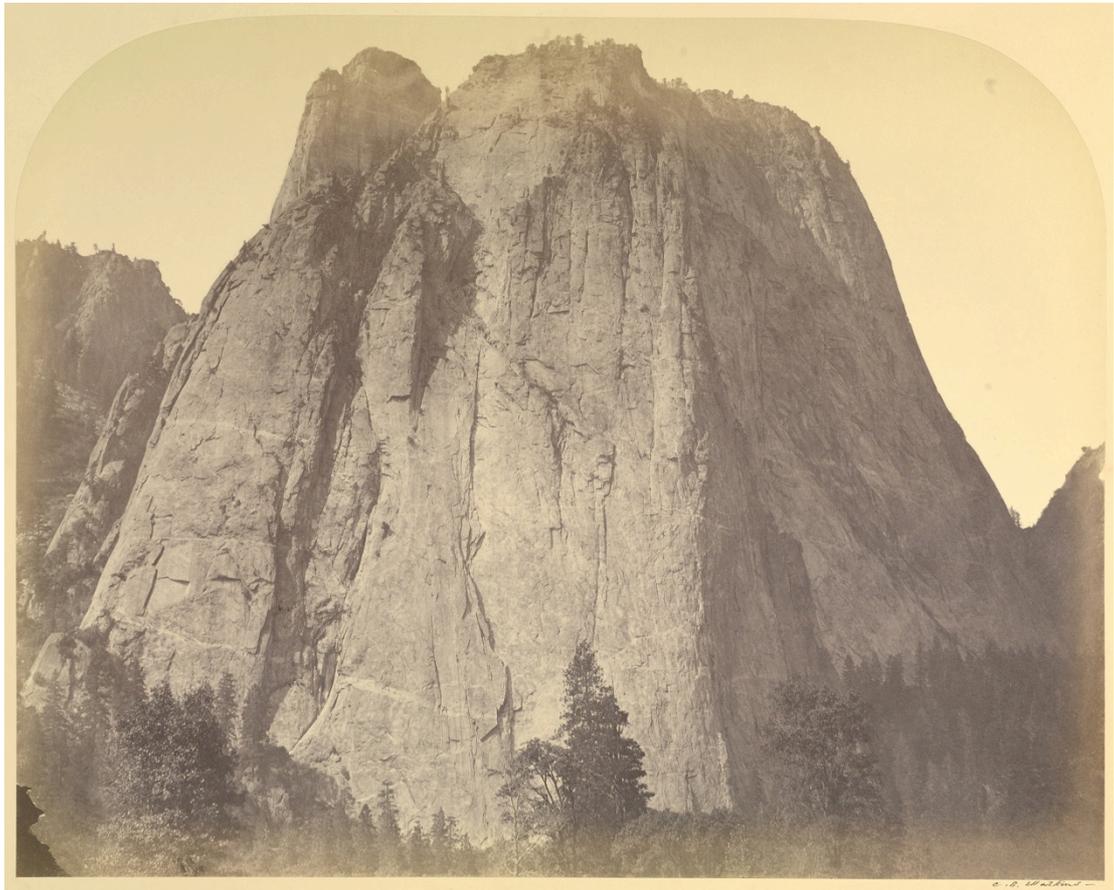


Figure 4: *Cathedral Rock, Yosemite.* 1861. Carleton Watkins, mammoth plate photograph, Huntington Library, San Marino, California.

In the next section, I briefly demonstrate how the objectification of landscape under the Picturesque and the Romantic exert a significant influence on patterns

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in contemporary tourism, which in turn will contribute to how I theorise the landscape experience within my case studies.

2.3.4 Prospect, refuge and militaristic landscapes

Given that I have been discussing how landscape experience produces a particular kind of 'space', it is worth mentioning two influential and related theories that present landscape through an instrumental biological or militaristic experience. These theories, whilst relying on slightly different criteria to those of the Marxist and feminist scholars previously mentioned, later become useful when I describe the particular types of experiences produced in my case study computer games.

Jay Appleton's 1975 book *The Experience of Landscape* used John Dewey's philosophy of aesthetic experience to derive what he termed the 'habitat' and 'prospect-refuge' theories of landscape experience. Habitat theory states that the aesthetic enjoyment of a landscape derives from the perceived potential for an environment to secure and sustain the observer. The prospect-refuge theory states that aesthetic enjoyment of a landscape derives from the perceived ability to safely survey an environment without being seen yourself. According to Appleton, landscape elements can be encoded with remnants of these biological qualities, which collectively contribute to the aesthetic experience of a particular landscape (Appleton 1975, 63).

Appleton's focus on a sort of survival-based instrumentality can also be seen in the work of philosopher Paul Virilio. Influenced by Merleau Ponty's phenomenology, Virilio developed a theory of landscape-based around war and the military gaze. In *War and Cinema: The Logistics of Vision* (1989) and *The Vision Machine* (1994), Virilio outlined a theory of landscape-based around spatial dominance, the line of sight, and a theory of military optics that linked modernist architecture to technologies such as the lens, the camera and the moving image. In contrast to Marxist materialist accounts of landscape as value

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and commodity, Virilio focused on speed and the 'war machine' as the dominant force in the landscape, towards which production, the market and the state are subservient (Virilio 1994, 3).

In Section 2.4, I return to the question of phenomenology and the body and introduce how I incorporate the landscape as experienced into my overall framework for analysing computer games. However in the next section, I make one more digression into a landscape narrative that will later appear throughout my case studies, that is the relationship between landscape and tourism.

2.3.5 Landscape and tourism

As I mentioned in section 2.2.1, 18th-century texts on Picturesque theory often took the form of travel guides and of tourist literature, designed to advise middle-class travellers on how to aesthetically appreciate and consume the British landscape. The agricultural and industrial revolutions brought about a greater contrast between the city and the countryside, and during this period, formalised how landscape was to be experienced and valued as an aesthetic object. Historian Stephen Copley writes:

London, as the city, and as the seat of luxury, corruption and contamination, serves as the antitype to the rural ideas discovered and celebrated in the Lakes District, and makes explicit the terms within which the earlier descriptions of that region have been articulated. (Copley 1994, 52)

In a similar way, historian Robert Rosenblum describes the emergence of Romanticism in the visual arts in the 1760s and 1770s from Ireland to Switzerland as being linked to the increased accessibility of mountainous regions for tourists, which allowed artists quicker and easier travel for solace, divine revelation and the pursuit of the sublime (Rosenblum 1975, 17). It, therefore, follows that tourism played a significant role in the history of the Yosemite

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Valley as told by Solnit. Whilst much of the Californian landscape had been transformed by industry, the Yosemite Valley was spared, as a pocket of pristine wilderness to be consumed as a tourist spectacle, contextualised within a new American pastoralism that labelled it a promised land and a relic of the Golden Age. In Chapter 5, I return to the objectification of landscape via tourism in more detail and explore how this relates to the typology of environments recreated in popular game environments within *Counter-Strike*.

2.3.6 Landscape and enclosure

The Enclosures Acts of the 1760s had a dramatic influence over the socio-economic relationships of rural England, however, the more abstract capitalist division between a commons and proprietary boundaries has seen the notion of 'enclosure' take on a much broader significance in media and cultural studies. As I develop my analysis of the Valve Source Engine, I will repeatedly return to the notion of enclosure to describe the relationship between players, modders and developers, as well as how the engine exists as an expanded visual and ludic lexicon.

In his 2017 book *Finite Media: Environmental Implications of Digital Technologies*, Sean Cubitt uses a Marxist cultural studies framework to contextualise contemporary landscape in relation to digital technology. Using a similar logic to Mitchell's landscape that "naturalises its conventions and conventionalises its nature", Cubitt argues that landscape conceals its materiality from the perceiving subject and that contemporary landscapes are defined by a hidden chain of resource dependency based on the enclosure of land, labour and data. In a way, Cubitt is reiterating Mitchell's point that landscape is the language of European imperialism by extending this logic to the 'enclosure' of globalised capitalism.

Cubitt begins with the existing argument that the enclosure of public land in the 17th century defined the modern capitalist relationship to the physical environment. He then argues that the environmental degradation brought about

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by resource extraction, industrial waste and atmospheric emissions can still be understood using the metaphor of enclosure (Cubitt 2017, 8). By differentiating, or “enclosing” the physical environment into that which is fit for resource extraction, and that which is aestheticized as nature or wilderness, Cubitt argues that, much like the Picturesque garden that sought to naturalise inequalities in land ownership, contemporary capitalism encloses consumable commodities and conceals the landscape externalities of despoliation and waste resulting from their production (Cubitt 2017, 118). For Cubitt, the Enclosures Acts of the 1760s are a template for the pattern of enclosed commodities and externalised waste, whether it be the despoliation from rare-earth mineral extraction that computer chips depend on, of the enclosure of End User Licence Agreements that enclose the data (and revenue streams) streams of Web 2.0 platforms from the labour of their users and producers. Cubitt writes:

Land enclosures turned farmers into agricultural labourers; industrial enclosures turned artisans into workers. The new change is so recent we have yet to find our terminology, but we might say that it is changing knowing creatures into “prosumers” of knowledge: people who both produce and consume it in relations no longer of shared information but of data exchange, and therefore mediated by exchange value. What is clear is that today knowledge is no longer something held as common sense between people, as familiar as a hammer in the hand once was. Knowledge has become an environment confronting us as something apart: alien and inhuman, even anti-human. (Cubitt 2017, 162)

For Cubitt, these contemporary enclosures are extensions of the enclosures of the Agricultural Revolution. If Mitchell describes the landscape process an exhausted medium, Cubitt argues that this exhaustion might only cease with the collapse of our planetary ecosystem, when the physical environment, plants, animals and humans have all been enclosed as externalities (Cubitt 2017, 5). By contextualising landscapes alongside these material affordances, Cubitt brings into question the broader relationship between capitalism, environmental degradation and anthropogenic climate change. When it comes to

representations of landscape in computer games, Cubitt argues that virtual worlds are upheld by their dependence on supply chains of resource extraction, as well as on the labour practices that go into their production (Cubitt 2017, 158). This is entirely consistent with my reading of Picturesque and Romantic landscapes as relying on material patterns of extraction, consumption and production. As an extension of this logic, in Section 3.6, I give a more detailed account of the relationship between computer games and their patterns of production.

2.3.7 Landscape, Nature and Culture

The extended use of 'enclosure' also destabilises concepts such as 'wilderness' and also brings into question other conceptual boundaries associated with landscape studies, such as the division between nature and culture. The conceptual dualism in the Western cultural imagination, between Nature and Culture, is, like enclosure, an important structure to consider for discussions of landscape. In *Topophilia*, Tuan writes that the European concept of 'wilderness' has shifted dramatically over time, from a signifier of chaos and the realm of demons during the Classical period, to representing the romanticised Arcadia that is more familiar to industrial modernity. Tuan writes:

Images are reversed so that the wilderness stands for order (ecological order) and freedom whereas the central city is chaotic, a jungle ruled by social outcasts. Suburb, once perceived as the place for paupers and obnoxious trades has now greater prestige than the decaying city core. Time-honoured meanings of "core" and "periphery," "center" and "margin" are reversed. (Tuan 1974, 248)

In Rose's review of feminist geography, she points to a litany of scholarship showing how the Nature/Culture dualism is also inseparable from discussions of gender. The association of 'nature' with the feminine, of women being closer to nature due to their child-bearing capabilities, and of women with the

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“tempestuous and uncontrollable wild Nature of storms” sets up a binary between the rational male Culture, and the irrational female Nature that pervades the Western imagination of the physical environment (Rose 1993, 68-9). Rose writes:

Knowledge, the social, the theoretical - all these are associated with the masculine and with the cultural and the scientific, the work of Man. The bodily, the specific, the private, the relational - these are feminine and are associated more with the natural, separate from Man. (Rose 1993, 74)

Therefore the characterisation of narratives of exploration and colonisation in terms of the conquest of nature should be read not only as a cypher for commodification and dispossession but as an inherently gendered stance to how humans relate to the physical environment. Whilst this is an extremely brief summary of much more wide-ranging critiques of the Nature/Culture binary, they are enough to flag that at the very least this dualism should be problematized, and perhaps more realistically for scholarship, it should be *denaturalised*.

Anthropologist Philippe Descola gives an in-depth analysis of the Western nature/culture dualism, situating it alongside animism, totemism as ontologically distinct sets, rather than epistemological systems of knowledge. Whilst this field of study, referred to as the ‘ontological turn’ is outside the scope of this dissertation, Descola’s analysis provides a useful overview of the Nature/Culture dualism, and how it relates to enclosure, globalisation and landscape.

Descola argues that the spatial representations of landscape most familiar to modernist aesthetics correlate to the spatial organisation derived from Leon Battista Alberti’s 15th-century writings on linear perspective, and the simultaneous exaggeration of the boundaries between dense areas of human inhabitation and uninhabited wilderness that accelerated in the centuries leading up to the industrial revolution (Descola 2013, 39). Descola connects the

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geometric objectification of the world to the optical developments in telescopes and microscopes that formed a constellation of measures aimed at systematising and rationalising the knowable world, which extended to European exploration, cartography and colonization (Descola 2013, 40-41). It was during this period, Descola argues, that Enlightenment theory combined with changing patterns of land ownership, agriculture, and ultimately the Industrial Revolution to produce a sharp distinction between culture and nature, which constitutes the philosophical underpinning of most discussions of landscape in Western art history. The Copernican revolution, the Cartesian rationalisation of space and the development of lens-based optics led to a privileging of the visual, and projection of these concepts both conceptually and geopolitically via European colonialism. Of this process, Descola writes:

Nature, now dumb, odour-free, and intangible, had been left devoid of life. Gentle Mother Nature was forgotten, and Nature, the cruel stepmother had disappeared; all that remained was a ventriloquist's dummy, of which man could make himself, as it were, the lord and master. (Descola 2013, 41)

Descola's account of nature and its objectification compliment what I have already described in cultural studies accounts of landscape. When Macarthur described the relationship between the Picturesque and property, he described the compositional schema of Western landscape painting, such as the division of the image into the parallel thirds of water, mountains and distant horizons, as a manifestation of "aesthetics of ownership" (Macarthur 2007, 197). Similarly, outside the objectification of nature as an enclosed commodity, Cubitt argues that nature can only be experienced either through a fantasy of "pantheistic integration" or by an invented nostalgia for "an impossible return to the formless state of nature" (2017, 28) (essentially the same categories of the Utopian and the Arcadian identified by Rebecca Solnit, and recounted in Section 2.3.3).

2.3.8 Marxist and Feminist definitions of landscape

Due to the profound shifts brought about by Marxist, feminist and human geographies in how landscapes are understood, it is understandable that definitions of landscape from a cultural studies perspective focus on the processes of encoding shifts in historical power relationships. In 1984, geographer Dennis Cosgrove, in his book *Social Formation and Symbolic Landscape*, gave the following definition of landscape:

“Landscape represents a way of seeing – a way in which some Europeans have represented to themselves and to others the world about them and their relationships with it, and through which they have commented on social relations. Landscape is a way of seeing that has its own history, but a history that can be understood only as a part of a wider history of economy and society; that has its own assumptions and consequences, but assumptions and consequences whose origins and implications extend well beyond the use and perception of the land...” (Cosgrove 1998, xiv)

In 1994, art historian W. J. T. Mitchell offered the following nine-point definition of landscape that, like Cosgrove, draws heavily on material relations and the history of imperialism. Mitchell writes:

1. Landscape is not a genre of art but a medium
2. Landscape is a medium of exchange between the human and the natural, the self and the other. As such, it is like money: good for nothing in itself, but expressive of a potentially limitless reserve of value.
3. Like money, landscape is a social hieroglyph that conceals the actual basis of its value. It does so by naturalising its conventions and conventionalising its nature.
4. Landscape is a natural scene mediated by culture. It is both a represented and a presented space, both a signifier and a signified, both a frame and what a frame contains, both a real place and its simulacrum, both a package and the commodity inside a package.

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5. Landscape is a medium found in all cultures
 6. Landscape is a particular historical formation associated with European imperialism.
 7. Theses 5 and 6 do not contradict one another.
 8. Landscape is an exhausted medium, no longer viable as a mode of artistic expression. Like life, landscape is boring, we must not say so.
 9. The landscape referred to in Thesis 8 is the same as that of Thesis 6.
- (W. J. T. Mitchell 1994, 5)

I have included both of these definitions in full because they encapsulate the best and worst of what the materialist model of landscape analysis has to offer. Both argue that landscape should be understood more broadly than just an aesthetic a representation of the physical environment.

At their best, by describing landscape as both the signifier and the signified, Mitchell argues that the physical environment is inseparable from the process of representation. If human activities continually alter the physical environment over time, then any representation of it is a representation of past human activities. Similarly, the shaping of the physical environment by human activities is influenced by the same ideologies that underpin cultural representations. In this sense, landscape is a two-way form of encoding, where representations can naturalise certain human activities, and human activities can be influenced by the cumulative history encoded in cultural representations and in the methods we use to analyse them. In Theses 6 and 8, Mitchell points to the contradictions inherent to how landscape conventionalises European imperialism.

At their worst, the definitions of Mitchell and Cosgrove, therefore, represent the homogeneity of landscape analysis criticised by Rose. As per Rose's critique of Berger's analysis of *Mr and Mrs Andrews* (Section 1.1), the Marxist critique replaces theoretical formalism with material contextual analysis but does not necessarily consider that such a position still relies on a very specific form of subjectivity. Both feminist geography and phenomenology critique this stance by placing the body at the centre of a landscape analysis.

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In the next section, I examine how the notions of experience and the body shift landscape analysis away from a strict focus on economic relationships, and towards a phenomenology of experience. It is at this point that my approach runs into some difficulties. In Chapter 3, I identify a strong tendency in computer game studies to focus on a phenomenology of play as a primary point of analysis, but at the same time, encounter a number of instances where the context or 'situatedness' of play becomes a crucial consideration for how the observations of experience can constitute a useful reading of a computer game. In the next section, I examine scholarship from feminist geography and landscape phenomenology that provides some practical templates for landscape analysis, and some approaches that might be suitably combined with similar literature from computer game studies.

2.4 Landscape, experience and the body

In my opening critique of landscape studies of computer games, I argued that a number of studies lacked a broader contextual framework, and therefore left compelling historical parallels unexplored. However, as the analytical quality of these studies attests, and as my examination of computer game studies in Chapter 3 affirms, the study of computer games from the position of emplaced experience, influenced by phenomenology, has provided a particularly useful set of approaches. In the introduction to this chapter, I described how in the 2007 Landscape Theory seminar, the discussion focused on a perceived split between cultural studies (principally Marxist) approaches to landscape, and processes that focused on phenomenology, experience and the body. I now introduce a selection of these criticisms, which in many ways re-iterate the call from feminist geography to return to the body as the locus of landscape experience. The reason I am following this path towards the body and experience is twofold. First, phenomenological methods were a clear prerogative in the landscape theory seminar, and second, this approach aligns with the literature I also encounter in computer game studies, where player experience and the avatar are promoted as a viable strategy to analyse computer games. Therefore in this section, I examine

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the relevance of the body and experience for computer games and present an initial approach for applying this as an analytical tool.

2.4.1 Landscape and phenomenology

A summary of the debate in the 2007 Landscape Theory seminar is encapsulated by the following quotes from the convenors, the first from James Elkins and the second from Rachel Ziady DeLue:

like the body, landscape is something we inhabit without being different from it: we are in it, and we are it...the object isn't bound by our attention, it binds us. (Ziady DeLue and Elkins 2008, 69)

The landscape is always "for us," since we construct it; but it seems to me that one of the things that a phenomenological reading allows us to break down the subject-object relation, to break down the idea of landscape as a view. It is about lived experience, rather than "me-it," or self and other. That is one of the things the phenomenological has to offer: landscape as a thing that we live within. (Ziady DeLue and Elkins 2008, 104)

The broader context of this seminar appears to have been motivated by the tendency for Marxist analyses to present all landscapes as cultural texts that encode material relationships. However, as I have already pointed out, the absence of the body and of variable points of experience was already a principal critique in feminist scholarship. What seems to be at issue here is the degree to which physical landscapes and landscape representations are to be understood as texts via cultural studies, or as experiential phenomena. Furthermore, if something is an experiential phenomenon, to what degree might important historical contexts be overlooked, or if a reading is based on cultural textual analysis, to what degree might existing historical frameworks overlook alternate experiences? This is precisely the critique that feminist geography introduced

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(Section 2.3), where exclusive subject positions dramatically skew the analysis of landscape.

Given that my overall goal is to reveal how computer games index contemporary landscape relationships, my dissertation might be best characterised as adopting a cultural studies perspective, influenced primarily by art history and geography. However, in both computer game studies and the Landscape Theory seminar, I repeatedly encountered the use of experiential frameworks as a tool of primary analysis. Whilst an attempt to derive a theoretical synthesis of phenomenology and cultural studies hermeneutics is beyond the scope of this dissertation, I point to two landscape scholars who describe the pragmatic approach that I adopt in my own analysis. In 1992, British anthropologist Tim Ingold wrote an explicit criticism of a materialist reading of landscape, arguing that it is not a framework for perceiving the world, but simply for interpreting it. However, Ingold nonetheless presents these interpretive frameworks as second-order rationalisations of first order experience – the experience of landscape is not pre-determined by the existence of historical narratives, but at the same time, it cannot be abstracted from them. Ingold writes:

Humans do not, in the ordinary course of life, experience the environment as a 'blank slate', i.e. as space, awaiting the imposition of cultural order; but rather as a structured set of affordances in the context of current action. (Ingold 1992, 53)

So on the one hand, Ingold situates landscape primarily in experience, but on the other, acknowledges that this experience is 'structured' by the affordances of context. In the landscape theory seminar, art historian Maunu Häyrynen presents a similar compromise. Häyrynen writes:

Textual and phenomenological interpretations of landscape do not exclude one another. The representable and the unrepresentable occur in constant interaction, resulting in the historical stratification of both. While landscape experience can hardly be totally free from ideological

framing, representation of landscape has to relate somehow to the lived environment. (Häyrynen 2008, 177)

In accordance with the positions of Ingold and Häyrynen, the reader will find that my analysis of computer games as landscapes is not phenomenology per se. I borrow phenomenological approaches from landscape studies and computer game studies to derive primary observations, which I then seek to contextualise within a broader cultural studies framework. In the following section, I describe a phenomenological landscape framework that I appropriate from anthropologist Christopher Tilley and use as an observational tool in my analysis.

2.4.2 A framework for spatial experience

In *Place, Paths and Monuments: A Phenomenology of Landscape* (1994), Tilley offers a framework for analysing landscape according to the different levels of spatial understanding that arise from landscape experience. In response to the motivations listed in the previous section, I adopt this set of spatial categories as a part of my approach for analysing computer games as landscape. As such, I have reproduced this framework in full:

1. *Somatic space*: Somatic space is the space of unselfconscious action, where sensation and movement begin with the human body, which structures the world in perception.
2. *Perceptual space*: Perceptual space is egocentric and relative to the individual. It connects intentionality to movement and perception of the relative position of the body to direction and distance.
3. *Existential space*: Existential space is mobile, and is produced and reproduced through the actions of members of a group. It creates social meanings and symbolic or sacred spaces of human attachment. Places are sites of meaning creation, and boundaries between mark out social distinctions, difference, oppositions, and Otherness.

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4. *Architectural space*: Architectural space only exists as afforded by perceptual and existential space. It bifurcates inside and outside spaces and channels of movement. It shapes and reproduces existential space.

5. *Cognitive space*: Cognitive space is that of reflection and theorisation, and discussion and analysis with others.

(Tilley 1994, 15-17)

From my research into methodological approaches to landscape, I found that these five spatial layers provide a practical set of questions with which one can analyse the experience of place, space, and landscape. In Chapter 4, I will reiterate these spatial layers and present them alongside principals derived from my research into computer game studies, which I have transformed into a toolkit for analysing computer games as landscapes.

2.4.3 The paradox of place

Across the breadth of landscape studies that I have considered, from Marxist material approaches to phenomenology, human geography and feminist geography, the notion of 'place' is commonly presented as a fundamental unit of landscape experience. Rose describes 'place' as "one of geography's most fundamental concepts", differentiated by "interrelationships between environmental, economic, social, political and cultural processes" (Rose 1003, 41). In contrast to the much-maligned abstraction of Cartesian space, humanist geographers such as Tuan and Harvey looked to place as a means to return politics and historical context to space. In *Representing Place: Landscape Painting and Maps* (2002), Edward Casey builds his phenomenology of landscape on by similarly rejecting the notion of absolute space, and characterising space and landscape, as "a system of places" (Casey 2002, 227). Casey presents landscape as the representational result, as well as the process by which 'place' is generated from 'space'. By demonstrating the inseparability of landscape representations and the physical environment, Casey shows that "to be a landscape at all, to be an integral part of a sensuously qualified place-world, is to

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already have entered the encompassing embrace of the representational enterprise” (Casey 2002, 227). Whilst this relationship between place and landscape goes some way to explaining how phenomenology derives a landscape reading from notions such as ‘emplacement’, it leaves certain contextual questions unanswered. As Rose pointed out in her description of an empty street (Section 2.3.1) perceptual experience is intrinsically linked to the subject position, in this case, whether one’s ‘emplacement’ in a quiet street results in the perception of ‘empty’ space or ‘threatening’ space. We, therefore, face not the potential for diametrically opposed experiences of place, but the lack of a normative centre that might claim an authoritative experience. Rose writes of both phenomenology and human geography that the tendency to forego difference in bodily experience, as well as the tendency to rank one experience as normative and another as Other, points to the ‘paradoxical space’ of landscape studies (Rose 1993, 45). This is the paradoxical place of landscape, both the site of divergent human experiences as well as an index of how these experiences relate to historical processes and relationships. In the next section, I briefly summarise how this overview of landscape studies informs my approach to computer games, and in the next chapter, I explore how this might be combined with congruent approaches from the field of computer game studies.

2.5 A context for computer games as landscape

In this chapter, I have introduced the main corpus of landscape theory that I use to generate my landscape reading of computer games. I have provided a historical overview of how cultural studies, via Marxist, feminist and human geography, present landscape as an index of human relationships, encoded into the physical environment and its representations. Whilst at times this presents a troubling maelstrom of histories and perspectives to consider, it illustrates the wealth of possible readings that might be derived from a landscape study of computer games. In the latter part of this chapter, I introduced a partial implementation of a phenomenological approach to landscape for two reasons. The first was in response to the discourse in the Landscape Theory seminar,

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which I found to be both instructive and compelling. The second was in response to the similar combination of cultural studies and phenomenology that I encounter in my review of computer game studies. By accommodating this conciliatory stance in both my reading of landscape and computer game literature, I look towards an approach to computer games as landscape that can build on existing studies of computer games and landscape, and supply the contextual readings that I currently find lacking in these otherwise exemplary accounts.

CHAPTER 3. COMPUTER GAME STUDIES

In the previous chapter, I defined landscape as the process that reveals relationships between humans and the physical environment through the interaction between representations and the physical environment itself, with a historical focus on European colonialism and globalised capitalism. This chapter examines the relevant literature for studying computer games as landscapes. I begin by examining what a computer game actually is, and how the formal qualities of these technological artefacts have led to various definitions. The definition of a computer game relies on establishing certain relationships between a technological artefact and a player. Features such as space or the representation of landscape must, therefore, be understood according to what experiences the game makes available for the player. In the previous chapter, I stressed that landscapes are best understood according to the interactions between human experience and the historical and material context by which the human and the landscape exist in the world. In this chapter, I make the same argument but in a slightly different order. I start by examining formal questions concerning the nature of computer games and their intrinsic modes of representation. I then move on to how these games exist according to the experience of the player. Finally, I examine how the player and the game exist together in the world by broadening my analysis to look at contemporary patterns of media production and consumption. In this chapter, I assemble the theoretical material necessary to describe the formal qualities of the computer game as experienced by the player, and the extrinsic context by which the player and the game exist together in the world. In Chapter 4, I describe how I combine this material with the landscape literature from Chapter 2, to formulate my argument for analysing computer games as landscapes. The summary provided in Chapter 4 formalises the approach I use for my landscape analysis of games made using the Valve Source Engine.

3.1 What is a computer game?

In this section, I identify the formal parameters of my object of study. Whilst readers familiar with computer game studies might find this overview brief, I hope to encapsulate the most pertinent formal qualities that distinguish computer games as an object of study, and introduce the challenge of developing a suitable approach for studying them as landscapes. In the inaugural issue of the *Game Studies* journal, Espen Aarseth argued that because the term ‘computer game’ applies to such a wide variety of computational media, from massively multiplayer games to a computational toy like a *Furby*, defining computer games using a consistent set of formal criteria, or defining them, as a medium is a fool’s errand (Aarseth 2001). In 2004, Aarseth made a similar claim, that computers themselves should not be considered as a medium, due to the extended range of material forms that computers can take (Aarseth 2004). By the end of this section, I arrive at a general definition of computer games that operate in between the potential for game-playing offered by the computational artefact, and the willingness of the player to engage as a player and thereby instantiate the condition of a computer game.

3.1.1 Formal descriptions of games

I will begin this section with a brief overview of various influential definitions of games, and then introduce some technical amendments more specific to computer games. In *Rules of Play: Game Design Fundamentals*, Katie Salen and Eric Zimmerman offer a useful overview of various definitions of games, and how in the English language, the term ‘game’ exists in a dynamic relationship with the term ‘play’. Salen and Zimmerman’s definition of a game is as follows: “a system in which players engage in artificial conflict, defined by rules, that results in a quantifiable outcome” (Salen and Zimmerman 2004, 80). Within this definition, they argue that a game should be understood according to the relationship between a system, its players, the boundary that separates the game from real life (derived from Johan Huizinga’s ‘magic circle’) (Huizinga 1964 [1955]), the

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conflict or context embodied within the game, the rules that structure its play, and the quantifiable outcomes that distinguish a game from other, less formalised activities (Salen and Zimmerman 2004, 172).

Jesper Juul argues that computer games challenge a number of classical definitions of what a game might be, including that of Salen and Zimmerman. In relation to Salen and Zimmerman's definition, Juul argues that quantifiable outcomes become variable in nature, resulting in the ability for a player to develop an emotional relationship relative to their effort and the quality of the outcomes it produces (Juul 2005, 6). Juul used this general definition of games to contrast how computers introduce a second variable by upholding the state of the game. A computer upholds the game by computing the rules and interpreting player input and provides a representational interface for the game and for player actions. The computer allows the rules and the simulation of a game to become extremely complex, and the concept of the variable outcome can, therefore, change relative to this complexity (Juul 2005, 49). In his 2003 keynote 'The Game, the Player, the World: Looking for a Heart of Gameness', Juul defines games as "rule-based systems that players interact with in the real world", as a distinct challenge to the magic circle, and the notion of games as entirely separate 'fictive' worlds. Rather than look for the line where actions and outcomes in a game are fictional or real, Juul points to the rules and structures of a game as a source of meaning – moving an avatar in a game environment is more meaningful than moving an avatar in an empty space (Juul 2003, 11). At numerous points throughout this dissertation, I appropriate Juul's phrase 'the game, the player and the world' to refer to my broader hermeneutic landscape project.

3.1.2 Formal descriptions of computer games

As Juul's distinction between a game and a computational game suggests, any formal description of a computer game is heavily dependent on understanding the formal qualities of computational media. Aarseth's book *Cybertext:*

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Perspectives on Ergodic Literature has been highly influential for definitions of computer games as they relate to computational media. In this book, Aarseth proposed a framework for understanding various configurable and dynamic textual forms, which he dubbed “ergodic literature”. The “cybertext” is mechanically organised, capable of feedback loops, and requires the user to activate its semiotic sequence. Appropriated from physics, Aarseth uses “ergodic” to describe the “non-trivial effort” for that reader the reader must apply in order to traverse the cybertext (Aarseth 1997, 1). In Aarseth’s formulation, like any form of representation, a text is dependent on its medium. It comprises information that may or may not make sense to the reader. This information comprises signs “as they appear to the reader” (scriptons), and signs “as they exist in the text” (textons). In the case of a computer game, textons might be formal game entities such as a 3D model of a barrel or an animation file, whereas a scripton would be that barrel exploding in front of the eyes of the player (Aarseth 1997, 62). For Aarseth, the “traversal” of the cybertext is the particular way in which non-trivial player effort produces a particular chain of signification. Understood in relation to the cybertext, the formal materiality of a computer game is one of undefined combinatorial potential, inseparable from the actions of the player.

On the technical side of formal computer game definitions, Lars Konzack’s (2002) methodological framework provides an overview of the formal components of a computer game. Konzack dissects the computer game artefact into a series of ‘layers’, which are as follows: hardware, program code (software), functionality, gameplay, meaning, referentiality and socio-culture. (Konzack 2002) Konzack’s ‘functionality’ layer is largely derived from Aarseth’s *Cybertext: Perspectives on Ergodic Literature* (1997) which I return to in Section 3.1.2. Whilst not a definition of a computer game *per se*, Konzack’s layers provide a useful taxonomy of the layered architecture of a computer game experience. Konzack’s overview also helps to contextualise the claims I make in Section 3.6 when I discuss the computer game as a contemporary digital artefact.

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When the formal definition of a game meets the formal description of a computer game via the cybertext, the technical variability that Aarseth pointed to in 2001 as a hazard inherent to formal definitions starts to make more sense. With such a wide range of possible configurations, the variable and quantifiable outcomes of a computer game become dependent on the individual actions, goals, or projects that players might decide upon for themselves. In the next section, I examine definitions of computer games that focus more on the attitude of the player and the relationship that they choose to form with a computer game.

3.1.3 The lusory attitude and the gameplay condition

In a 2015 paper, Aarseth and Gordon Calleja used the variability inherent to computer game textual configuration to summarise a more general critique of formal definitions of computer game artefacts (Aarseth and Calleja 2015). Their critique contrasts the system and outcomes-based definitions of Salen, Zimmerman and Juul with that provided by Bernard Suits in his book *The Grasshopper: Games, Life, Utopia* (1978). Rather than look for a common set of features or affordances with which to define the concept of a game, Suits looked to a common experiential condition shared by players. Suits defines the “lusory attitude” as the desire to play, combined with the player’s acceptance of the rules that constitute the game, which then results in the act of play. According to Suits, a game (a goal, the means of achieving this goal and rules) is only actualised *as a game* when a player engages with these elements with a lusory attitude. (Suits 1978, 35) In this definition, a game is not a matter of a formal description, but of an experiential approach. Olli Leino adapts Suits’ formulation for computer games by arguing that the computer game, beyond winning or losing, can be understood according to the existence of the ‘gameplay condition’. Leino defines the gameplay condition as follows:

“Given that I desire to play, and am willing to demonstrate the lusory attitude, the materiality of the game artefact imposes on me a freedom of choice of which I am responsible in my choices.” (Leino 2010, 133-4)

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According to the gameplay condition, choices can be understood according to the goals that the player pursues and how the game resists the player achieving their goals. Leino characterises the player's relationship to the challenges of the game as a process of emancipation and self-realisation. Invoking Sartre's notion of freedom relative to resistance, Leino uses the gameplay condition to refer to the freedom players can achieve for themselves in relation to the resistance of the game. Therefore any perspective that the player can have on the game is understood relative to the struggle they undertook to achieve it. The resistance of the game makes the player struggle to discover what entities exist in the game, how these entities can help the player remain in the game, and having achieved this, how these entities can be used by the player according to their own preferences (O. T. Leino 2013). Therefore what Aarseth and Calleja criticise in relation to *Suits* had arguably been answered by Leino – despite the absence of a consistent goal within the materiality of the game, a goal can still exist relative to the gameplay condition of the player.

If I am seeking to analyse computer games in terms of landscape, I must pass through this combination of computational affordances and the gameplay condition that defines a computer game *as a computer game*, rather than simply a form of representational digital media. The aforementioned definitions of computer games reside in the interaction between the formal properties of a computational system that provide the potential for a game to be played, combined with the decision of a player to engage with this system *as a player*. Given that these are the fundamental conditions which computer defines games, it is essential that my analysis of computer games as landscape flow downstream from here. Rather than speak simply about the visual parallels between a mountain in a computer game and a mountain in a Romantic painting, I will examine the mountain only as it exists relative to the experience of the player.

3.2 Computer game representation

Having established a basic framework for the computer game as a set of computational affordances combined with the active engagement of the player via the gameplay condition, I now examine exactly how a computer game makes representations. Due to the difficulties in generalising computer games according to formal properties alone, this section identifies the *potential* for representation afforded by the game artefact, and the *experience* of the game by the player. In order to formalise the language with which I analyse landscape in computer games, in this section I give a brief overview of theories of computer game representation.

3.2.1 Game mechanics and surface renderings

Computer game studies commonly describe a conceptual separation between rendered audio-visual representations and the programmatic instructions (or mechanics) that drive them. This dualistic function can again be compared to Aarseth's description of 'scriptons' as the significations available to the player, and 'textons' as ontological components within the game artefact itself (Section 3.1.2). In her 2008 dissertation *Between Regulation and Improvisation: Playing and Analysing "Games in the Middle"*, Sara Mosberg Iversen outlines a representational structure for computer games based on the interaction between the dual layers of computer game representation, which she refers to as the rendered spectacle and abstract game mechanics and rules. Iversen proposes that the dualism of a mechanics layer and a representational layer be understood according to ludic and thematic representations. Ludic representations exist as "the state machine with its objectives, legal and illegal actions, points, and measurements of success" (Iversen 2009, 80). Thematic representations refer to the story fragments that exist in characters and environments, driven by functional characteristics, but "interpreted within the frame of everyday cultural significance" (Iversen 2009, 81). She stresses that both the ludic and the thematic layers rely on mechanics and representation, and both should be

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considered as meaningful vectors by which computer games form meaning in conjunction with the player.

Borrowing from the literary concept of the implied reader, Iversen argues that computer game representation on the ludic and thematic levels must be triangulated by the player (Iversen 2009, 41). The implied player raises the same contextual problems discussed in Section 2.4.1. In response to this, Iversen proposes two solutions. The first is a conscious ‘underconstruction of the implied player so as not to prescribe a single form of play or stance of interpretation, and the second is to “embrace subjectivity in the analytical account”, something that I will return to when I discuss ‘situatedness’ in play (Section 3.3.1). The achievements of Iversen’s description of computer game representation are twofold – she demonstrates how game mechanics and surface renderings collaborate to make representations on ludic and thematic levels, and that these can be appreciated by the player intrinsically in relation to the game state and game goals, and extrinsically according to their perceived cultural significance. At this point the reader might recognise an early answer to the problems I identified in my overview of existing research on computer game landscapes – the focus on intrinsic representations was typically not complemented by an equally thorough examination of extrinsic cultural or historical significance. I will now shift from the player to the game and examine how various theorists have approached computer game from a position of authorship and communication.

3.2.2 Simulation and procedure

In 2001, Gonzalo Frasca proposed that computer games make representations as a form of simulation, described as “modelling a system A by a less complex system B, which retains some of A’s original behaviour” (Frasca 2001). Frasca’s model argues that rather than communicating as a form of narration, computers games simulate concepts that can be understood by players who experience and experiment with them. In *Persuasive Games: The Expressive Power of Video Games* (2007), Ian Bogost made a similar argument, this time using the term

“procedural rhetorics” (Bogost 2007). Like Frasca, Bogost located the procedure of the game as the point at which the game designer can make a persuasive argument, which the player experiences via the surface representations of the game. Bogost argued that when the surface representations of the game are congruent with its procedural rhetorics, a game could be expected to make a successful representation, measured by the degree to which the player is persuaded by the argument of the designer. According to this argument, a ‘serious game’ might not be so serious if it is a rendered skin² of a more conventional procedure, however, if an existing game is re-skinned in such a way that the audio-visual rendering gives a new meaning to the programmatic rules, an effective procedural representation can be produced (Bogost 2007, 49, 238-41).

There are two important criticisms of the formulations of Bogost and Frasca that are worth mentioning. The first criticism I identify with the simulation view of computer games lies in the distinction between game mechanics and a simulation. Veli-Matti Karhulahti points out that the scientific definition of a simulation is quite different than that used by Frasca, and would be better summarised as ‘that in which System B mimics System A with a goal to attain empirical knowledge about System A’ (Karhulahti 2014). With some exceptions, it would be fair to say that most computer games are not seeking to gain empirical knowledge about their referent systems. If the programmatic behaviour is to be understood as a mode of representation or expression, Karhulahti argues that the term ‘metaphor’ is more appropriate than ‘simulation’, which in turn points to the analysis done in this area by Sebastian Möring (Möring 2013).

² To ‘skin’ a computer game means to replace elements such as textures or audio files, but to leave the programming in tact. The result is a computer game that renders a different audio-visual representation, but enacts the same programmatic behavior as the original.

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The second criticism lies in the relationship between player agency and the rhetorical argument made, either by the simulation or the procedure. Bogost's procedural rhetorics states that a game should be understood in terms of the rhetorical argument that it makes to the player. Miguel Sicart has challenged this, arguing that whilst rules and systems can guide player behaviour, they cannot rationally determine how the player will react to, or indeed understand the rhetoric they are being presented with, as this would constitute an authorial fallacy. Sicart writes: "against proceduralism an army of players stand and play, breaking the rules, misunderstanding the processes, appropriating the spaces of play and taking them somewhere else, where not even the designer can reach" (Sicart 2011). Sicart is giving unpredictability back to the player by diminishing Bogost's rational determinism using a sort of ergodic version of Roland Barthes ("the unity of a text is not in its origin, it is in its destination...the birth of the reader must be ransomed by the death of the Author") (Barthes 1967, 6). Whilst Sicart neatly sums up the authorial problem with both the simulation and procedural rhetorics theories, the reader should note that Sicart's criticism is a somewhat extreme exaggeration of player agency. As I stated in Section 3.1.3, to be qualified as a player, the player must engage the game *as a player*, according to the tenets of the lusory attitude and the gameplay condition.

Despite the criticisms of both the simulation and procedural rhetorics, they provide a general structure of how game mechanics and surface renderings work together in computer game representation. In the next section, I return to the player and introduce one more concept about how computer game representations can be meaningfully evaluated.

3.2.3 Deniable and undeniable representations

In the paper *Emotions about the Deniable/Undeniable: Sketch for a Classification of Game Content as Experienced* (2007) Olli Leino made the distinction between computer game representations that had a deniable or undeniable significance to the player. Leino's paper is part of a broader discussion in play-based game

analysis that I will return to in Section 3.3, however, the deniable/undeniable distinction is a categorisation I would like to add to my overview of computer game representation. Leino defines this distinction as follows:

Undeniable meanings are the ones the player cannot deny without decreasing his possibilities to act in the game, e.g. the importance of making it to the next checkpoint in Turbo Outrun.

Deniable meanings are the ones which can be denied without such consequences, like the shape of Bismarck's moustache in Civilization IV. (Leino 2007, 116)

Leino's distinction gives us another vector to evaluate the computer game representations. Leino provides a definition of computer game representation that can only be understood by the player who can evaluate the emotional significance of the representation according to their existential position with the game. This distinction, combined with Iversen's use of the implied player, addresses the criticisms of simulation and procedural rhetorics. Outside assumptions of authorial intent, the existential position of the player in relation to the conditions of the game function as the most reliable point at which meaning can be evaluated. In the next section, I build upon this theory of computer game representation and start to describe how I will analyse computer games as landscapes from the perspective of the player.

3.3 Computer game phenomenology

The previous section focused on how computer games are defined, and how these definitions flow through into the forms of representation that computer games form. In this section, I examine how these definitions relate to the how exactly computer games should be studied from the perspective of the player. I introduce the concept of play-based analysis, and how the relationships between the body and the avatar affect the meanings that are available to the player.

Finally, I return to the concepts of space, place and landscape, and investigate how these are understood to exist in computer games, and therefore how I can start to talk about landscapes and computer games.

3.3.1 Play-based analysis

The definitions of computer games and their representations discussed in the previous section were developed as part of broader methodological discussions on how exactly computer games should be studied. In this section, I clarify how computer games should be analysed from the perspective of the player. As I said in Chapter 2, a number of useful analytical tools for studying the experience of computer games (and the experience of landscape) derive from phenomenology. Landscape is something that is experienced, but it is also something that signifies historical processes. Similarly, computer games exist as things that are played, but as my intention is to study these experiences in terms of landscape, I am nonetheless engaged in a process of hermeneutics. Therefore as I outlined in my landscape research, my dissertation will look for the balance that Iversen describes, between the implied player and contextual subjectivity (Section 3.2.1) or what Häyrynen describes, between ideological framing and something that is lived (Section 2.4.1).

Aarseth's paper *Playing Research: Methodological Approaches to Game Analysis* (2003) builds on the layered structure of Konzack and suggests an approach for analysing computer games³ based on the different ways a game can be played and therefore the different research perspectives that can be prioritised. Because computer games can be studied from so many different research angles

³ In this paper, Aarseth referred to computer games as 'games in virtual environments' to distinguish between games that can be played in a virtual environment upheld by a computer, and other similar activities in a similar environment that would not be suitable to be analysed as games, such as simulations.

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(such as landscape), a play-based investigation can focus on gameplay (the players' actions, strategies and motives), game structure (the rules of the game, including the simulation rules) and the game world (fictional content, topology/level design, textures, etc.). A game can be played superficially for a few minutes, lightly to gather a general understanding, to partial completion, to total completion, or played repeatedly to levels of varying expertise. Alternately, as was also suggested by Sicart, a game can be played in an esoteric or innovative style where new strategies or goals can be pursued (Aarseth 2003).

Writing in response to Aarseth's methodology paper, Sybille Lammes pointed out that whilst these categories of intention and play help to shape a research direction, the undefined quality of the implied player nonetheless risks occluding what Lammes refers to as "situatedness" in play. That is, an over-determined focus on the implied player can homogenise important subjective differences, such as gender, culture and material differences between players (Lammes 2007, 27). This critique relates back to the occlusion of subjectivities outlined by Rose (Section 2.3). To address this shortcoming, Lammes takes an anthropological stance, characterising Aarseth's methodology as a form of participant observation. Lammes argues that situatedness and reflexivity on the part of the researcher-as-player should form an important part of play-based analysis, the goal of which is to ensure that "game culture is viewed as a local and embodied social practice and to avoid making universal knowledge claims" (Lammes 2007, 29).

The distinction between the abstracted formalism of Aarseth's methodology and Lammes' contextual examination of the researcher more or less symbolises the two approaches that I am attempting to balance in my analysis of computer games as landscapes. As I demonstrated in Chapter 2, the analysis of landscape requires a consideration of how the subject and the landscape are situated in the world, which includes a consideration of the historical contexts that shape their experience. In my play-based analysis of computer games, I seek an approach that uses an under-construction of the implied player to ensure that my observations are undeniable rather than esoteric. From this starting point, I seek

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to contextualise my observations according to how I am able to relate to the game the material and historical context of the world.

Relative to the gameplay condition, Leino, like Lammes, identifies the tension between those who seek scientific objectivity in relation to the game object, and those who study the game as experienced. Leino quotes Aarseth, who writes that in the case of the implied player, “the humanist is trying to exclude himself from the interpretation while acknowledging that this is impossible” (Aarseth 2007 in Leino 2009). To ease the contradiction between an essentialist and an esoteric reading, Leino distinguishes between a third and a first-person analytical perspective. The third-person sociological analysis can ascertain what a game is according to the experience of others, whereas a first-person analysis can ascertain *how* a game is according to the gameplay condition.

In summary, the first-person play-based analysis of computer games requires the scholar to locate and reflect upon the conditions by which they are able to experience the game in the world. This relates to their mode of play and the goals they pursue, the significance of their actions and goals in relation to the conditions imposed by the game, and how these experiences result in deniable and undeniable meanings. In my analysis of games made using the Valve Source Engine, I commence each case study from the first-person perspective as outlined above. As I move through my results, I often adopt a third-person perspective and speculate on the broader contextual significance of the observations I have made. In doing so, I pursue my goal of analysing computer games as landscapes, according to the relationship between the player and the game and how they exist together in the world.

3.3.2 The player, the body and the avatar

There are a series of structures internal to computer games, which further qualify how a first-person experience generates meaning. In this section, I examine the relationship between the player, the avatar and the character. This

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is pertinent because the games I analyse are all drawn from the basic structure of the first-person shooter genre, where the player experiences the game world via the construction of an avatar and, invariably, a character. As such, in this section, I give an overview of how the player, the body and the avatar structure gameplay experience.

Alison Gazzard provides a succinct definition of the relationship between the player and the character, which provides a useful introduction to this topic. She appropriates the hierarchical description of the parent-child relationship from computer programming systems to describe how the movement of a game character as a child is mapped to the interactive input of the player as a parent (Gazzard 2010, 25). Whilst the game character is capable of idle actions outside the player's control, it is fundamentally bound as a child of the player parent. Within this parent-child relationship, Rune Klevjer and Peter Bayliss have explicated the phenomenological relationship between the player, the avatar, the character and the game world.

In his dissertation *What is the Avatar?* (Klevjer 2006b) and in subsequent papers such as *Enter the Avatar* (Klevjer 2012), Klevjer establishes the phenomenological relationships between the player, the avatar and the character, and how these relationships exist in the type of first-person 3D games that populate my case studies. Klevjer defines the character as a category that applies to games, as well as novels and films, as an independent subject who can act, be identified with, and can function within a narrative ("when we play with characters, we play with story") (Klevjer 2006b, 116). Klevjer defines the avatar as "an instrument or mechanism that defines for the participant a fictional body and mediates fictional agency; it is an embodied incarnation of the acting subject" (Klevjer 2006b, 87). Whilst in a general sense, the avatar can appear in the game as little more than a cursor for interaction, in the case of 3D games, where the movement of the avatar brings the player into a world on the other side of the screen, the avatar becomes a "prosthetic navigable camera" that relocates the player's sense of bodily awareness (Klevjer 2012, 16). In this sense, the avatar differs from the cursor because it is part of the simulated world of the

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game, and the body of the player has become “polarised” (in the words of Merleau-Ponty) by the perception and actions afforded by the avatar. When learning to play a first-person shooter game, Klevjer argues that the player moves from a kind of “drunken stupor” towards a skilful and embodied inhabitation of the game environment. Klevjer writes:

Analysing it through the theoretical prism of Phenomenology of Perception, we must conclude that our embodied self is actually being re-located, transported into screen space. Our familiar body-image, our intuitive awareness of where we are as perceiving and acting subjects, is being dramatically altered once we step into a prosthetic relationship with the avatarial camera-body. (Klevjer 2012, 18)

Drawing on the earlier work of Klevjer and the phenomenology of Merleau-Ponty and Martin Heidegger, Bayliss makes important distinctions about how the function of the avatar relates to how the player is able to experience the game. Bayliss describes the avatar as the “locus of manipulation”, a tool that “extends the player’s ability to realise affordances within the game world” (Bayliss 2010, 179). Unlike other tools such as a white cane that extends the field of touch for a blind person, a computer game avatar both limits *and* extends player agency (Bayliss 2010, 174). Bayliss looks to Heidegger’s distinction between the ready-to-hand and the present-at-hand to describe how, as the player becomes more aware of the limitations of the avatar as a locus of manipulation, the limits become internalised, and the avatar-as-tool disappears, allowing the player to be embodied in the game (Bayliss 2010, 51).

I now have an overview of the basic structure of the player – avatar – character hierarchy. So far in this chapter, I have established computer games according to various technological layers and definitions of ‘game’ relative to the player. I have shown how and why computer games can be studied from the perspective of play-based experience, how the relationship between the player, the avatar and the character structures the experiences that the game can produce. In the following sections, I introduce the building blocks of landscape experience

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within computer games, starting with how place and space exist within a computer game, followed by a review of how scholars have engaged with the experience of landscape in a computer game.

3.4 Space and place in computer games

Given what I write about space and place in Chapter 2 and the overall direction of this chapter so far, the reader would be correct in assuming that I situate place and space in computer games according to the locus of player experience. In Section 2.4.2, I introduced the work of Henri Lefebvre and Yi-Fu Tuan to demonstrate the importance of space as a product of material and historical forces. In Section 2.4.3 I introduced the work of Edward Casey and Christopher Tilley to demonstrate how analysing the transition from place to space provides a valuable way to understand the process of landscape as a conceptualisation of the environment, as well as a process that is instrumental in shaping it. In this section, I examine how previous descriptions of computer games as a 'spatial medium' relate to the experience of the player via avatar embodiment, and how we might connect ideas on space, place and landscape to the experiences created when playing computer games.

3.4.1 A spatial medium

The phrase 'computer games are a spatial medium' is found across a number of publications in computer game studies. Given that I have already repeated Aarseth's claim that computer games are too multifarious to be considered as a 'medium' at all, it is obvious that the 'spatial medium' characterisation will require a bit of unpacking. In *Cybertext*, Aarseth characterises ergodic textuality as a "spatial activity" due to its configurative nature. This then borne out by the popularity of adventure computer games that had "spatially oriented themes of travel and discovery" (Aarseth 1997, 102). Aarseth later wrote, "the defining element in computer games is spatiality", and pointed out that computer game genres, such as the Platformer or the First-Person Shooter often correlate with

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distinctions in how space is represented, but when it comes to *how* these spaces actually exist for the player, it is necessary to return to the place/space problematic of Lefebvre et al (Aarseth 2000). Aarseth concludes that the visual representation of a landscape in a computer game can only be described in spatial terms according to the mechanics that structure player experience – where a single player game might create an asymmetrical linear landscape, a multiplayer game might instead create an abstract symmetry so as not to yield an unfair advantage to either player. Aarseth writes that computer games are “allegories of space: they pretend to portray space in ever more realistic ways, but rely on their deviation from reality in order to make the illusion playable” (Aarseth 2000, 169). Whilst I agree with this overall assessment, I would add the clarification that the description of ‘reality’ should assume that this ‘space’ is experienced and produced, rather than existing as an *a priori* quality. Using Casey’s assessment that the body experiences place, and that space is the cognitive abstraction that is *produced* (Section 2.4.3), combined with Rose’s qualification that space is not produced uniformly across situated human experience (Section 2.3.1), it would be simpler to say that the allegorical spaces of multiplayer symmetry or single-player linearity are the emergent spaces produced by the game as part of their overall representation. Therefore, what various scholars refer to, as ‘ludic space’ should be understood according to how the emplaced player discovers the abstract functions of represented space.

The term ‘ludic space’, as well as the dichotomy between topography and topology, are two areas in which scholars have attempted to describe the production of space in a computer game according to player experience. In *The Construction of Ludic Space* (2003), Ernest W. Adams describes how the architectural spaces of computer games differ from their representational parallels in the physical world. Because functional requirements defer to gameplay and computational restrictions replace the requirements of the human body or of real-world physics, concepts such as natural light and engineering loads are replaced by playability and the computational ‘cost’ of complex shapes. For example, rectilinear shapes in a 3D virtual environment consist of fewer polygons and thus require less processing power for a computer to render, than

curved shapes, which require a higher polygon count. Adams argues that ludic architecture structures the design of all computer game spaces, irrespective as to whether or not they are representing indoor or outdoor, architectural or organic environments. Adams' criteria for the design and evaluation of ludic spaces lie across the familiar division of surface representations and game mechanics. On the side of game mechanics, ludic architecture can be understood according to principals such as constraint, concealment, obstacles and exploration, and on the side of surface representations, ludic architecture can be instrumental in forming associative links, such as familiarity, thematic allusion, unfamiliar novelty, comedy, cliché, surrealistic horror, etc (Adams 2003).

In *Video Game Spaces* (2008), Michael Nitsche makes a similar argument that the represented space of computer games requires a sort of 'ludic translation' of architectural terminology. Nitsche argues that the rendered game world can be structured according to a divergent set of virtual cameras, deriving from various precedents such as perspectival lenses and the language of film, to architectural isometry where perspective is replaced by an extendable space that swaps relative scale for an omniscient view (Nitsche 2008, 89-99). As well as being co-dependent on programmatic behaviour, the concept of 'space' in a computer game must also be disentangled from other normative architectural assumptions, such as physics, proximity and topography. Space might be better thought of in terms of how long it will take a player to traverse from one location to another, but then these same spatial relationships can be neutralised by the introduction of 'fast travel' systems⁴ (Nitsche 2008, 7-10). Adams' use of the phrase 'ludic architecture' provides a language best suited to a game-designer; as it focuses on how a game-space can be structured in order to shape gameplay. Whilst taxonomies of camera perspectives and architectural spaces provide a functional language for describing a computer game as a designed artefact, it is

⁴ 'Fast Travel' appears across numerous games, and allows the player to teleport between certain predetermined sites within a larger game environment, thereby drastically reducing the time required for the player to navigate their avatar across the game map.

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not really the language with which a player might describe their individual experience of the game. Whilst these elements are certainly constitutive of computer game representation, but the player has a sort of inverted experience of these qualities. Indeed, in the latter chapters of Nitsche's book, he shifts his analysis to consider how notions such as place and space exist for the player. Nitsche writes:

A virtual character's home inside a multiplayer world, the place of a significant gain or loss, of relevant encounters and revelations, of a first encounter with an outstanding in-game character—all encourage the assignment of some of these personal qualities onto the game space and form the player's own identity at the same time. (Nitsche 2008, 193)

From the player perspective, Nitsche shows that the typologies of space and camera perspective appear in the form of 'place'. Through play, these can become sites of dwelling. In the next section, I explore the notion of game landscape as experienced and the conceptualisation of the game environment according to the player.

3.4.2 Topography, topology and playable worlds

Both McKenzie Wark and Leino have made useful contributions to articulating how the player experiences space. Their use of the terms 'topography' and 'topology' provides a useful bridge to how Casey uses the 'space' and 'place'. In *Gamer Theory* (2007), Wark describes how the "fixed geometry of topography gives way to the variable forms of topology", which occurs when the topical loses its autonomy and is merged with the topographical, "when the line along which communication flows closes the gap between the map and the territory" (Wark 2007, 41). The reader should note the similarity between Wark's use of the term 'topology' and the overall use of the term 'landscape' to describe a *process* that encapsulates the dynamic fusion between the physical environment and the forces of history. Wark writes:

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Topology is experienced more as a gamespace than a cyberspace: full of restrictions and hierarchies, firewalls and passwords. It is more like a bounded game than a free space of play. Once again: If it is free, it is valueless. Those odd lines within topology where anything goes are the ones of no consequence. (Wark 2007, 48)

In reference to Wark's characterisation of game-space as topological, Leino argues that if computer games are considered from a player-perspective, then the entire language of game 'spatiality' needs to be reconfigured. He argued that whilst the language of Cartesian architecture might work from a design perspective, it cannot describe how a player *experiences* a computer game. This is a reasonable argument considering what I have already discussed in relation to Cartesian space are abstract products of the embodied experience of place. (Section 2.3.1) Leino essentially levels the same argument at the 'spatial' language of computer games. Building on Wark's observation that game spaces are topological rather than topographical, he argues that any environmental feature only exists relative to the experience of the player avatar. Using the example of the game *Railroads!*, Leino argues that the incline of a mountainside is significant for the player due to the difficulty a train has in ascending it and the ludological effort the player has to expend to overcome its topology. Leino writes:

A description more faithful to the role of space in the experience of computer game play would mention 'playability' (as in 'playable space') instead of 'representation' (as in 'represented space'), 'simulation' (as in 'simulated space'), or 'virtuality' (as in 'virtual space'). (Leino 2013, 9)

Leino argues that the phrase 'playable world' might then be a more accurate term to describe this situation:

What distinguishes computer games from 'navigable spaces', 'virtual environments', and the like seems to be the subordination of spatial representation, among other representations, to gameplay. This prompts

a shift from 'game spaces' to what we might call 'playable worlds'. (Leino 2013, 6-7)

Leino's repositioning of computer game landscapes as 'playable worlds' based on Wark's distinction of topography and topology brings the play-based experience of computer game environments into a accord with the phenomenological approaches to landscape developed by Casey and Tilley. Understood as an experiential process, high-level concepts such as space can be examined according to how they are experienced by the emplaced player. Emplaced experience gives way to a conception of space and the transition from place to space is where we locate the concept of landscape.

3.5 The player in the computer game landscape

In this section, I return to the literature of landscape studies for computer games that I introduced in Chapter 1 and make some final reconsiderations based on what I have covered in my review of landscape theory and computer game studies. To remind the reader, I observed that in the work of Bjarke Liboriussen, play-based phenomenology combined with architectural and landscape theory provided a strong framework to derive concepts such as 'worldview' and 'ethos' from game environments. Similarly, Paul Martin made successful connections between modes of landscape experience, such as the pastoral and the sublime, with modes of computer game experience. In both cases, I found that their intrinsic analysis satisfactory, but that the opportunity to capitalise on these experiences and to consider them as landscapes in a socio-historical context was left unexplored. As I also mentioned in Chapter 1, Daniel Vella's scholarship on the emplacement of the player/avatar in the game as a mode of landscape is exceptional, but once again, the portentous links he makes between examples such as *Robinson Crusoe* and the landscape of *Minecraft* as a standing reserve suggests a wealth of unexplored potential. I will now return to the work of Vella and Liboriussen to make some final examinations of how the player experience of a computer game can be considered in landscape terms.

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Liboriussen's dissertation has supplied the most detailed account of how landscape theory can be applied to computer games, and as such I will examine it in more detail here. Focusing on the work of Jay Appleton and Steven C. Bourassa, Liboriussen uses the conceptual split between a 'naturalist' view of landscape – that found in Prospect/Refuge theory (Section 2.3.4), which focuses on how a landscape might support human survival, and a 'culturalist' view, where landscape as representation is instrumental in shaping human perception (Liboriussen 2009, 104-105). For the experience of the player, Liboriussen matches the naturalist/culturalist binary to the surface rendering/game mechanics binary of computer game representation, where mechanics as naturalist contain the existential condition that the player must satisfy in order to remain in the game (Leino's 'gameplay-condition'), and surface rendered renderings as cultural are where the player can become a connoisseur of the landscape as aesthetic spectacle (Liboriussen 2009, 100-121). On the whole, comparing the biological mode of Bourassa to the existential condition of the player is a worthy comparison. Liboriussen's description of the player overcoming the existential condition in order to achieve the contemplative mode of landscape connoisseurship sits well with how Marxist and feminist historians differentiate subject positions in the picturesque landscape, from the disinterested detachment of the literate empiricist gentleman to the dispossessed wage labourer employed by the landowner (Section 2.3.2). However, much like my reading of Appleton in Section 2.3.4, I argue that these initial correlations, whilst sound, risk a certain over-simplification. For example, when the existential condition of the player relies on game mechanics modelled on historical economic paradigms, as Scott Rettberg (2008) argues in relation *World of Warcraft* and Wark argues of *Civilization III* (Section 3.6.2), the biological theory of landscape needs to be dramatically expanded to include Marxist and post-colonial readings. It is not simply a matter of analogising ludic struggle to essentialised biological struggle. Generally speaking, I agree with the links Liboriussen makes between computer game studies and landscape theory, however by expanding this relationship into a contextual reading, I believe that a more comprehensive analysis of computer games as landscape can be achieved, especially when it comes to examining the extrinsic significances of historical

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landscape reference points, or as I previously stated, the way in which the player and the game exist together in the world.

Returning to the relationship between the player, the avatar, the character and the playable world, I now want to look more closely at how Vella characterised the embodied player in the computer game landscape. What Klevjer describes as the prosthetic and Bayliss describes as the locus of manipulation, is what Vella uses to locate the emplaced experience of landscape in the computer game. Vella writes:

[Worldness] emerges in the encounter between a landscape and the individual's embodied being: as such, in their capacity to determine both the ontological nature of their virtual environment and the nature of the player's embodiment within it (through structuring the affordances available to the player and the goals towards which they are directed) games present themselves as an aesthetic form by which specific modes of being-in-the-world might be brought into view, adopted and explored. (Vella 2013, 13)

Because the player can be embodied within the virtual environment of the game, they can, therefore, experience place, space and landscape. For Vella, this “points towards the possibility of founding a poetics of the medium upon a consideration of the mode of being-in-the-world in which the player is located” (Vella 2013, 14). In short, Vella is saying that by understanding *how* the player is emplaced via the avatar, we can understand what sort of landscape experiences might be available to them. Whilst in the introduction I pointed shortcomings in the contextual explication of Vella's *Minecraft to Robinson Crusoe* comparison, I think his technical formulation that landscape experience in a computer game exists relative to the kind of experience that is available to the player via the avatar is correct. Going back to the work of Bayliss (Section 3.3.2), the ready-to-hand avatar disappears as the player becomes embodied in the landscape. Going back to Leino (Section 3.4.2) the player encounters the playable world as topological (rather than topographical) – mountains become steep when they are difficult

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for trains to climb, and pathways gain significance because of the challenges the player faces in traversing them. And then going back to Adams (Section 3.4.1), the thematic, or rendered representations of these topologies create resonances of cultural association as to why certain mechanics in ludic architecture are presented in combination with certain thematic representations.

The ways in which topological representations are combined with surface renderings prompts a range of possible meanings for the player as they experience them. As I have made clear across the previous chapters, my examination of computer games as landscapes seeks to expand on how the meanings a player can experience might reflect a broader significance regarding human relationships with the physical environment. My project is to extrapolate the embodied experience of landscape into a broader socio-historical context and look for what computer games, specifically those made using the Valve Source Engine, might be revealing about contemporary relationships with the physical environment.

Before I move on to the final section of this chapter where I delve deeper into the material context of computer games, I want to go back to Hayot and Wesp's landscape analysis of *EverQuest* (Section 1.2) to demonstrate where the identification of 'undeniable' representations in computer game landscapes can be situated within a broader cultural studies framework.

Hayot and Wesp identified a dynamic relationship between patterns of player behaviour and the gradual restructuring and redesign of landscape locations, and how this related 'bottom-up' player behaviour related to 'top-down' game updates, such as of 'The Plane of Knowledge' and the introduction of instantaneous travel to a common meeting place. I draw the reader's attention to two passages, the first describes the cultural significance of the rendered representation of the playable world of *EverQuest*, and the second describes the cultural significance of its topology:

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“...an account of the passive and active pleasures of a world like Norrath suggests once again that virtual worlds must be thought of as part of, rather than apart from, the real world in which they take place. Norrath expresses rather than evades the culture of supermodernity in which we live.”

“In the combination of a powerful fantasy of pure competition mediated by world-like geography (a geography completely indifferent to the planet outside our computers) and the nostalgic return to a pre-industrial geography populated by none of the trappings of contemporary modernity, one sees, not for the first time, the thick schizophrenia of the current historical imaginary.” (Hayot and Wesp 2009)

Hayot and Wesp extrapolate the significance of landscape features of undeniable significance to the player and use this to form a fascinating landscape critique. The links between the modern competitive structure of EverQuest and the nostalgic turn to pastoralism is a pertinent contradiction that can be observed across a wider array of cultural artefacts and therefore does not seem to be an esoteric interpretation of ‘Bismarck’s moustache’ (see Section 3.2.3). Similarly, by illustrating how the landscape is structured by the behaviour of thousands of players as well as software updates released by the proprietors of the game, Hayot and Wesp have made a plausible extrinsic reading of the landscape of EverQuest.

In the final section of this chapter, I examine the materiality of computer games, how they exist in the world, and how they can be understood according to economic and environmental relationships. I establish a number of vectors that facilitate further undeniable extrinsic readings of computer game landscapes, and in doing so, address the goal of this dissertation in providing a reading of computer games as landscapes, according to the relationships between the player, the game and the world.

3.6 The computer game in the world

In this section, I identify three frameworks where scholars examine computer games within in a broader cultural studies framework. The first, which I call ‘textures and intertextuality’, returns to the relationship between mechanics and rendered representation. I examine how rendered content and game mechanics allude to extrinsic content with which the player can locate the cultural significance of their gameplay experience. The second frame draws more from media studies and considers the modes of production and consumption that structure how the game exists for the player. I define terms such as ‘modder’ and ‘developer’ and show how they provide an important material distinction for how players can relate to the computer game. The third frame engages with what has been referred to as the ‘material turn’ for game studies. This goes back to the historical materialism of Cubitt (Section 2.3.6), where the digital media are framed according to their economic and environmental context, which I then use to contextualise how the computer game exists in the world.

3.6.1 Textures and Intertextuality: Surface rendered representations

In Section 3.2, I introduced the distinction between the surface rendered representation and the game mechanics as the dualism of computer game representation. In Section 3.4.1, I examined how Adams’ description of ludic architecture showed how this dualism functions in computer game environments – the mechanics of an architectural environment is structured by how the player can navigate the game world, and the rendered representations informed the player as to what sort of world they are experiencing. In this section, I demonstrate how mechanical and surface representations can make associative links outside the computer game itself. Throughout my dissertation, I use the subheading of ‘textures and intertextuality’ to refer to this mode of experience.

At the level of surface rendered representations, a number of scholars have outlined the importance of intertextuality as a mode of player experience. Nitsche has shown that the use of virtual cameras, must be understood in a broader continuum of lens-based vision and visual studies, and along with Klevjer (Klevjer 2006a) and Alexander Galloway (Galloway 2006b), has shown how the first-person shooter game implements a particular appropriation of the subjective point of view shot to create its defining interface. Nitsche links his analysis of the computer game camera to Lev Manovich's argument that the transition from celluloid to digital film brought about a convergence of indexicality between painting, film, animation and computer game representation (Nitsche 2008, 80) (Manovich 2001, 295). In Section 5.4, I compare Manovich's characterisation of remix culture to the collaged nature of the surface rendering in the landscape of *Half-Life 2*.

3.6.2 Textures and Intertextuality: Game mechanics

At the level of game mechanics, Galloway and Bogost have made a similar argument that the socio-historical circumstances of the player alter how the procedure of a computer game can be understood as meaningful. In *Unit Operations*, Bogost refers to the 'simulation gap' as a rupture of Johan Huizinga's concept of the 'magic circle'.⁵ Much like Lammes' critique detailed in Section 3.3.1, Bogost's simulation gap exposes the blind spot in Aarseth's *Cybertext* theory, where the junction between the text and the implied player fails to take into account the material context of the game and the player in the world. Bogost writes: "At the extreme, cybertext theory becomes a systemic operation, forgoing all the gradations of a work's subjective uses in favour of their common roles of configurations" (Bogost 2006, 131).

⁵ The 'magic circle' is a concept proposed within Johan Huizinga's theory of play. Huizinga argues that games exist within the temporary enclosure of game rules, within which actions and consequences are isolated from the world outside the game. (Huizinga 1964 [1955], 10)

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Bogost argues that the operations of a cybertext must, therefore include a consideration of the material and historical relationships that structure how an individual relates to a cybertext. In a similar way, Galloway looks for the notion of 'realism' in computer games in the degree to which the procedure of the game can be contextually meaningful for the player, arguing that where literature offered realism of narrative and painting and photography offered realism of image, games now offer the realism of action. What Galloway calls 'the congruence requirement' refers to how the lived reality of a player relates to the mechanics of a game (Galloway 2006b, 76). Galloway finds the U.S. Army's recruitment game *America's Army* (2002) as thoroughly 'unrealistic' because of the congruence gap that exists between the life of an American adolescent (potential recruit), the cultural mythology of the American military, and the reality of foreign deployments as depicted in the game. *America's Army* contains a 'gap' between the intended player and the representations within the game. By contrast, Galloway argues that *Special Force* (released by Lebanese organisation Hizbullah in 2003) and *Under Ash* (released by Syrian publisher Dar Al-Fikr in 2001), whilst sharing similar militaristic representations to *America's Army*, achieve a higher degree of realism because their game-world is familiar and congruent with the lived experience of Palestinian, Lebanese and Syrian players most likely to play these games (Galloway 2006b, 78-81).

Whilst *America's Army* played by a suburban American teenager might not satisfy the congruence requirement for Galloway's definition of 'realism', there is a wealth of research that shows how a number of games simulate the economic conditions that are much closer to the lives of the same teenagers for whom *America's Army* is not realistic. Wark argues that beneath the cultural diversity of the surface representations in *Civilization III* (2001), lies the consistent simulation of 20th-century American capitalism, evidenced by how the game funnels world history into a managerial juggle of resources, geared towards exploitation and economic domination, culminating in the Cold War and the Space Race (Wark 2007, 54). At a more specific level, Rettberg argues that the Protestant work ethic and Capitalist alienation are key design features of MMORPGs such as *World of Warcraft*. Rettberg writes:

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The principle reason why Blizzard has been able to build such a large and devoted audience for their flagship product is in fact because it offers a convincing and detailed simulacrum of the process of becoming successful in capitalist societies. (Rettberg 2008, 22)

If Galloway's 'congruence requirement' tethered realism to whether or not computer game representations resonate with the life of the player, the arguments put forth by Wark and Rettberg then connected to a more extrinsic sense of computer game representation. Leino and Möring, who compare the structures of work and play in computer games with historical structures of liberalism and neo-liberalism, expand the link between gameplay and socio-economic structures. In parallel with the observations made by Rettberg, Leino and Möring argue that a negative opposition to work defines the liberal, industrial notion of play ("romantic" play theory), whereas neo-liberal play is defined by the blurring of work and play when both have been co-opted for the accumulation of capital (Moring and Leino 2016, 3). They write:

The player who shows off her collection of badges in her Steam profile may, of course, derive immediate gratification from looking at this collection, but essentially the badges there are to be looked at and appraised by someone at some point in the future. (Moring and Leino 2016, 10)

They conclude:

Computer games not only train us, but we are always already neo-liberal subjects that are prone to be attracted by neo-liberal games. (Moring and Leino 2016, 11)

The examples provided by Rettberg, Wark, Leino and Möring illustrate how game representations can be evaluated according to the extrinsic social and material conditions in which they are experienced. Throughout my case study chapters, I extend a number of claims from my primary gameplay experience,

into the cultural studies realm I generalise as ‘textures and intertextuality’. Like the examples mentioned above, I look at representations made by the game and make extrinsic claims that I believe are defensible, if not undeniable. I will now move on and extend these extrinsic claims to the materiality of the computer game object itself.

3.6.3 The game engine and platform studies

The case studies for this dissertation are four computer games made using the Valve Source Engine. A computer game engine is the software environment that upholds a computer game. A game engine is responsible for the rendering of sound and graphics, as well as calculating physics simulations, artificial intelligence procedures, networking, and all other forms of programmatic representations that uphold the player’s experience of the game (Zerbst and Düvel, 2004). The distinction between the computer game and the game engine reflects the contemporary trend in game development to use the same engine for building a number of games, rather than to build a new software environment for every new game. The way that game engines are appropriated to make new games, how their repeated use changes the engine over time, and how this accumulation of production leads to an identifiable medium with its own cultural and economic structures, is the process that I am examining in my case studies. By analysing a strategically chosen set of games made using the Valve Source Engine, I reveal how this engine functions as a distinct medium of representation, and a distinct medium of landscape.

Across each case study, I examine how the development of the Valve Source engine, its licensing, and the types of interaction that it affords become a meaningful context for understanding the games as landscapes. My examination of the medium that upholds the game derives from Konzack’s layered typology (Section 3.1.2), however, it has also received increasing attention from the field of platform studies. The platform studies approach to computer game analysis, most visible in Bogost and Nick Montfort’s book *Racing the Beam* (2009) and

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subsequent publications in the *Platform Studies* series, recommends that the study of computer games be “situated in culture, society, economy and history” via an examination of the material affordances of its medium (Montfort and Bogost 2009, 147). Montfort and Bogost focus on how both the hardware and software of digital media facilitate creative representation and development. They describe the ‘platform’ as:

the abstraction level beneath code...if code studies are new media’s analogue to software engineering and computer programming, platform studies are more similar to computing systems and computer architecture, connecting the fundamentals of digital media work to the cultures in which work was done and in which coding, forms, interfaces and eventual use are layered upon them. (Montfort and Bogost 2009, 147)

Whilst my study does not engage with the computer hardware on which the Valve Source Engine is run, and is therefore not a platform study *per se*, the extension of my analysis to how the game and the engine exist in a broader media environment is certainly indebted to this approach. As I said in Chapter 1 and 2, the commodity status of a painting is inseparable from its signification of landscape, and by extension, so are the material affordances it relies on. An example of this might be Ravi Mangla’s analysis of lapis lazuli and the value chain of ultramarine blue (prior to the 19th century invention of synthetic French Ultramarine, the use of ultramarine blue in a painting demarcated an extravagant show of wealth as it could only be produced from the semi-precious mineral lapis lazuli, mined almost exclusively in Afghanistan) (Mangla 2015). There have been a number of game studies papers that make hermeneutic examinations of the computer game artefact at the level of source code. William Robinson, Dylan Lederle-Ensign and Michael Mateas (2015) present a close reading of the source code of Jason Rohrer’s game *Passage* using a selective reading of platform studies to examine how source code expressions can be a meaningful level at which to study the game (Robinson, Lederle-Ensign, and Mateas 2015). Ea Christina Willumsen (2016) provided a modification of this same approach and case study, noting that whilst such a hermeneutic reading of source code is valuable, it

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should not be employed as a justification for authorial intent – a sentiment I agree with, as have expressed already in reference to Sicart’s critique of Bogost (Section 3.2.2). Nevertheless, these studies demonstrate that it can be valuable to use an extrinsic examination of the game medium as a partial implementation of the platform studies approach. In my case studies, I examine numerous instances where the materiality of the Valve Source Engine is instrumental for understanding the game experience, and in Chapter 7, I examine the limits of representation by building my own landscape within the Valve Source Engine. In the next two sections, I take a closer look at areas in computer game studies where the extrinsic relationship between players, the game and the world makes a meaningful contribution to how the computer game is contextualised as an expression of landscape.

3.6.4 Modding, playbour, produsers and Game 3.0

In addition to how a computer game can be viewed in a broader historical and material context, the economic structures that shape how players relate to computer games is a subject that has received a good deal of scholarly attention. My case studies, whilst united by the Valve Source Engine, can be differentiated according to their individual patterns of production and consumption. In this section, I define the terms ‘modder’, ‘developer’, ‘produser’ and ‘playbour’, and how they reveal an important context for the material relationships between players, games and the world. Thinking back to Section 2.3, the Marxist revisionism of the Picturesque and the Romantic undeniably changed the significance of 18th century landscape painting, by demonstrating that the formalist theories used to justify these images were instrumentally shaped by the material wealth of their patrons, and that the images themselves were complicit in the processes that were changing historical and economic relationships to the physical environment. In a similar way, the relationships I explore in the next two sections show how the economic connections between computer games and their players represent highly significant shifts within capitalism. Much like a painting, the relationships between the materiality of the

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game, its players and its producers, are a vital component for reading a computer game as a contemporary landscape.

In *Precarious Playbour: Modders and the Digital Games Industry* (2005) Julian Küchlich outlines some economic distinctions between how games are produced, played, shared and modified. Küchlich describes the computer game developer, who retains the intellectual property rights of their creation as stipulated by the End User License Agreement (EULA), who can, therefore, sell their game (Küchlich 2005, 5). In 1997, id Software published the source code for their game *Doom*, which led to the dramatic expansion of the practice of 'modding' (Küchlich 2005, 2). The 'modder' makes alterations to the game at various levels, by changing texture files, designing new game levels, and often making new products that are almost unrecognisable compared to their source material. Due to the configuration of the EULA, modders rarely retain the intellectual property rights of their creation (the mod), and rarely receive remuneration for their labour. The mod enjoys a close relationship to 'homebrews', which are modifications and plugins for existing software that are typically published under a General Public License (GPL) (Küchlich 2005, 5). The homebrew is usually made freely available for the collective benefit of the open source software development community. Küchlich points out that the mod, whilst not sell-able, often creates in commercial windfalls for the EULA holder (the developer) because it can extend the lifetime of the original game, and maintain a core community willing to pay for and play the game. Within the set of relationships between the developer, the player, the modder and the homebrew producer, Küchlich identifies the patterns of precarious labour that are characteristic of 21st century Capitalism, and introduces the neologism 'playbour' to highlight "the fact that in the entertainment industries, the relationship between work and play is changing, leading, as it were, to a hybrid form of playbour" (Küchlich 2005, 1).

In *On Productivity and Game Fandom* (2009), Hanna Wirman argued that the economic relationships outlined by Küchlich, Nick Yee (2006) and Hector Postigo (2003) should change how we think about creativity and productivity. Wirman

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identifies a contradiction between how scholars such as Henry Lowood (and I would argue Lev Manovich) describe computer games as design tools for players, and the demonstrably unequal relationships that enclose player productivity under the EULA and the notion of playbour. This contradiction is highlighted by the term 'Game 3.0', which was originally coined by Sony executive Phil Harrison, to refer to games designed to be disseminated and reproduced via the affordances of Web 2.0 platforms such as Facebook and YouTube (Wirman 2009). Wirman points to the work of James Newman, who recontextualised 'Game 3.0' to take into account the extractive economic model of these platforms so that 'Game 3.0' denotes an economic as much a technological relation (Newman 2008). Axel Bruns also uses the term 'produser' in reference to the play-work activities associated with contemporary digital media (Bruns 2008).

Just as the term 'game' has been scrutinised in computer game studies, the term 'play' has become increasingly clouded by the economic context in which computer games exist. I have touched on this already in relation to Leino and Möring's work on neoliberal play (Section 3.6.2). Galloway argues that not only has play lost its anti-work status, it functions not as a respite from work, but rather as an "after-image" of it, with "repetition, displeasure, and competitive interaction being but symptoms for deeper social processes" (Galloway 2006a). As Nick Yee points out, playing in a clan or guild of an online multiplayer game can require a similar clerical and logistical responsibilities and commitments as a regular job, but in this case, the player is paying for the right to play (Yee 2006).

What my analysis of the terms 'modding', 'playbour', 'produser' and 'Game 3.0' has attempted to show is that the production and play of computer games should be considered together, and that this relationship is a fitting context in which to examine how computer games can be read as landscapes. If Marxist and feminist analyses showed that the production and consumption of landscape paintings dramatically alter their hermeneutic qualities, why should computer games be any different? While the leap from play-based analysis to these extrinsic material factors opens the door to an impossibly vast set of historical contingencies, I demonstrate in my case studies that it is possible to balance a close reading of

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the computer game as played, with a contextual examination of how the experience of the player resonates with the relationship between the player, the game and the world.

3.6.5 The material turn for computer game studies

The final section of my extrinsic examination of how computer games exist in the world looks at what has been referred to as ‘the material turn’ for computer game studies. In *Game Studies’ Material Turn* (2012), Tom Apperley and Darshana Jayemanne expanded the framework of computer game studies beyond what they perceived as narrow formalist arguments deriving from the ludology/narratology debate. As well as covering what I have already discussed in the preceding section, such as the status of neoliberal play and the economic precarity in computer game production, Apperley and Jayemanne bring the materiality of the computer game artefact into consideration. In Section 2.3.6, I cited Cubitt’s materialist reading of digital media to illustrate how the notion of enclosure can be re-applied to the growth of digital media platforms. The ‘material turn’ of computer game studies essentially makes the same point. By combining ethnography and media ecology with a platform studies approach, I believe that the ‘material turn’ for computer game studies is a fitting way to complete my overall consideration of the relationship between the player, the Valve Source Engine and the world. Where Dovey and Kennedy connect Moore’s Law to the acceleration in computer graphics capabilities (2006, 52), Apperley and Jayemanne connect this same acceleration to the environmental footprint of electronics factories, e-waste dumps and coltan mines (Apperley and Jayemanne 2012, 14).

As Lammes, Bogost and Galloway have already demonstrated (Sections 3.3.1 and 3.6.2 respectively) players are distributed across vastly different geopolitical terrains, delimited by firewalls, Internet access and speed and the access to credit cards for online purchases. Apperley and Jayemanne argue that the diverse geopolitical and environmental conditions from which players enter a

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game discredits techno-utopian conflation of virtual worlds and political neutrality. They write:

in their status as objects in the world, digital games are linked to topics of global importance, for example, international relations, finance, organization of labour, and environmental issues. (Apperley and Jayemane 2012, 15)

In Section 2.3.6, I showed how Cubitt's appropriation of the metaphor of 'enclosure' characterised economic structures and environmental footprints as instrumental for how digital technology exists in the world. In Section 2.3.7, I linked these material contingencies to the conceptual enclosure represented by the Nature/Culture dualism. I showed how Descola's research points to the acceleration of the rationalisation of the physical environment under the Nature/Culture dualism. I presented Descola's description of Nature as "a ventriloquist's dummy of which man could make himself lord and master" as a correlate of the rationalisation and geometricisation of the physical environment via the processes of industrial modernity. Between these discussions of enclosure and the Nature/Culture dualism, I pointed towards the environmental consequences associated with globalised capitalism. My reason for doing this was to link the enclosure represented by the Nature/Culture divide to the material and environmental enclosure described by Cubitt. In my case studies, I explore how certain computer game representations must be understood according to both of these historical structures, so it makes sense here to demonstrate the material connections between them. By introducing the material turn in game studies, I hope to have provided a plausible set of extrinsic circumstances with which my case studies can be positioned in the world. This should provide an informative framework for player experience, and support my view that an examination of landscape in computer games must consider how the landscape exists in the world.

3.7 A starting point for computer games as landscape

In this chapter, I have given an overview of computer game studies with a focus on how the player experiences computer games and how the game and the player exist together in the world. Like Chapter 2, I moved from a discussion of computer game formalism to the modes by which the player experiences the game, to the material circumstances by which the player and the game exist in the world. In the next chapter, I will take the theoretical material from Chapters 2 and 3, and give a quick overview of the methodological approach I use in my case studies.

CHAPTER 4. THE OBJECT OF STUDY AND THE APPROACH

This chapter aims to transition the reader from the literature of the previous two chapters, into the case study analysis in the following four chapters. I remind the reader how and why I am analysing computer games as landscapes, and I give an overview of my approach. I identify the Valve Source Engine as my landscape medium, and four games made with this engine as my case studies. I give a summary of the questions that I derive from the literature, which in turn, structure the approach I take towards my case studies.

4.1 Computer games as landscape

This dissertation seeks to show why computer games should be considered as an important contemporary medium of landscape. I have cited key examples that show how landscape paintings have been historicised as indexes of historical processes, and how both their forms of representation and their status as material commodities have been instrumentally involved in these same processes. The way of seeing that the picturesque landscape puts forth, and its position as a cultural and economic artefact allowed the painting to function as a focal point for wide-ranging discussions on the relationship between humans and the physical environment, in this case the relationships between the enclosure of the commons, the emergence of modern patterns of wage labour, social divisions along gender lines, and the broader objectification of the physical environment inherent to the Nature/Culture dualism.

The reader will notice that where appropriate, I refer to my case studies as games, but I also defer to related terms such as 'playable artefact' or 'software'. As I transition from the first case study (*Half-Life 2*) to the last (*Garry's Mod*), the range of experiences and modes of interaction rapidly expand from those more conventionally associated with a player to those that fit more comfortably with the activities described in Section 3.6.4, such as playbour and producing. A

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number of scholars have posed solutions to this problem, of when computer games appear to become less and less game-like. In *Death Loop, as Feature* (2012) Leino advocates that ‘playable artefact’ would function as a more stable container term than ‘game’. Players can interpret the artefact as a game due to their approach to it as players (with a gameplay condition), and designers can call their products games to market them to players, however, the third-person scholar (Section 3.3.1) “cannot project an essence of ‘gameness’ on the artefact, as it would imply a designer fallacy and reduce the multistability of the artefact” (Leino 2012). Boluk and LeMieux’s metagaming theory posited a different solution, this time from a sociological perspective, where they re-classified computer games as tools for making metagames, and therefore all extrinsic activities surrounding computer games as forms of metagaming (Boluk and LeMieux 2017). The problem with this theory seems to be that with such a breadth of applicability, ‘metagaming’ might equally describe ‘existing in the world with technological artefacts’, and is so broad that my focus gets a bit lost. Terms such as ‘produser’ and ‘playbour’ already inject ‘use’ and ‘labour’ into the activities of the ‘player’, so, therefore, I will follow the experience afforded by each case study, and where appropriate, highlight how this experience requires a shift in how the artefact should be understood. Given that my focus is on studying computer games *as* landscapes, rather than to defining the boundaries of play when these boundaries become blurred, I highlight them and describe how an example such as *Garry’s Mod* might be more suitably described as a platform, or perhaps simply a piece of software.

4.2 The game engine as the landscape medium

The four case studies examined in this dissertation are computer games made using the Valve Source Engine. It is perhaps more accurate to say that my case study *is* the Valve Source Engine as a medium of landscape, analysed through a close reading of four separate Valve Source Engine games. As I described in Section 3.6.3, a ‘game engine’ refers to the software environment that runs a computer game, where the computation of graphical rendering, physics, sounds,

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artificial intelligence, networking, and all the other forms of programmatic representations that uphold the player's experience of the game occur. The individual case studies from the Valve Source Engine are *Half-Life 2*, the *Counter-Strike* series, a *Counter-Strike* mod that I co-authored entitled *Autosave: Redoubt*, and *Garry's Mod*. In Section 3.1, I introduced Espen Aarseth's observation that computer games are not a medium *per se*, because the variation in forms they can take is so impossibly vast, that a consistent form of mediation would be impossible to identify. By focusing on the mediation of a single game engine, I have provided a solution that allows me to talk about computer games and landscape with a degree of medium specificity – the variation within the four games can be discussed in reference to the engine as a shared system of representation.

Across the case study chapters, I provide a comprehensive analysis of the Valve Source Engine as a medium of landscape. The experience of each game is an experience of the Valve Source Engine, and each case study presents a different relationship between the player and the game engine. This is especially apparent as the divisions between playing and modding (Section 3.6.4) are slowly broken down, from the player-produced content in *Counter-Strike* (Chapter 6) to the modding-as-playing in *Garry's Mod* (Chapter 8). In this transition, I demonstrate how various structures of the game engine, from the economic environment it creates, down to the level on which representations are structured and coded, becomes a conscious part of my play experience.

By analysing a game engine as a medium, my approach is partly indebted to platform studies (Section 3.6.3) and the existing studies of computer games as landscape from a play-based perspective (Section 3.5). I have simply expanded from the game to the engine in order to give a longitudinal examination of how the engine has produced various landscape representations relative to player experience, and how the engine has changed over time to form various extrinsic relationships with the player, which influence the overall hermeneutics of the landscape it creates. The Valve lexicon of game entities, such as trees, rocks, building surfaces and characters has expanded over time, as have the mechanics

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available to the player, and the online systems through which players interact with one another. In addition to offering a common language of representation, these changes in computer game experience present a rich fabric of experience that I unfold as I explore the Valve Source Engine as a medium of landscape.

4.3 Hypothesis

The hypothesis for these case studies is that the representations made using the Valve Source Engine can be read according to a hermeneutics of landscape. Throughout Chapter 2, I showed how through both a cultural studies approach, via art history and geography, as well as a phenomenology of experience, it is possible to understand landscape as a form of social and historical encoding. I hypothesise that via a similar combination of analytical approaches, I should be able to reveal landscape relationships encoded across the representations made using the Valve Source Engine. Much like the landscape paintings analysed in Section 2.3.2 and 2.3.3 indexed historical processes, both through their intrinsic visual representation as well as their physical materiality, I propose that the landscapes of Valve Source Engine games, if analysed in an appropriate manner, should reveal contemporary landscape processes and relationships.

4.4 The approach

My approach for analysing the Valve Source Engine as a medium of landscape can be summarised according to three principal methods. The first is the play-based analysis drawn from computer game studies, influenced by phenomenology, where I seek to understand the game according to what I can experience as a player (derived primarily from Sections 3.2 and 3.3). The second is the overall framework of cultural studies, which I have introduced via Marxist, feminist and human geography and art history (derived primarily from Section 2.3). This is where I seek to historicise, to localise artworks and to understand them in a cultural context. The third, influenced by material culture studies and historical materialism, is where I contextualise the materiality of the computer

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game itself within the system of economic and technological relationships on which it depends (derived primarily from Sections 2.3.6, 2.3.7 and 3.6). These are the perspectives from which I analyse the Valve Source Engine as a medium of landscape. This triangulation of approaches is a direct response to how the discourse of the Landscape Theory Seminar (Section 2.4) intersected with the discourse surrounding the implied player versus situated contextual analysis (Section 3.3) and constitutes how I will analyse my computer game case studies in terms of landscape.

To structure my approach, I appropriate a set of questions that prompt my play-based analysis and inspire my critical reflection on each case study. For consistency, I use these questions in a similar order for each case study, but in some cases, it makes more sense to rearrange things a little. For example, when I transition from *Half-Life 2* to *Counter-Strike*, it made more sense to introduce *Counter-Strike* as a mod of *Half-Life* before proceeding to my first-person analysis. Putting that disclaimer aside, I have reproduced below a summary of the questions that I use to prompt the analysis and criticism of each of my case studies.

4.4.1 Play-based research

I start by playing each game multiple times through, keeping notes and taking screenshots. I observe shifts in my ability and style of play in reference to Leino's gameplay condition and Liboriussen's conditions for landscape experience (existential instrumentality versus the freedom required for disinterested contemplation, Section 3.5). Where relevant, I present an edited version of these gameplay notes as an italicised paragraph within the case study.

4.4.2 Experience, player, avatar, character

I examine my primary experience of play according to the notion of player embodiment, the relationship between the player, the avatar and the character,

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and the player's experience within the game landscape. This combines the research of Gazzard, Klevjer, Bayliss and Vella (Sections 3.3.2 and 3.5 respectively) with Casey and Tilley's research on the experience of place and landscape. As an analytical tool, I appropriate Tilley's five categories of space (Section 2.4.2) and examine how these spaces emerge as a result of my embodied player experience, and I use these results as a springboard to further analysis. For convenience, I have repeated these categories below:

1. *Somatic space*: Somatic space is the space of unselfconscious action, where sensation and movement begin with the human body structures the world in perception.

2. *Perceptual space*: Perceptual space is egocentric, and relative to the individual, and connects intentionality to movement and perception of the relative position of the body to direction and distance.

3. *Existential space*: Existential space is mobile, and is produced and reproduced through the actions of members of a group. It produces social meanings and symbolic or sacred spaces of human attachment. Places are sites of meaning creation, and boundaries between them, either mark out social distinctions, difference, oppositions, and Otherness.

4. *Architectural space*: Architectural space only exists as afforded by perceptual and existential space, and attempts to bifurcate into inside and outside spaces and channels of movement, and shapes and reproduces existential space.

5. *Cognitive space*: Cognitive space is that of reflection and theorisation, and discussion and analysis with others.

4.4.3 Game representations

I take the observations from my analysis of space and experience, and I compare them to a number of hermeneutic frameworks for computer game representation, as well as play-based simulation and phenomenology models.

In reference to Konzack's game typology (Section 3.1.1), I examine my observations relative the five layers that Konzack suggests (hardware, program code, functionality, gameplay, meaning and referentiality). Some of these criteria produce results most appropriate for intrinsic game representations, whereas others I save for my extrinsic analysis of the game in the world.

In reference to Aarseth and Elverdam's game typology (Section 3.1.1), I examine my observations relative to their eight categories (virtual space, physical space, internal time, external time, player composition, player relation, struggle and game state). I use the spatial typology provided by Nitsche (Section 3.4.1) (rule-based space, mediated space, fictional space, play space, social space) to make a similar formal examination, and consider his typology of in-game cameras (first person, following camera, overhead view) to more precisely locate the visual interface of my gameplay experience.

In reference to the mechanical representations of the game, I consider the 'simulation gap', 'congruence requirement' and the 'situated' qualifications to the implied player (Section 3.6.2 and 3.3.1 respectively) as a starting point for how the representations made to the player by the game can be considered according to the relationship between the player and the world. I use this extrinsic link to compare how undeniable representations within the game can be extended to conditions outside the game, and look to links made by other scholars studying computer game representations in historical and material terms (Sections 3.6.1 and 3.6.2).

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4.4.4 The shape of the landscape

Using the qualitative results of Tilley's spatial categories, I adapt the description of the 'shape' of the landscape from Tilley's *Place, Paths and Monuments: A Phenomenology of Landscape* (1994) to describe the 'shape' of the landscape as experienced by the player. I then use this to form an overall assessment as to what *type* of landscape is produced by the game and how it can be understood in relation to existing topics in landscape studies.

4.4.5 Intertextuality

Based on the literature in Sections 3.6.1 and 3.6.2, I build on the extrinsic links made in the previous section and examine the computer game according to its reliance on other media, such as photographic textures or intertextual references. I build on Mary Fuller and Henry Jenkins' (1995) research into the non-game precedents for certain landscape representations in computer games and examine how media theory such as that of Lev Manovich and Alan Kirby can provide valuable and justifiable insights into the extrinsic significance of computer game landscapes.

4.4.6 The game, the player and the world

Each case study concludes with a broader look at how the player and the game exist in a network of economic, social and historical relationships. Because this dissertation does not engage in quantitative ethnographic research, I am careful to position my extrinsic connections according to either existing research in games and landscape ethnography, or at least as what might be considered 'undeniable' significances. In these final sections, I demonstrate how primary player experience can be linked to extrinsic conditions and historical precedents that provide a contextual reading of the computer games as landscape.

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This concludes my summary of how I appropriate concepts from Chapters 2 and 3 for my analysis and use them to synthesise an argument for how the Valve Source Engine functions as a medium for landscape.

CHAPTER 5. THE PROTAGONIST LANDSCAPE OF *HALF LIFE 2*

In this chapter, I analyse the computer game *Half Life 2* as my first case study for the Valve Source Engine as a medium of landscape. I begin with a first-person play-based analysis that examines how the player experiences the world of this single-player first-person shooter (FPS) game. I locate this experience according to existing literature on the representational affordances of the first-person shooter as a genre. Using the spatial categories of Tilley (Section 2.4.2), I examine how my experience as a player via the avatar, my access to the character of Gordon Freeman and the playable world of the game reveals meaningful landscape spaces. I highlight the thematic resonances between the player and these landscape spaces as well as other forms of representation found in the game, such as surface rendered representations and game narratives. I derive the initial characterisation of the playable world of *Half-Life 2* as a linear landscape of progression (after Juul) and argue that this structure of experience can be the basis of an intertextual reading. I build on these extrinsic links and explore how the materiality of the game, from its textures to its relationship to the Valve Source Engine relates to Manovich's theory of the digital media remix. I conclude this chapter in reference to an observation made by Aarseth: that finishing a single-player computer game can bring about a feeling similar to unemployment. I combine this observation with my own analysis and arrive at a final reading of the single-player first-person shooter landscape of Half-Life 2.

5.1 A player in *Half-Life 2*

[Gameplay notes]

Sitting at my desk, the computer tower warms my legs, I take my shoes off and I start a new game of Half-Life 2. Directional sound plays through my headphones, I hear things in the game before I turn to see them. There is a hierarchy on my keyboard and a poised tension in my left wrist. The

thumb of my left hand is resting on SPACE, my pinkie finger is on SHIFT, my ring finger on A, middle finger on W and index finger on D. I adjust the angle of my keyboard to relieve the strain on my wrist. Panning the view on my screen with my mouse, I scan the surroundings. My avatar is in a train carriage, pulling into a train station, which is introducing me, the player, to a city. CTRL lowers my point of view. SPACE temporarily raises it. My avatar crouches and jumps. I appear to have no hands, but E is a functional prosthetic. If my avatar can pick an object up, or open a door, I can trigger this action with the E key.

I press W and my avatar view glides into the game world like a machine. There is a crosshair in the centre of my screen. Using my E prosthetic, my avatar can pick up large packing crates that levitate in front of me. I start to imagine my avatar body as a single eyeball on a pole. I can rotate and move it forwards and backwards, left and right. It does not feel like a body at all. Or perhaps it feels exactly like my body as a young man - movement is frictionless, and the world is defined by my ability to traverse it.

Friendly NPCs (non-player characters) seem depressed, and NPC soldiers tell me that my character is a prisoner of some sort. Another NPC recognises my character as a hero and gives me a crowbar – my first destructive prosthesis. Clicking the left mouse button, I can destroy the wooden crates that are close to me, and attack hostile NPCs. After killing a soldier NPC, I pick up its gun. As a left-handed player, I realise that my avatar is right-handed. My eyeball perceives perspectival space. If I align the crosshair on my screen to an object within my field of view and click the left mouse button, I shoot at it. The gun takes up position on the lower right-hand portion of my screen. Between the eyeball of my avatar, the crosshair on my screen and the trajectory of the bullet, an interval is collapsed. Firing the gun emphasises the vanishing point of perspectival space, marked by the crosshair on my screen. I can shoot at the NPCs and they can shoot back at me. The world of the game comes back to face me, culminating at the eyeball of my avatar. Bullets can hit me, and my

existence in the game is now threatened. I press the ESC key, save my progress, then return to the game and move forward into the landscape.

The passage above describes my primary experience of place using the first-person avatar and starting to play *Half-Life 2*. In the following section, I examine this experience as my primary experience of place in the game.

5.1.1 Who is in the landscape, and how?

In the preceding account of my gameplay experience, there is a slippage between the actions I attribute to myself as a player and the actions I attribute to my avatar. Based on Klevjer's description of how the 'prosthetic navigable camera' can relocate the player's sense of bodily awareness (Section 3.3.2), I move from the "drunken stupor" of correlating my keyboard inputs to avatar actions, to the increasingly comfortable, skilful and inhabitation of the game environment via the avatar, and as such, I begin referring to in-game actions in the first person, such as "I jumped" and "I shot". To quote Bayliss (Section 3.3.2), the avatar as a "locus of manipulation" disappears, and as a player, I have become embodied in the game. I situate the "playing I" as myself, the researcher, playing the single player computer game, bounded by the materiality of the gameplay condition that allows me to experience the game as a player (Section 3.1.2). I form my observations as a player via the representations available to me, as a player.

But *how* am I in the landscape? According to Vella's research on player embodiment, the landscape of the game, made available by the avatar, allows the player to experiment with the type of emplacement and being-in-the-world that the game has to offer (Section 3.5). Building on Rose (Section 2.3.1) and Casey (Section 2.4.3), the way in which I am emplaced as a player determines how I conceptualise the game as a series of spaces. This is also the process by which place becomes space, and where I look for a reading of landscape. Klevjer's paper *The Way of the Gun* (2006) provides a starting point to locate my gameplay

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description alongside the representational conventions of the first-person shooter computer game. Klevjer writes:

because the hand with the gun is fixed in relation to the framing of the first-person perspective (as if mounted to a subjective camera, immovable), the gunpoint is always at the centre of the player's vision. Looking and targeting comes together in the same movement, and the player is invited to, as it were, follow his gun. (Klevjer, 2006a, 1)

He continues:

The first-person camera of the FPS is not really just a camera, but a camera-and-gun joined in the same virtual apparatus, a camera-gun. (Klevjer, 2006a, 2)

The merging of the player's vision with the targeting of the gun creates an experience characterised by precise aiming, speed, and movement, as well as the suspense created by the contradiction between the field of view and the navigable environment. Klevjer argues that the contrast between the navigable potential of the avatar in 3D space and the relatively narrow 'tunnel vision' provided by the monocular subjective avatar camera creates what Leino might call an 'undeniable' dichotomy between narrow, tunnel-like spaces and more open environments. In a tunnel-like space, the player can easily see and target threats, however, in open environments, the player is vulnerable to attacks coming from outside their field of vision (Klevjer, 2006a, 2). Klevjer contrasts the tunnel vision of FPS with the much wider aural field provided by the game, where sound can alert the player to events and threats from outside their field of vision, which he argues, adds a third vector by which the experience of the player avatar can be manipulated to produce tension in the playable space of the game (Klevjer, 2006a, 2). An initial parallel to landscape theory can be made here, between how Klevjer describes FPS experience and Appleton and Bourassa's biological reading of landscape as prospect and refuge (Section 2.3.4). My experience is defined by the visual restriction of my fused camera-gun, so I seek

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restricted prospects, whilst relying on my wider aural receptivity to detect threats. Like Klevjer, I agree that there are basic tensions that exist in *Half-Life 2*, facilitated by the contrast between tunnel-vision and ‘non-tunnel hearing’, however as per my criticism of prospect/refuge theory in Section 2.3.4, I believe these functions can be greatly expanded towards a richer, more complete evaluation of the landscape experience produced by *Half-Life 2*.



Figure 5 A tunnel-like space in *Half-Life 2*, author's screenshot.

Returning to Rose, it is also reasonable to suggest that my avatar's experience of space is distinctly gendered. Rose writes "it is never 'the body' which is erased, but women's bodies because the master subject so rarely acknowledges his" (Rose 1993, 82). My observation of the 'eyeball on a pole' (the camera-gun) corresponds to my 'body-less' experience as a young, 180cm tall, white male. As Rose describes, this contextual position allows me the exclusive privilege to consider myself as 'without a body', due to the lack of friction between my body and the world I experience. My access to this 'norm' is only disrupted by age or injury. Compared to Rose's description of her experience of oppressive space in a quiet street (Section 2.3.1), my avatar experiences space in terms of access and

navigation. Therefore, even before I develop a relationship with the game character, it is reasonable to suggest that my experience via the 'camera-gun' is masculine.

5.1.2 Remediation in FPS vision and the framing of landscape

Before moving on to what sort of landscape *Half-Life 2* produces, there are some important cultural precedents for how the vision of FPS came into being. Jay Bolter and Richard Grusin locate 3D graphics as a remediation of the Albertian window, where a two-dimensional image plane is generated using a mathematical projection of perspectival lines of recession (Bolter and Grusin 2000, 122). Within the narrow field of FPS vision described by Klevjer, Bernadette Flynn argues that the artificial elongation of the Z (depth) axis results from a rigid Euclidian delineation between 'objects' and 'emptiness', and that the exaggerated depth of field this creates emphasises the separation between foreground and background elements, which further encourages the player to 'penetrate' into the visual frame (Flynn 2005).

Whilst the perspectival projection of 3D space can be traced from Renaissance painting through to lens-based optics, there is another important point to make between the monocular perspectival gaze and the experience of place and landscape, which takes us back to the Picturesque theorists of the 18th century. In Section 2.2, I cited Punter, who described the Picturesque as creating a landscape where nature is denaturalised and subjugated to the "framing and shuttering of the ego" (Punter 1994, 228). I pointed out that a number of texts by Picturesque theorists appeared in the form of travel guides, which sought to teach tourists how to enjoy the English countryside. Picturesque theorist William Gilpin writes:

Many appreciate nature through travel, but can't give reason as to why they appreciate it, the Picturesque seeks to define how we enjoy nature travelled through, not lived in. (Gilpin 1794)

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As both a travel guide and a drawing textbook, Gilpin's work explained in detail how landscape tourism should be structured as a search for images. His quantification travel via the production of images is an early example of a practice familiar to contemporary tourism studies. Sociologist John Urry describes tourist photography as the reproduction of a culture's dominant visual ideology, achieved by masking ideological structures in the pursuit of 'accurate' representations. (Crawshaw and Urry 1997, 183) For Gilpin and the Picturesque theorists, accuracy was not a priority, as they advocated for the adjustment and improvement of observed phenomena (Section 2.2.1). The shift, from advocating that representation should be adulterated and improved, to an implicit assumption that such improvements should be concealed, is addressed in Mitchell's thesis that landscape "naturalises its conventions and conventionalises its nature" (Section 2.3.8). It is in this spirit that I make an initial connection between the Picturesque 'framing and shuttering of the ego' and the subjective rendering of 3D space via FPS vision in *Half-Life 2*.

In Chapter 1, I demonstrated how the imaging conventions of the Picturesque played an instrumental role in naturalising the agrarian power relations of 18th century England. I argue that the objectification of landscape via the projected image plane of the lens must be treated as a fundamental part of how the player is emplaced within a first-person shooter game like *Half-Life 2*. In this game, the environment is rendered on my screen as a two-dimensional projection of a three-dimensional computational environment – a technological descendant of Renaissance visuality, photography and film. As a qualitative precedent for the experience of the player in the FPS game, Galloway compares the monocular 'gamic vision' of FPS to the visual semiotics of the subjective point of view shot in film. In Mike Nichols' *The Graduate* (1967) or Paul Brickman's *Risky Business* (1983), the subjective POV shot is used to create a sense of alienation and emasculation, however in films such as Jonathan Demme's *The Silence of the Lambs* (1991) or James Cameron's *The Terminator* (1984), the overlay of night vision goggles or cyborg vision creates a predatory subjectivity. (Galloway 2006b, 63) The transition between alienated vulnerability and predation is evident in Paul Verhoeven's *Robocop* (1987), when the initial helplessness of the

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protagonist's cyborg subjectivity, reminiscent of the snorkelling mask in *The Graduate*, is transformed into the thermo-vision of the 'super-cop'. Galloway links these transitions of subjectivity to the 'first-person shooter prototype' shots used by Alfred Hitchcock in films such as *Topaz* (1969) or *Spellbound* (1945), where the coalescence of the camera and the aim of the gun emphasises the actionable diegetic space (Galloway 2006b, 67).

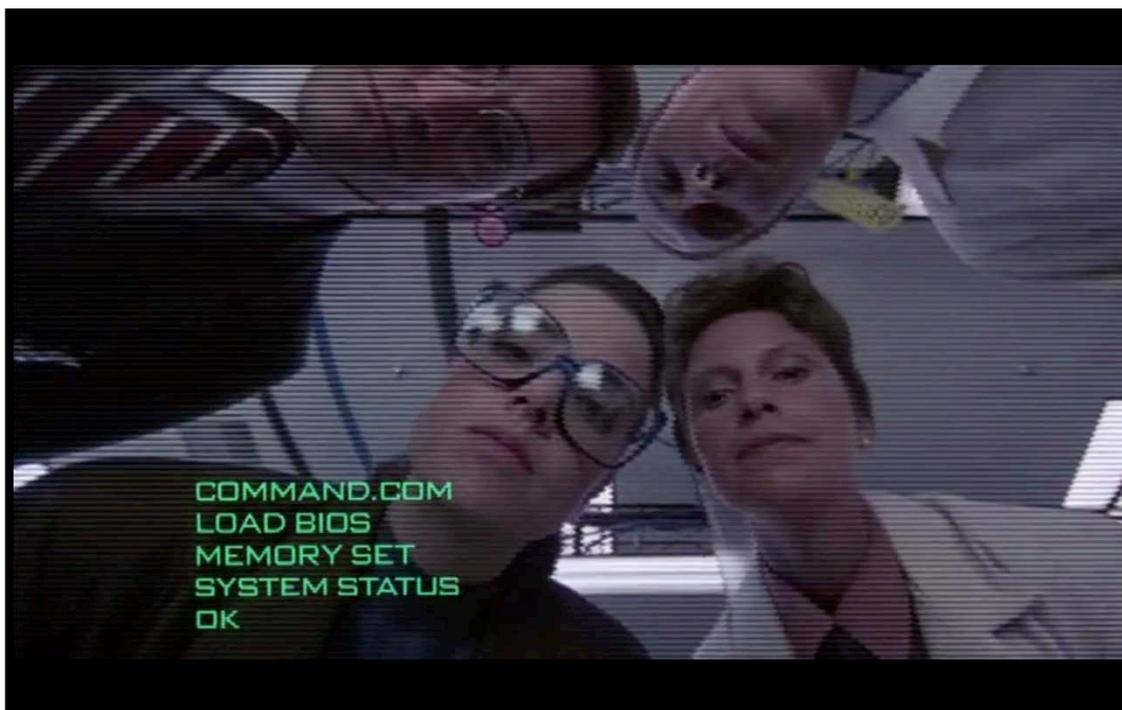


Figure 6: Alienated subjectivity in *Robocop*. 1987. Directed by Paul Verhoeven.

By referencing these precedents in landscape drawing, tourist photography and cinema, I make an addition to Galloway's qualitative contextualisation of the 'gamic vision' of FPS. If the tourist photograph can be traced to the 'framing and shuttering of the ego' characteristic of the Picturesque, where the landscape subject conceals its construction by implying a form of naturalism, the vision produced by FPS might be characterised in a similar way. The tourist photograph requires the tourist photographer to frame their image in a certain way using the camera. The landscape is objectified as a tourist spectacle via a practice that dates back to Picturesque sketching. *Half-Life 2* objectifies its landscape using the only prosthetic through which it is available to the player. It objectifies the landscape according to the affordances of the camera-gun. As a player, I am a

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walking male camera, I perceive space as actionable and traversable, and the world as framed images; my subjectivity has visual precedents forms of alienation, vulnerability, predation, and the 'framing and shuttering of the ego'. *Half-Life 2* creates a specific mode of experience and sense of place – I frame and objectify the world according to the interactive experience afforded by my avatar – the male camera-gun.



Figure 7: Predatory subjectivity in *The Silence of the Lambs*. 1991. Directed by Jonathan Demme.

5.1.3 The somatic, perceptual and existential spaces of *Half Life 2*

Having analysed my experience in the environment of *Half-Life 2*, I can now consider what types of spaces I can identify as a player. Using the spatial categories of Tilley, the somatic space (where sensation and movement begin with the body and structure the world-in-perception) derives from the experience I have described in the previous section. As a player looking out upon the world, I experience *Half-Life 2* via the camera-prosthetic in actionable space. My location changes according to the relationship between the image plane of

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my screen, my negotiation of input controls, and my aural awareness via the sound in my headphones.

Perceptual space exists between my actions as a player relative to the actions of my avatar-prosthesis. My gun travels down the vanishing point of my perspectival gaze, and I enjoy the 'body-less' sensation typically reserved for masculine subjectivity. I am aware of an undeniable topology – there are heights that I can fall from, causing avatar death, and there are doors that I cannot open.

Existential space is a more difficult category to consider. Typically defined as reproduced via the activities of a group, this seems contradictory in relation to a single-player computer game. Borrowing from Möring's research, I will say that games contain the human condition by way of incorporating death, love, work and struggle (via Leino's gameplay condition). (Möring 2015) Therefore the existential space of *Half-Life 2* exists in the pathways I am forced to follow through the landscape, the struggles I encounter with NPCs and puzzles, and the loading points that demarcate each stage. This experience of landscape as a sequence of challenges will be the subject of Section 5.2, where I will elaborate on the architectural and cognitive spaces that complete Tilley's five categories, as I expand my analysis from emplaced experience to a broader consideration of an overall landscape structure.

5.2 The shape of the landscape in *Half-Life 2*

[Gameplay notes]

The landscape of *Half-Life 2* is shaped like a line, it has a forwards and a backwards direction. This line is divided into sections, which recognise and quantify my ability. If I coordinate my keystrokes with the slide of my mouse across my desk, I can balance on a thin wooden plank and successfully sneak past the monsters hiding in the sand below. The landscape is a challenge for me to overcome.

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A gunship fires at me in regular intermittent bursts. If I fire my rocket launcher in between these bursts, I can shoot down the gunship and move on to the next section. The landscape is a chain of checkpoints that quantify my activities into pass and fail binaries. The landscape puts a warm hand on my shoulder and guides me forwards. It forgives my mistakes, offers me second chances, and allows me to prove myself against it.

Driving down the Lost Highway, I see a single house up on the headland. I recognise this aberration as a possible checkpoint in the landscape. The house has rolling landmines hiding inside, which chased me out onto the grass. I run away and I pull out my gravity gun, hurling the mines over the adjacent cliff, and into the ocean below. I return to the house and search for health packs and ammunition. I die at the next checkpoint on the Lost Highway, but not before learning where my enemies are hiding. I respawn wiser, kill two enemies, quick-save in the middle of the battle and perfect my response to the line of the landscape.

No matter where I am on this line, I am the centre of attention. The line encloses the world to confirm my existence and purpose. Time is relative. When I stop moving forwards, the landscape stops to wait for me, playing the ambient echoes of narrative in my headphones. If I leave the line, the landscape guides me back. I tried jumping off a cliff, but the ocean was full of electric eels, and I woke up, back on the Lost Highway. The line is not a war zone, it is a skill-tester. Like fighting a wooden Kung-Fu dummy, the landscape reflects my actions back at me.

In this section, I analyse the shape of the *Half-Life 2* landscape, and how it is structured to confirm the existence and purpose of the player, and demonstrate how this linear chain of challenges can be likened to a theme park ride or a safari. I examine how these historical precedents allow me to understand the structure of the *Half-Life 2* landscape in terms of a 'double experience', where the player is

exploring a landscape that has been built to anticipate their action and to confirm their achievements.

5.2.1 The gladiator-explorer in the linear landscape

Klevjer's description of the player as emplaced through the camera-gun avatar (Section 5.1.1) reveals some important structural relationships between the player-avatar and the landscape. He sets-up a categorical binary within the genre of the first-person shooter, between the tactical FPS and the adventure FPS game. The tactical FPS game seeks a level of simulation realism by encouraging the player to minimise their violent intervention, whereas the adventure FPS positions the player as a gladiator/explorer/engineer, who experiences "explorative linearity" in an adventure world comprised of enemies to be overcome, puzzles to be solved, and the gradual increase in their power over the landscape. (Klevjer, 2006a, 7) Klevjer refers to *Half-Life* (the prequel to *Half-Life 2*) as a prototypical model of the adventure FPS, and writes:

Half-life follows a rather elaborate logic of scientific-industrial instrumentalism, one that was only implied by the general structure of Doom. The name of the developer, Valve, is quite illustrative, suggesting that this is a game for the engineer as well as for the soldier. Progressing through the game is like an exercise of rational, problem-solving, painstakingly systematic, and ultimately very civilized, work. (Klevjer 2006a, 5)

Therefore the player as masculine camera-gun is also the player as problem-solver, in a landscape of challenges to be overcome. This essentially corresponds with the second claim by Rose, that the 'without body universality' of masculine space is that which "imagines that universality in terms of spatial conquest". (Rose 1993, 193) The landscape chain of challenges also satisfies what Juul refers to as 'games of progression' (Juul 2002). Juul makes a categorical distinction between what he calls games of progression and games of emergence.

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The latter comprise “a small number of rules that combine and yield large numbers of variations” (this is the case in my examination of *Counter-Strike* in Chapter 6), whereas the former requires the player to “perform a predefined set of actions in order to complete the game” (Juul 2002). Whilst Juul describes as ‘emergence’ as the more theoretically interesting structure due to the ludological variation in strategies that players invent, in this section I argue that the progression structure of the *Half-Life 2* landscape nonetheless generates an interesting landscape reading. The perceptual space of *Half-Life 2* establishes the player via the masculine camera-gun, with the forward momentum of the crosshair-vanishing point (Section 5.1). The emplaced desire to penetrate the Z-axis forwards into the landscape resonates with the structure of the landscape itself. Therefore, the architectural space of *Half-Life 2* (Tilley’s third layer of spatial experience) derives from the combination of the player as camera-gun, combined with the “explorative linearity” of the progression-based landscape. The player encounters the landscape of *Half-Life 2* as a sequence of problems to be solved, based around hostile NPCs and puzzles in-game physics. The landscape is in the shape of a line and the player is drawn down that line as an explorer and a gladiator, empowered with the ability to overcome each challenge and confirm their centrality in the landscape. In the next section, I consider how the structure of the linear landscape and the player-protagonist might be understood in a broader cultural context.

5.2.2 A theme park landscape

A number of scholars have likened the ludological topology of certain computer game environments to the structured spectacle of the theme park. In his chapter on *World of Warcraft* entitled ‘The Hollow World’, Aarseth writes:

The nature of the game dynamics can be compared to a theme park ride, the Fordist paradigm of assembly-line mass entertainment as pioneered by Disney: “Move along, please, more enjoyable monsters and sights await around the next corner.” (Aarseth 2008, 114)

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The structural comparison between a theme park and a computer game landscape brings a number of features from *Half-Life 2* into a convenient conceptual container. In Section 5.1.2, I suggested that the remediation of the camera in the first-person shooter forges initial links to the quantification and consumption of the physical environment, evident in the historical trajectory from the Picturesque to tourist photography. Aarseth's paper adds the qualification that the landscape has also been structured for ludic consumption. As in the theme park, distances are compressed to avoid the boredom of travel, and the world is organised for the ludic consumption of the emplaced FPS player. This world is not a "proper world", but "a conglomerate or parkland quilt of connected playgrounds built around a common theme" (Aarseth 2008, 121).

Aarseth's comparison to a theme park seems to be partly indebted to the body of research that presents the theme park as a structure that typifies the 20th-century landscape. In Jean Baudrillard's *Simulacra and Simulation* (1995 [1981]), the theme park is described as "a cover for a simulation of the third order" (Baudrillard 1995 [1981], 8). Baudrillard writes:

Disneyland exists in order to hide that it is the "real" country, all of "real" America that is Disneyland (a bit like prisons are there to hide that it is the social in its entirety, in its banal omnipresence, that is carceral). Disneyland is presented as imaginary in order to make us believe that the rest is real, whereas all of Los Angeles and America that surrounds it are no longer real, but belong to the hyperreal order and to the order of simulation. (Baudrillard 1995 [1981], 8)

For Baudrillard, the theme park is not simply a discrete landscape restructured for the enjoyment of the park visitor, it a paradigmatic structure for the "hyper-reality" of the world outside the park. Under the condition of postmodernity (discussed in Section 8.4.2), the real is no longer distinguishable from the virtual, and the simulacra (the copy with no original) precedes the real (Baudrillard 1995 [1981], 8). Therefore, whilst Aarseth's observation of the similarity

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between the compressed, task-oriented landscape of *World of Warcraft* and a theme park is indeed valid, it does not produce any binary contrast between the 'real', or 'non-theme park/game world', but instead, it leads to a deeper set of parallels between how landscape is experienced as a pre-structured, or confected environment, which I examine throughout this chapter.

In analysing the neo-baroque spectacle of the theme park, Angela Ndalianis makes a fascinating examination of pleasure and threat in the various incarnations of *Jurassic Park*, starting with Michael Crichton's book (1990) and Steven Spielberg's film adaptation (1993). The diegetic world of *Jurassic Park* is a theme park that contains dangerous genetically engineered dinosaurs. Conflict occurs when the bounds of the park are breached, and the threat of the dinosaurs is actualised for the human protagonists. The Sony PlayStation game *The Lost World: Jurassic Park* (1997) allowed the player to inhabit the fictional world of *Jurassic Park*, performing the roles of both human and dinosaur. The theme park ride *Jurassic Park Island* (1999) at Universal's *Islands of Adventure* in Florida, created a world where, according to Ndalianis, visitors could experience "wonder turn to terror when they were stalked by raptors and a mammoth Tyrannosaurus, barely escaping with their lives" (Ndalianis 2004, 2). Whilst the existential threat experienced in the theme park might be debatable, Ndalianis reveals some of the complexities left unexplored in Aarseth's initial comparison. Whilst Aarseth is correct in his analogy between the game and the theme park, the strength of the comparison is found deeper in the simulated nature of postmodernity, rather than as a simple game world/real world comparative binary. I expand on the significance of the theme park and the hyper-real in Section 5.4, however, for the purposes of analysing the architectural structure of *Half-Life 2*, I will now shift to what I think is a stronger analogy, which is the comparison between the game landscape and a wilderness safari.

5.2.3 A safari landscape

Ndalianis' reference to threat in relation to the theme park is an important point for adjudicating the structure of the FPS landscape of *Half-Life 2*. In *Half-Life 2*, I encounter a landscape of sequential challenges, measured by my gameplay condition and my desire to remain in the world of the game (Section 3.1.2), which is also relative to my ability to repeat and master challenges via the quick-save and my ability to die and start again. My relation to each challenge is delineated by the structure of the *Half-Life 2* landscape, where challenges are activated by navigation into trigger points that instantiate new enemies to be defeated. If I do not navigate into the next trigger point, I can luxuriate in what Galloway (2006) refers to as the 'ambience act' of the game, and enjoy the sights and sounds before the next risk is instantiated. My experience of challenges and problem solving is therefore relative to my position and movement within the game.

Mary Fuller and Henry Jenkins (1995) orient the landscape of problem-solving according to the travelogues that provided the literary accompaniment to the colonisation of the New World by European powers in the 17th century. I read the analysis of Fuller and Jenkins as charting the actionable landscape as experienced by power and domination. According to their argument, the landscape spaces in *Half-Life 2* are those that I have dominated and colonised by my action, and the spatial narratives of this game should be understood as the conversion of emplaced experience into spatial domination. By way of comparison, Jenkins and Fuller point to the illustrated catalogues of John Smith's adventures in Virginia (1624) as a prescient example of a place, conquered and transformed into space via colonialism, then presented as a site for adventure and exploration. By way of Michel De Certeau's writings on New World literature, Fuller and Jenkins show how the Virginia Company tended to downplay the material affordances of the colonial process, such as the need to trade for corn in order to save the colony from starvation, and emphasised "goal-oriented trajectories" in the literature later produced for popular consumption. The way that colonisation defined the space 'Virginia' in terms of vulnerability

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and survival is replaced by the heroism and spatial conquest of John Smith's rescue of the Lost Colony or Walter Raleigh's quest for El Dorado. (Fuller and Jenkins 1995) They write:

John Smith's ability to trade for corn to feed a starving colony was unarguably more critical than the story about the rescue of the Lost Colony that the Virginia Company tried to impose on him or the story about Pocahontas that he recounted 16 years after the event and 6 years after her death. (Fuller and Jenkins 1995)

Fuller and Jenkins make a very important point here. Whilst, on the one hand, I can talk about experience in the landscape of *Half-Life 2*, and my struggle to achieve a domination of space, but what Fuller and Jenkins are pointing out is that in the literary history of the adventure landscape, a defining experience has already occurred – place has already been colonised and abstracted into space, and the challenges in front of me exist as a landscape novelty, sustained by previous conquests. In *Half-Life 2*, the goals in the landscape are created specifically for me, the player, and my traversal results in a chain of personal achievement. At no point is my purpose in the landscape confusing, because this landscape emplaces me via the well-trodden path of adventure narratives. I, therefore, liken the structure of *Half-Life 2* to that of a safari. I am not alone in the wilderness, I am on a pre-planned path (I problematize the notion of 'wilderness' in Section 2.3.3), and my guides have made sure I will confront and prevail over a captive lion at my journey's end. Unlike the theme park visitor of Ndalianis and Aarseth, I am not along for the ride; I am here to test myself against a sequence of challenges. This sequence articulates the architectural structure of the ludic landscape in *Half-Life 2*. This architectural space is a corridor of confirmation that congratulates me on my increased mastery. The warm hand on my shoulder is the path that has been laid out before me, it is the experience of landscape where the gameplay condition has turned to face me at all times, confirming my purpose and direction, and the quicksave mitigates any risk that I might experience in relation to the gameplay condition. In *Playing the World: Computer Games, Cartography and Spatial Stories* (2008), Lammes generates a similar

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reading of *Civilization IV* (2005) based on Fuller and Jenkins' link to De Certeau, where the player shifts from the role of the protagonist cartographer to the protagonist traveller (but importantly never the protagonist explorer, because as Jenkins and Fuller point out, the landscape has already been explored) (Lammes 2008, 94).

In *Half-Life 2*, I experience the landscape in the shape of a line, it is a safari built for the pleasure of the touristic gaze, a singular view of a world that exists as images, and a world made specifically to confirm the purpose and position of the playing subject. In the next section, I examine how this emplaced experience relates to the player-character relationship within the *Half-Life 2*.

5.3 The alien in the landscape

[Gameplay notes]

Playing as Dr Gordon Freeman, it is better to run than to walk. The architectural banalities of urban administration have become the lonely thoroughfares of my traversal – drainpipes, ventilation shafts and storm water canals. A pollution haze sun sets in a toxic wasteland, where rushes and reeds surround bleached boats and create the sort of ad hoc ecosystem one might expect to find in an abandoned construction site. My traversal is relentless, unlocking doors, finding pathways across toxic swamps, and killing hordes of soldiers and monsters. Some doors can never be unlocked and some fences can never be climbed, despite how many wooden crates I stack next to them. I am the hero in this landscape, the scientist that people look to as their warrior saviour.

In this section, I extend my observations of the emplaced player to consider how these structures relate to the player-character of Gordon Freeman, and the fictional diegetic world of the game. I begin by examining the player-character relationship, and how my ludic experience in the landscape safari relates to the

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fictional world of the player-protagonist and the idea of alienation in the landscape. I introduce art historian Robin Kelsey's theory of 'landscape as not belonging' as a plausible model for this player-character-landscape relationship. By describing the player-character relationship in terms of alienation and 'not belonging', I will set up a series of extrinsic parallels that I later examine in Section 5.4.

5.3.1 The alienation of Dr Gordon Freeman

To contextualise the subjective relationship that I form as a player with my character, in this case, Dr Gordon Freeman, I turn again to Bayliss, who writes that the first-person shooter is especially proficient at creating player-character relationships because the visual cues of a represented character model, such a third-person view are absent, and the player is more likely to form a subjective identification. Bayliss writes: "an avatar based playing relationship relies on the player to play a secondary game of make-believe in the form of role-playing" (Bayliss 2010, 192).

The game of make-believe that I play with Dr Freeman is re-enforced by the masculine lens I have already described, how my character is referred to by other NPCs, and how my character relates to the landscape. The NPCs encourage me to see my character as a figure of salvation – human NPCs look to me for my abilities to vanquish alien oppressors, and alien oppressors treat me as a dangerous threat. My relationship with the landscape is for the most part solitary – my character reflects my solitary position as a player. As Leino notes, the single player encounters the computer game as an existential object via the gameplay condition. As such, it is reasonable to surmise that this mainly solitary relationship reinforces the existential character of this task-based landscape. The landscape constantly faces the player-character, challenging them with enemies and puzzles, and rewarding them with progression.



Figure 8: An obstacle course landscape, built just for us, *Half-Life 2*, author's screenshot.

In Section 5.1.1, I locate the experience of the player according to Klevjer's notion of the 'camera-gun' and introduce Galloway's qualitative distinction that this point of view can be compared both to a predatory perspective as well as to a form of subjective alienation. The solitary condition of the player-avatar-character relationship and the dualism of alienation and predation start to reveal the 'mode of being' for Dr Freeman.

Across the fictional world of *Half-Life* and *Half-Life 2*, I learn that my character, Dr Freeman is a scientist, despite the fact that the actions we perform are those of a gladiator and an adventurer. (Section 5.2.1) I am the sole witness to the landscape and the protagonist around which NPCs swarm. I am surrounded by the familiar landscape of modern bureaucracy, but the cataclysm of the alien invasion has liberated the landscape from its instrumental rationality –roads are not defined by traffic regulations, apartments are not defined by property and debt, and air conditioning vents are not defined by air conditioning. As a player, I enter the landscape of *Half-Life 2* equally liberated from bureaucracy – I am not defined by my employment status, my personal life, or my fears for the future, I am only defined by how the landscape quantifies my actions. Outside of the

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game, my landscape has less direction and I am not the protagonist. I share a pleasurable sense of liberation with Dr Freeman. In the narrative backstory of the first *Half-Life* game, Dr Freeman is a scientist, somewhat alienated from his work. His liberation comes in the form of a cataclysmic workplace accident, and the realisation that this player-character seems quite ignorant of the inter-dimensional military experiments being done by their employer (the Black Mesa Corporation) with monstrous space aliens. Amid the chaos of explosions and alien attacks, Dr Freeman abandons his life of research and becomes the game-character defined by the gladiatorial actions performed by the player. In a way, Dr Gordon Freeman reads like a science fiction caricature of Marxist alienation. Karl Marx famously writes: “if the product of his labour, his labour objectified, is for him an alien, hostile, powerful object independent of him, then his position towards it is such that someone else is master of this object, someone who is alien, hostile, powerful, and independent of him” (Marx 1844, 79).

So whilst Marx was probably not writing about actual aliens violently bursting into the workplace through inter-dimensional portals, it is fun to think that Freeman’s alienated labour resulted in actual aliens destroying his workplace. From the perspective of the player, Dr Freeman was liberated from an employment situation he did not properly understand, and joined the player in a new life, as the sole protagonist in a post-apocalyptic landscape. As an emplaced player, I enjoy a similar liberation to that of Dr Freeman. As an employee in a large bureaucratic organisation, my future is unclear and my time is administered. Emplaced in the character relationship with Dr Freeman, we embark together on an adventure, liberated from bureaucracy, alone together as protagonists in the landscape. We run rampage through the ruins of our alienation, guided by a warm hand, through a landscape safari, built just for us.

Dr Freeman and I seem more suited to the safari than we were to our previous lives. The linear landscape simplifies life into a set of clearly defined obstacles. My player-character relationship with Dr Freeman is at its strongest when I see myself as alienated from my work and from my environment. Sitting in my office, I wonder whether I could escape my office via the air-conditioning duct. Could I

kill a monster with a crowbar? Could I apocalypse? This particular player-character identification is touched on by Cubitt, who writes:

A similar process of negation is involved in the genesis of the form of play which it seems dominates corporate culture. We are still involved in techniques of absorption and in a bounded and timeless play world, but now the goal of play is self-realisation in the face of a more thoroughly alienated environment, both natural and human. The players seek neither to meld with others nor to subordinate themselves to a greater external environment, but to ratify their existence as separate, definite and defined individuals. (Cubitt 2009)

Therefore there are two types of alienation at play in my player-character relationship with Dr Freeman. On the one hand, I propose that we share a sense of liberation, by transitioning from an alienated anonymous worker into a protagonist hero who can achieve self-realisation in the landscape. But on the other hand, as Cubitt points out, this self-realisation also takes place in a landscape that we are alienated and define ourselves as separate. This relationship has a strong history in landscape theory, which I will summarise via Kelsey's notion of landscape as a form of 'not belonging'.

5.3.2 The landscape of not belonging

Despite the pleasure of linearity and confirmation that this landscape provides, it begins and ends with the same problem. It was a violent monstrosity that liberated Dr Freeman from alienation, but his liberation instantiated another form of not belonging. Whilst the character of Dr Freeman exists in opposition to the monsters and aliens that dominate the landscape, he also remains alienated from the human characters in the game. Despite the temporary co-operative relationships he forms with secondary characters, the game commences with Freeman being inserted into the world by the mysterious 'GMan' character, and concludes with Freeman being extracted in a similar way. Within the diegetic

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fiction of the game, Freeman is an alien in the landscape, and the player-character relationship in this landscape is characterised by the safari of progression, and ludo-fictive sense of 'not belonging'.

The characterisation of landscape as 'not belonging' is a theory developed by art historian Robin Kelsey. Kelsey argues that landscape as a fantasy of 'not belonging' can function as a container concept for the broader history of Western naturalism (Section 2.3.7). The historical foundation of this theory rests in the emergence of 'landscape' as a political concept in Romance and Germanic languages that "referred to the place of a polity, to a largely – and often fiercely – independent farming republic" (Kelsey 2008, 205). Kelsey writes: "Landscape as *Landschaft* was thus about the political belonging of the people of a place to the *Landschaft* and not to a distant sovereign" (Kelsey 2008, 205).

After the work of Kenneth Olwig and Yi-Fu Tuan, Kelsey argues that the notion of 'landscape' as a construction for geopolitical identification can be traced through to the modern Western appreciation of landscape as contemplative scenery. As visual objectification merged with conceptual identification with the nation-state, Kelsey writes that "landscape became a perspectival fiction designed to bond otherwise distant or rival communities within a national identity" (Kelsey 2008 205). Therefore, much like the word 'animal' exists to distinguish the exceptional status of the human being, Kelsey argues that the Western conception of 'landscape' creates an objectification to expresses identification via exceptionalism, and is, therefore, a concept that distinguishes humanity *from* the physical environment. With the advent of industrial modernity, Kelsey argued that Romanticism repurposed the visual objectification of landscape as an oppositional stance, and landscape combined "not belonging with aestheticized longing" (Kelsey 2008 205). Kelsey provides a number of variations for how the concept of landscape manifests a Western fantasy of 'not belonging'. For the benefit of the reader, I have summarised some of the relevant fantasies of 'not belonging' identified by Kasey, and the suppressed paradoxes that they rely on:

The futuristic fantasy: Humanity belongs to a distant, galactic tomorrow.

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Suppressed paradox: The trajectories of history and the propensity of humans to move their mistakes from one location to the next.

The unilateral fantasy: The earth is obdurate and resilient, so our belonging is not required.

Suppressed paradox: The unilateral fantasy suppresses the mounting evidence that our ecology is delicate relative to our patterns of consumption.

The nostalgic romantic fantasy: Humanity does not belong, but it used to and longs to belong once again.

Suppressed paradox: The nostalgic fantasy, many studies have suggested, entails habitual dishonesty about the ecological insensitivity of ancestors. (Kelsey 2008 208-9)

Kelsey's theory is a good characterisation of how the landscape of *Half-Life 2* appears to the player via the player-avatar-character relationship. The exceptional status of the single player, emplaced in the subjective view of Freeman's protective suit, playing as the unlikely scientist-soldier-saviour, illustrates a landscape fantasy of 'not belonging'. The post-industrial ruins that characterise the landscape of *Half-Life 2* confirm the nostalgic romantic and the unilateral fantasy and the focus on technology as both cause and solution satisfy the unilateral fantasy. By arguing that landscape is characterised by fantasies and non-existent histories, Kelsey is advocating that phenomenological readings of landscape require social and historical context. Whilst this might put the scholar in a contradictory position, by having to both analyse what can be experienced, as well as considering the influence of conceptual fantasies, but like the 'simulation gap' and the 'congruence requirement', these contingent fantasies, whilst not deterministic, can be drawn upon to examine how the player and the game exist together in the world. Landscape phenomenology requires the scholar to analyse their experience prior to imposition of totalising historical frameworks, but also to consider how illusion and obfuscation are inherent to the process of landscape. In reference to Leino's deniable and undeniable game

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representations (Section 3.2.3), the single player condition of the single player first person shooter is undeniable. The player-avatar-character relation is the only constant in this landscape experience. The extrinsic resonance I formed with this experience is, of course, a deniable interpretation, however, I have attempted to build this interpretation using a bare minimum of esoteric conditions.

5.4 Textures and Intertextuality

In this section, I continue to look at the cultural politics of media aesthetics. I look at the intertextual representations made within *Half-Life 2* and examine how Dr Freeman's journey through a ruined landscape conforms to a broader paradigm of the Promethean dystopia in the representations I experience as a player. I consider how the intertextual composition of *Half-Life 2* is indicative of contemporary economic patterns of exchange, and how the use of photographic textures in *Half-Life 2* can locate this landscape within a specific historical mode of production. Along with Section 5.5, this section offers an extrinsic examination of how a computer game exists in the world to enrich the analysis of it as a landscape. Just as the materiality of the landscape painting deepens an understanding of the process it is representing, an examination of the materiality of a computer game should make an equally valuable contribution.

5.4.1 A Promethean dystopia

The diegetic narrative of *Half-Life 2* exists within a long tradition of Promethean dystopias – human scientific experimentation leads to alien monsters and technological overlords destroying the world of human bureaucracy, which is replaced by alien totalitarianism. Dr Freeman stands as an unwitting collaborator in this technological transgression, a generic working cog symbol of rational modernity pitted against a monstrous dystopian world. According to Langdon Winner, Mary Shelley's *Frankenstein (A Modern Prometheus)* provided the essential template for the technological dystopia. By characterising the

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monster as the victim of Frankenstein's ambition, Shelley transforms the Promethean myth into a cautionary tale for modernity – parents bear existential responsibility for their children, and creators are existentially responsible for their creations (Winner 1977, 306-7). In the Promethean myth, mankind falls victim to the disregard of Epimetheus and is left without the strength or claws of other animals. Prometheus steals fire from the Olympian Gods and gives mankind the art of fire. Facing the monstrous dystopia of *Half-Life 2*, Dr Freeman stands ludologically naked, neither a clawed monster nor an alien soldier. The player starts the game as the unarmed Dr Freeman and walks into the landscape in search of weapons, action and the desire to assert dominance.

Having characterised Gordon Freeman as a state of alienation contextualised by a Promethean dystopia, it is not surprising that the environments of *Half-Life 2* repeat the same post-industrial wastelands that have characterised similar texts. Sociologist Majid Yar cites James Cameron's first two *Terminator* films as exemplary cases of the landscape of the Promethean dystopia (Yar 2014, 53). In both *Half-Life 2* and *Terminator 2*, the action is housed in the abandoned institutions of modernity – factories, hospitals and prisons.

My point here is not to draw a causative link between *Terminator 2* and *Half-Life 2*, but to show both texts furnish their settings using a similar vocabulary of 'ruined modernity', which shares a thematic root in the Promethean dystopia. My experience as a player who notices these intertextual connections can be expanded beyond the Promethean dystopia to connect the landscape of *Half-Life 2* to broader flows of cultural representation and economic activity, which form the subject of the next section.

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Figure 9: Chases through the administrative architecture of canals in *Terminator 2: Judgment Day*. 1991. Directed by James Cameron.



Figure 10: Chases through the administrative architecture of canals in *Half-Life 2*, author's screenshot.

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Figure 11: Chases through the administrative architecture of an asylum in *Terminator 2: Judgement Day*, 1991. Directed by James Cameron.



Figure 12: Chases through the administrative architecture of an asylum in *Half-Life 2*, author's screenshot.

5.4.2 A neo-baroque landscape

According to theorists such as Angela Ndalianis, the intertextual connections I made in the previous section are indicative of how cultural representations reflect the expansion of globalised capitalism, from the colonial periods of the 17th to 19th centuries to contemporary networks of trade and exchange (Ndalianis 2004, 129). In Section 2.3, I illustrated how the Western lexicon of landscape representation was intrinsically connected to the modern commodification of land and colonial expansion. Ndalianis extends this and writes that as globalised capitalism expanded from nautical trade to digital networks of exchange, cultural representations adapted to reflect the accelerated exchange of aesthetic material, and the shifts from modernist cartographic spatial logics to ones that reflected rapid flows of exchange. Ndalianis uses the phrase 'neo-baroque' to refer to the increased frequency by which representational material can be exchanged and how the shift to post-Fordist corporate structures to an extreme acceleration of intertextuality and seriality, beyond the conventional boundaries of genres or mediums. These accelerations, in turn, lead to the expectation that audiences will be familiar with an expanded lexicon of textual references. Ndalianis writes:

Examples of popular culture, past and present, exist side by side, and the gap between memory and history grows smaller. The ruins of popular culture are ever present. (Ndalianis 2004, 97)

Of computer games, Ndalianis writes:

humans persist in creating spaces that appear to have gravity and objects that have solidity and materiality. Ultimately, these digital worlds present, in macro form, a filtered and revised variation of our memory of the reality we inhabit beyond the computer. (Ndalianis 2004, 147)

To speak directly to Ndalianis' point, it is interesting to note that the aesthetic of *Half-Life 2's* 'City 17' was based on the appearance of Eastern European cities,

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where 19th-century architecture is overlaid with architecture from the 1930s, 1940s and 1970s. Having simulated these historical strata, the Valve game designers added their own layer of high technology alien architecture (Valve Corporation 2004, 166). Valve artists Jeff Ballinger and Viktor Antonov based their designs for the technologically advanced headquarters of the Combine ('The Citadel') on the totalitarian architecture of the 20th century, from Nazi Germany to the communist governments of the Cold War (Valve Corporation 2004, 246). Dr Freeman is, therefore, looking out a sort of architectural remix of ruined modernity. The intertextual fragments that populate the landscape of *Half-life 2* might, therefore, be understood as part of the aesthetic lexicon Ndalianis calls the 'neo-baroque', which is itself an index for networks of economic exchange. The landscape lexicon of the Valve Source Engine is an enduring theme throughout this dissertation, especially as I expand my case studies to include modding and open sandbox environments (Chapters 6 and 8 respectively). In the next section, I look at the materiality of the *Half-Life 2* landscape, and how its composition of photographic textures also indexes a particular contemporary mode of production.



Figure 13: An architectural collage of Eastern European ruins and an alien skyscraper in *Half-Life 2*, author's screenshot.

5.4.3 A photo-remix landscape

When Dr Freeman and I are not busy shooting clawed monsters and armed guards, I like to luxuriate in the ‘ambience act’ of the game (Section 5.2.3) and inspect the surfaces of the landscape more closely. On the rocks in an underground cave, I see photographs of real rocks, indexical emissaries from the world outside the game. The concrete walls of a sewer drain are covered with photographs of real concrete, complete with the imprint of wooden panels characteristic of Brutalist architecture. Dr Freeman and I walk outside on grass composed of photographs of grass. I am in a landscape collaged from photographic samples.



Figure 14: Photographic textures of rocks and grass in *Half-Life 2*, author's screenshot.

The relationship between the intrinsic architectural space of *Half-Life 2* and these extrinsic digital images marks an important point for the materiality and structure of the first-person shooter landscape. At this point in my analysis, I am wearing my ‘artist hat’, which brings with it knowledge of the fundamentals of 3D modelling, texturing and rendering. *Half-Life 2* sits at a particularly ‘transparent’ moment in the rendering of 3D graphics, where the use of

photographic textures to give representational distinction to game geometry⁶ is easily spotted and gives the game landscape a pleasing ‘collaged’ appearance.

André Bazin describes photography as freeing other plastic arts from their conscription to optical mimesis – the intervention of an automated image-making process changed the psychological relationship with images, such that a photograph could take the responsibility for attesting to the ontological existence of an object or phenomena (Bazin 1967, 13-14). Contrary to Bazin, various theories of the digital image posit that not only does computer manipulation at the pixel level destroy this relationship, but also that the human and chemical processes required in analogue photography might be more accurately understood as processual, rather than automated (Rubinstein and Sluis 2013, 28). Nevertheless, the manipulation and consumption of images facilitated by computer technology shed an important theoretical light on what I observe as the collage of photographic surfaces in *Half-Life 2*. Manovich argues that the status of the digital image is best understood via the relationship between editing software such as Adobe Photoshop, and the Internet as an image database. Whilst these functions exist in analogue photography, the logic of Photoshop naturalises the process of selecting, copying, pasting and cloning parts of images drawn from a database, and exemplifies the broader practice of recycling and quoting existing media, typically associated with postmodernism.⁷ Within this mode of production, Manovich uses the figure of the DJ as the implied author, where the digital image is produced via the artful skill of selection and combination (Manovich 2001, 129-134). Manovich’s description of the digital

⁶ It should be noted that the surface representations achieved in *Half-Life 2* are more complex than simply wrapping photographs onto a 3D mesh, and involve the use of specular and normal maps to simulate further visual detail, as well as a number of supplementary techniques, such as the high dynamic range lighting later developed in the expansion *Half-Life 2: Lost Coast*.

⁷ In Chapter 8, I will return to the relationship between the cultural producer and the database in more detail.

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image as a composite remix is a highly appropriate description for the visual fabric of the *Half-Life 2* landscape.



Figure 15: An example of a database (textures.com) from which computer graphics artists can source textures, author's screenshot.

Through this extrinsic analysis of the *Half-Life 2* landscape, I have shown how the diegetic narrative of the game can be understood within the broader context of the Promethean dystopia and technological fables of modernity. I also illustrated how the exchange of cultural material outside the boundaries of genre and medium can be directly related to broader socio-economic conditions, such as globalisation and digital networks. Finally, I showed how even at the level of the visual fabric of the represented landscape, it is possible to read contemporary patterns of production and exchange. In the next section, I extend my extrinsic analysis of the landscape of *Half-Life 2* and make a general introduction to the Valve Source Engine itself. As I work my way to the end of this chapter, I will show the reader how the extrinsic history of the game engine can be connected back to the emplaced experience of the player, such that an overall reading of the computer game as landscape can be produced.

5.5 The Valve Source Engine in the world

I will now jump from my examination of *Half-Life 2* to an introduction of how the Valve Source Engine was developed at the same time as this game, and how a material cultural analysis of the engine informs the landscape reading I have been developing so far in this chapter. The history of the Valve Source Engine introduces an important distinction between a licensed software modification and an unlicensed software modification, which will become a structure I analyse throughout my case studies. As I described in Section 3.6.4, the activities by which players can relate to the game often blurs historical boundaries, such as those between work and play, producer and consumer and designer and player. In this section, I examine the material context of the Valve Source Engine, and how the contemporary legal boundaries between a licenced product and a mod can be useful tools to deconstruct the relationship between the player, the game and the world. As an analogy, I consider these structures as similar to those that found in art historical landscape studies, such as the relationship between the artist and the patron, or the rural labourer and the landowner. In this section, and over the course of my dissertation, I show how the Valve Source Engine represents the process of enclosure as broadly defined in Section 2.3.7. Enclosure is a useful term to characterise the origins of the Valve Corporation, and it helps to contextualise the patterns of production and consumption that develop relative to the Source Engine over time. I will now give a brief introduction to the developmental history of the Valve Source Engine, which will lay the foundations for how I connect my game case studies to the overall study of the Valve Source Engine as a medium of landscape.

5.5.1 The licensed mod as a mode of production

Two ex-Microsoft employees – Gabe Newell, formed the Valve Corporation and Mike Harrington in 1996, who licensed the Quake engine from id Software and used it to develop a new engine, referred to as the GoldSrc, or ‘GoldSource’ engine. GoldSrc was used to produce the first *Half-Life* game, *Day of Defeat*

(2003), as well as the first instantiations of the *Counter-Strike* game series. According to *Half-Life* software engineer Ken Birdwell, the GoldSrc engine left some aspects of the Quake engine relatively unchanged, such as core rendering and the way game maps are compiled, however other aspects were drastically changed, such as the game logic, the AI system, and a number of other graphical and server-client properties (Bokitch 2018). The Valve Source Engine was produced as an extension of this same process and included further innovations, such as the addition of radiosity normal mapping and a number of other improvements to the programmatic and rendered representations that the engine was capable of delivering (Mitchell, McTaggart, and Green 2006).

According to Kücklich, this iterative process of development is different in magnitude rather than degree from the process of modding (Section 3.6.4), and the relationship between game production and modification was already built into the history of the Quake engine. Following the *Castle Smurfenstein* modification of *Castle Wolfenstein* (1983), id Software released the source code and level editing software with all of its subsequent titles, such as *Doom* (1993) and *Quake* (1996) (Kücklich 2005). For Kücklich, the decision on the part of Newell and Harrington to license the Quake engine simply gave them the economic independence to develop their own commercial product that is typically not available to the modder. (Kücklich 2005, 2) In the next section, I examine how the End User License Agreement defines the distinction between the game developer and the modder, and how this division adds a significant dimension for understanding the material context of the Valve Source Engine as a landscape medium.

5.5.2 The EULA and the Ha-Ha

According to Kücklich, the iterative and participatory culture that exists around computer games was identified by both id Software and the Valve Corporation as a successful way to extend the life of a game and to capitalise on the innovative and experimental creations that players voluntarily produce (Kücklich, 2005).

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This relationship, between voluntary production and distribution, has its roots in what Tiziana Terranova describes as the 'social factory' of the Internet (Terranova 2000, 23). Borrowed from the Italian Autonomists, the 'social factory' refers to the transition of work from the factory to society, and in the case of the Internet, how the Capitalist need for free labour commodified the productivity of online social exchanges. Terranova is not saying that the economy of the Internet, or of game modding is a simple binary of exploit and exploitation; she is simply applying a corrective to the techno-utopian assumptions that commonly underpin narratives such as the 'Gift Economy'. (Terranova 2000, 35) Both Kücklich and Hector Postigo trace the growth of the Valve Corporation via the *Half-Life* games and the modding economy, to reveal the same online economies described by Terranova (Postigo 2003) (Kücklich 2005).

The modding and development dualism associated with the Valve Source engine can be effectively described using the metaphor of enclosure (Section 2.3.6 and Section 3.6.4). When the Valve Corporation licensed the Quake engine and distributed modding software with the first *Half-Life* game, the End User License Agreement (EULA) enclosed the amateur modder from the professional software developer. Valve's commercial license of the Quake engine allowed them to sell *Half-Life* as a stand-alone product, whereas the EULA prevents modders from selling their own games, keeping the intellectual property with Valve. Kücklich argues that *Half-Life* is no less derivative of Quake than a number of the more extravagant mods made by the player community, however, the commercial experience of the authors is entirely different depending on which side of the EULA they are sitting on. Therefore, the *Half-Life 2* landscape must be contextualised relative to the practice of software modification, and the lines of enclosure drawn by EULAs.

Postigo argues participatory modding culture stems from the desire to overcome alienation, and to find community through a shared passion, and in this way, can be likened to voluntary work. However, the key distinction between modding and voluntary work is that voluntary work is almost universally associated with

not-for-profit enterprises (Postigo 2003). Kücklich illustrates this point by comparing the commercial game mod to the homebrew software or plugin. Whilst both derive from similar online sharing communities, the former produces commercial value almost exclusively for the game company, whereas the latter is typically distributed using a General Public License (Kücklich 2005). Kücklich argues that the games industry attempts to hide the enclosed boundary between these two modes of production by emphasising the participatory nature of computer game culture (Kücklich 2005). Therefore, an effective landscape comparison for the obfuscation of these enclosed boundaries might be the 'ha-ha'. As I described in Section 2.3.2, the 'ha-ha' was a popular feature in the landscape architecture of Picturesque gardens for demarcating property boundaries, preventing livestock from crossing them, and importantly, making them invisible from the perspective of the landowner. Consisting of a raised mound and a ditch, the 'ha-ha' was invisible from inside the Picturesque estate, but visible from the outside, giving the owner the impression of a boundless estate, whilst firmly demarcating their territory to those on the outside. As Cubitt has already said, enclosure is a highly functional concept for understanding the historical relationship between labour and property and is a useful historical parallel for describing the large amounts of voluntary work that occurs in digital economies. The EULA arguably functions like a 'ha-ha', from the perspective of the Valve Corporation, all mods are ultimately licensed by them, and from the perspective of the modder, the obstacle between their creations and their legal ownership over them is the wall of the EULA.

The boundary between professional designer and modder is, of course, complex and at times, permeable. In Chapter 6, I show how the *Counter-Strike* game series, along with some of its key authors, traversed this boundary. To summarise this section, the material history of the Valve Source Engine provides a rich context for analysing its potential as a medium of landscape. By situating its origins within a broader lineage of computer game software, and establishing its legal boundaries relative to landscape studies, I have shown why this extrinsic history is relevant. In the coming chapters, I build on the principals of game development, modding and enclosure as I work towards a comprehensive

analysis of the Valve Source Engine as a medium of landscape. In the next section, I offer some concluding thoughts on finishing *Half-Life 2* as a player, and what sort of landscape was generated by the analysis of this first case study.

5.6 When the adventure is over

[Gameplay experience]

I ended my first experience of Half-Life 2 by completing the final mission. In the diegetic fiction of the game, Dr Freeman and I defeated our enemies. Dr Freeman was transported back into the limbo from which he began the game, our player-avatar-character relationship was over. I stared back at the air-conditioning ducts in my office.

The final category in Tilley's layers of spatial experience is 'cognitive space', where reflection, theorisation and analysis can be used to generate an overall impression of what type of space, and what type of landscape, has emerged from emplaced experience. In this section, I briefly theorise the experience of finishing *Half-Life 2*, and in the final section of this chapter, I give a summary of how *Half-Life 2* can be understood as a landscape.

In these latter stages of the game, I redefined my relationship to my keyboard and mouse. "4" was a shotgun for close range combat. Double tap "3" summoned my most powerful machine gun, and single tap "5" was a grenade to quickly hurl over the rubble at soldiers hiding behind a burned-out car. Like playing jump rope, my relationship with the landscape became a synchronised set of skills. As Bayliss notes, the prosthesis disappears, and the player is embodied (Section 3.3.2). In one of the final stages of the game, the antagonist character, Wallace Breen confronts Dr Freeman and I with the following question: "you have destroyed so much, what is it that you have created?" This question seemed to be directed at me, the player, as much as it was directed at my character Dr Freeman. When the game ended, whatever alienation I escaped by joining Dr

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Freeman on our safari adventure, was abruptly returned to me as I closed the game software and sat back in my office chair.

Aarseth compares the experience of finishing a single player computer game to a feeling of limbo or unemployment. He writes:

The gameworld is its own reward, and the end, if and when it comes, does not offer dramatic satisfaction, but a feeling of limbo. There is no turning back, and no going forward. You are no longer employed by the game. Time to buy another. (Aarseth 2004)

If the journey is the reward but also a form of employment, how exactly should I describe the landscape I have traversed? The end of the game terminates my player-avatar-character relationship, and with it, my ability to experience the landscape. Leino's 'gameplay condition' (Section 3.1.2) is broken, and I am left with the cognitive space of reflection. Having read Aarseth and Leino's research *before* I started playing *Half-Life 2*, I identified my experience of completing the game as feeling unemployed and almost hung-over. To articulate this sensation slightly better for the reader, I describe it in three stages: the loss of validation provided by the game landscape, followed by the return to my regular alienation, and finally, the recognition of the gap between these two states.

By using the comparison of the safari (Section 5.2.3), I explain how the *Half-Life 2* landscape is structured to positively enforce my agency as a player. Through my avatar, I am a gladiator, and through my character, I am the unlikely hero, emplaced in a landscape structured to quantify and reward my effort. The underlying structure of this landscape is the sequential chain of tasks built to confirm the existence and efforts of the single player. When I leave this landscape, I symbolically reverse the bond that I once held with my fictional character. Dr Freeman is put back in the toy box, and I am put back in my office. The cognitive space I am left with is the feeling of returning from a safari holiday, or as Aarseth said, from losing a job that quantified my efforts and gave value to my existence. Despite the fact that I am returning to my real job as a young

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academic, I reflect on the *Half-Life 2* landscape with a sense of loss. My central position, confirmed by my acquired skill set, has become redundant. The linear landscape of the game now contrasts the non-linear landscape of my own life. The sense of purpose I enjoyed by moving through the structured challenges of the game, revealed the *lack* of purpose I feel in relation to my own efforts in the world, which I define as alienation. When Mark Fisher described the “comfort food oblivion of PlayStation”, he was writing about the contrast that Giles Deleuze outlines, between the disciplinary society described by Michel Foucault, and the control society of Capitalism (Fisher 2009, 23). The disciplinary society of the factory, the school and the prison regiment the body and time, whereas the control society embeds institutions via a ubiquitous diffusion. Under the latter, time is no longer divided between work and play, but by perpetual activity (Fisher 2009).

[Gameplay notes continued]

It is 9 pm on a Sunday night, I am writing in my office and instant messaging. Outside my building is a jobless recovery, stagnant real wage growth and accelerating global inequality.

Upon reflection, my enjoyment of the structured challenges of the *Half-Life 2* landscape seems like a sort of 19th century Stockholm Syndrome – where all I crave is validation for my repetitive input. It would seem that both Gordon Freeman and I were better suited to the world of monsters and enemy soldiers. We were the protagonists in a landscape that was made just for us, and we enjoyed the simple pleasures of resistance, success and validation.

5.7 The landscape of *Half-life 2*: An alienated safari

In this first case study, I arrived at the following conclusions about *Half-Life 2* as a landscape, which I hope might be useful across a range of single-player FPS computer games.

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Analysing how I am emplaced through the avatar and the character reveals the somatic and perceptual space of this landscape. I experience the landscape via the avatar-as-camera, the avatar-as-gun, and a masculine ability to access space as traversable, and 'without a body'. The camera-gun frames and contains the landscape, and this particular field of first-person vision creates a hierarchy of perceptual space, between safe, tunnel-like spaces, and dangerous open spaces. Extrinsic precedents for FPS vision in film suggest that this form of experience can create a vulnerable alienated subjectivity as well as a predatory, action-based subjectivity. Analysing my experience revealed the architectural 'shape' of the landscape to be a linear chain of puzzles and challenges, reminiscent of adventure novels and the landscape safari. In both comparisons, the landscape is a pre-prepared container for adventure rather than an unknown wilderness. This quality points back to New World literature and colonial landscapes, where historical struggles of conquest, dispossession or dangerous exploration, were replaced with simulated adventures and aesthetic spectacle. The architectural structure of the *Half-Life 2* landscape is one that confirms the existence of the single player and rewards their effort with achievement and progression. The ludological relationship between the player-character and the landscape, as well as the intertextual significance of the post-industrial ruins and the Promethean dystopia, makes the *Half-Life 2* landscape a strong example of Kelsey's nostalgic-romantic and the unilateral theory of landscape as a projection of 'not belonging'. As a player, I am the sole witness and the sole protagonist in a landscape that is built for my enjoyment, but in both a fictional and a ludological sense, I am alienated from it. The cognitive space of the landscape emerges after the game has finished when Dr Freeman has left the fictional world and I am once again sitting in my office. Returning home from safari, the actionable landscape that rewards presence and effort now contrasts the bureaucratic life of a late-capitalist subject.

Expanding on the relationship between the player, the game and the world, the *Half-Life 2* landscape combines multiple elements from the Promethean fable and the technological dystopia. The sense of remixed familiarity, described in this chapter as 'neo-baroque' signifies broader economic patterns of media

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production and distribution. Looking closely at the visual fabric of the landscape itself, its collage of textures reflects the remixed structure of new media production as described by Manovich.

Finally, by thinking about the Valve Source engine as a piece of commercial software, I used the End User License Agreement to consider the engine exists alongside to similar pieces of non-commercial software, and how this relationship can be summarised by the metaphor of enclosure. In the next chapter, I analyse what Kücklich refers to as “the most successful mod in computer game history” (2005), the *Counter-Strike* series. In doing so, I also expand my material reading of the Valve Source Engine and consider what happens when the feedback loop of the single-player landscape is broken by online multiplayer competition. Where *Half-Life 2* created a protagonist landscape that reflected my alienation back at me, the open interaction of the multiplayer landscape of *Counter-Strike* reveals an entirely different series of landscape relationships.

CHAPTER 6. A RECIPROCAL LANDSCAPE – ON COUNTER-STRIKE: GLOBAL OFFENSIVE

In this chapter, I analyse my second case study computer game made using the Valve Source Engine –*Counterstrike: Global Offensive*. The *Counter-Strike* game series originated as a player-made modification of *Half-Life* and was eventually rebuilt using the Valve Source Engine. It is a multiplayer FPS game made using the components of the single player world of *Half-Life*. Between *Half-Life 2* and *Counter-Strike: Global Offensive*, we are looking at the same landscape medium, but reconfigured to represent different places and spatial experiences. Whilst the game might not appear to be a landscape in such an obvious way as *Half-Life 2*, I contend it is simply a reconfiguration of the same lexicon and basic mechanics. Its mode of production and play has shifted dramatically; it has different processes of signification and different material economies surrounding it, so, therefore, I will start my landscape analysis again and look for a new landscape reading.

As is the case with the development history of the Valve Source Engine, *Counter-Strike: Global Offensive* is part of an iterative process involving a number of *Counter-Strike* game titles. As such, when I talk about the developmental history of the game, I refer to the *Counter-Strike* series as a generalisation, but when I talk about my own gameplay experience, I refer to the current iteration, *Counter-Strike: Global Offensive*. I selected the *Counter-Strike* series as a case study because it exemplifies a number of important structural shifts away from the single-player FPS experience of *Half-Life 2*. As the most enduring and commercially successful mod produced from the *Half-Life* series, I use *Counter-Strike* to examine modding as part of the expanded experience of the player. As a multiplayer game built from the *Half-Life* engine, *Counter-Strike* also illustrates how a landscape experience changes when the player is no longer alone in the game world, and how the architectural shape of the landscape adjusts to the requirements of a multiplayer game.

The reader might notice that this chapter makes a sequential alteration to the methodological structure outlined in Chapter 4, and implemented in Chapter 5. Instead of starting with first-person gameplay experience, I begin by introducing how *Counter-Strike* emerged from the modding communities associated with *Half-Life*. Iteration and repurposing of the landscape lexicon is a theme I develop throughout my landscape analysis of the Valve Source Engine, so it seemed appropriate to introduce *Counter-Strike* as a game made from another game. I then return to my methodological sequence and analyse *Counter-Strike: Global Offensive* (or *CSGO*) from a first-person player perspective. I demonstrate how a player-avatar relationship similar to *Half-Life 2* results in an entirely different form of somatic, perceptual and existential space due to the multiplayer structure of the game. I examine how the architectural shape of the game differs from the landscape of sequential challenges and achievement in *Half-Life 2* and becomes what I call a 'reciprocal landscape'. In the textures and intertextuality section, I examine the range of representational spaces that populate the servers of *CSGO* and propose that in many ways, these spaces combine the objective consumption of tourism with a representational transgression that comes from appropriating non-game environments into the *Counter-Strike* world. Finally, I examine how the extrinsic economy of ESports, loot boxes and online gambling account for the longevity of *Counter-Strike* as a popular online game, and how this material contingency is a crucial factor for understanding the significance of the landscapes of *Counter-Strike*. This chapter examines the shift from the single player to the multiplayer game, from developer-made landscapes to player-made landscapes, and how the online economies form a new extrinsic vector by which we can evaluate what is being represented in the landscapes of the Valve Source Engine.

6.1 A Game made from another game

In Section 5.5, I describe how the Valve Source Engine has its origins as a proprietary Mod of id Software's *Quake* engine, and how the line between a proprietary licensing of this software, and the player-made mod can be

understood in terms of enclosure. In this section, I introduce how the *Counter-Strike* series emerged from the *Half-Life* modding community as a reconfiguration of the representational lexicon available of *Half-Life* and the GoldSrc engine, and how *Counter-Strike* was later licensed and released as a successful commercial game in its own right. In this chapter, I start to unveil my argument that as a game made from another game, *Counter-Strike* reveals the *modus operandi* for how the Valve Source Engine functions as a medium of landscape.

6.1.1 The modding history of *Counter-Strike*

The first iteration in the *Counter-Strike* series was developed in 1999 as a “total conversion” (Section 3.6.4) modification of *Half-Life*. It was created by a small team of modders, headed by college student Minh Le, in collaboration with Jesse Cliffe. *Counter-Strike* gameplay pits two teams against one another in an enclosed FPS environment. One team (the ‘Terrorists’) seeks to plant a bomb or hold hostages, whilst the other team (the ‘Counter-Terrorists’) seek to defuse the bomb or rescue the hostage, or alternately, kill all members of the opposing team. Le and Cliffe developed *Counter-Strike* in close collaboration with the *Half-Life* modding community and players of the multiplayer *Half-Life Deathmatch* (Overwiki, n.d.). After developing the configuration of the game, its weapons, rules and player structures, Le and Cliffe adjusted their game in response to feedback from the modding community and populated the game with environments (referred to as maps) developed and uploaded by other players (Te 2014).

In the years intervening the first release of *Counter-Strike* and its most popular iteration *CSGO*, the development of the game passed through a number of commercial and amateur phases of production. According to Le, during the early beta testing phase, the modding team received technical advice from the Valve Corporation, and Canadian-based production company Barking Dog Studios (Gestalt 2000). In 2000, Valve purchased the rights to *Counter-Strike* and

released the first non-beta versions (ESCalation 2015). In the same year, Rogue Entertainment was contracted to develop *Counter-Strike: Condition Zero*, however, development switched back to Valve, who contracted Gearbox Software, Ritual Entertainment, and finally Turtle Rock Studios, who published the game in 2004 (Remagen 2004) (ESCalation 2015). During this same period, Minh Le was employed by Valve to rebuild *Counter-Strike* from the GoldSrc engine used by *Half-Life*, to the Source Engine that was being developed for *Half-Life 2*, and this version – *Counter-Strike: Source* – was released only months after *Counter-Strike: Condition Zero* in 2004 (Te 2014). In 2012, *Counter-Strike: Global Offensive* was released by Valve and Hidden Path Entertainment as a means of expanding certain aspects of gameplay as well as the platforms on which the game could be played (Lahti 2015). Much like the development process that connected the Quake engine to *Half-Life*, the iterative process behind *Counter-Strike* saw asset libraries and game engine properties undergo significant overhauls.

To simplify the relationship between the *Half-Life* series and the *Counter-Strike* series, the first iteration of *Counter-Strike* is built quite directly from *Half-Life*, and the current iteration of *Counter-Strike: Global Offensive* is built using the *Half-Life 2* engine (the Valve Source Engine). As a commercial game in its own right, *Counter-Strike: Global Offensive* has received updates and revisions that make it more distinct from *Half-Life 2*.

6.1.2 Assets and lexicon

I argue that the iteration and elaboration that links my case studies together can be framed as the cumulative development of a medium of representation, which I identify as the Valve Source Engine. As one game is built from another, representational fragments are appropriated and transformed to meet the demands of the new game. Now that I am talking about one game relative to another, I will increasingly use the word ‘asset’ to refer to the representational vocabulary of each game, and the ways in which this vocabulary can be shared

across the medium of the Valve Source Engine. In Chapter 7, I give a first-hand account of making a mod in the Valve Source Engine. I show how making a custom asset reveals to the modder the various file formats that all Source assets share, and how this qualifies the representational lexicon of the Valve Source Engine, which in turn, becomes my ultimate way of describing landscape in Chapter 8. At this point, I will simply clarify that a computer game ‘asset’ refers to the representational objects that populate a game, such as characters, weapons, environment objects, textures, animation effects, interfaces and sounds, which are driven by the source code of the game (Bates 2004, 288-289). Returning to Section 3.1, where Aarseth observed that computer games are too diverse to be considered a medium, I argue that the consistent structure by which assets are upheld by the Valve Source Engine constitutes a medium and a language of representation. By observing how various games alter and modify this medium via the landscapes they produce, I argue that I am observing and analysing the development of a medium of landscape.

6.1.3 The enclosure of Counter-Strike

I have already made the case that the divisions between the commercial computer game and the mod, defined by the End User License Agreement can be referred to using the landscape metaphor of enclosure (Sections 2.3.6, 3.6.3 and 5.5.2). The production process of *Counter-Strike* is an interesting case, because it traversed this boundary a number of times – it began as a community mod and is now a commercial product, but it continues to be populated by community made content, in a manner similar to its first release (more on this in Section 6.4). The shifts in production, from a game made by a modder, workshopped by a modding community, populated by landscape spaces made by other modders, to a commercial title, demonstrates how quickly the categories of commercial and voluntary production can shift. Kücklich refers to *Counter-Strike* as “the most successful mod in computer game history” (Kücklich 2005). In reference to the origins of the Valve Source Engine (Section 5.5), it is fair to say that the commercial success of the *Counter-Strike* series derives from the initial

combination of the proprietary GoldSrc engine, and what Kùchlich refers to as the “dispersed multitude” of the modding community (Kùchlich 2005). By the time the Valve Corporation licensed *Counter-Strike*, research, development and play-testing had already been completed by Le, Cliffe and the modding community, and it already had a wide player base, towards which Valve could direct their marketing efforts. Much like the endless sequels and seriality described by Ndalianis (Section 5.4.2), Postigo argues that the iterative seriality of this process is indicative of contemporary online systems of production, consumption and distribution. According to Postigo, the development of online distribution and rapid production systems led to short market lives for products and therefore made static consumer items less profitable. Instead, these distribution systems required rapid, continual innovation of the sort typified by participatory modding practices (Postigo 2003). The rapid speed with which *Counter-Strike* was developed and iterated through multiple releases, and ported to new software and hardware applications can be understood within the paradigm that Postigo presents. At the time that *Counter-Strike: Source* and *Half-Life 2* were being released, Valve made it clear that their relationship with the modding community was a key consideration in how they produced the Source Engine editing tools, and how their systems of distribution sought to encourage continual experimentation with their products by modders (Valve Corporation 2004). Using the editing tools available via *Half-Life*, Minh Le and Jesse Cliffe produced a new game. The lexicon of one game became the raw materials for the next. This process expanded to include the labour and creativity of many more players, who built playable maps and tested and critiqued *Counter-Strike* and its representational environments. When Valve licensed *Counter-Strike*, Minh and Cliffe transitioned from being voluntary modders to professional developers, thereby crossing the boundary of enclosure. From a material standpoint, the landscape of *Counter-Strike* is a combination of paid and unpaid labour.

In Section 6.5, I continue my extrinsic analysis by examining ESports, the Steam platform and the online economies that have developed around loot crates and weapon skins. By understanding how the player relates to these broader processes of production and consumption, I believe that my analysis of my play-

based experience can achieve a greater depth, and reveal the contemporary significance of *Counter-Strike* as a landscape.

6.2 A player in Counter-Strike: Global Offensive

[Gameplay notes]

I launch Steam and start a new game of Counter-Strike: Global Offensive. I choose the ‘hostage rescue’ mode, and my computer searches for a game to join. After a few seconds, a melodic “beep” signals that I am ready to be placed into a game.

I first see the avatars of other players, highlighted by coloured halos. I’m watching them finish the current round, as I wait to join. The game sounds are a mix of gunfire, footsteps, and the collaged interruptions of sound drawn directly from the local environment of each player. When a player turns on their microphone, the alien sounds of the real world invade the game; air is sucking into their microphones, breaking the sonic seal of the game world. Most of the conversations on this server are in Russian, between men and boys. Watching them play while I wait to join, my fingers are on the same keys that they were on in Half-Life 2, but I’m not alone anymore. This is not a world built just for Dr Gordon Freeman and I. It is a social space and there are new rules to learn.

When a new round begins, I equip myself with weapons and glide forwards into the map with the other 7 members of my team. It is kill or be killed, and in each round, I die quickly. Having finished Half-Life 2, it seems that I have over-estimated the skills I learned with Dr Freeman. I am not alone anymore and positive re-enforcement is no longer a given. I am one among many, and everyone has been practising. Through the repetition of the game rounds, I mimic the behaviour of other players and start to even the scores a little. If I kill one enemy team member before I

die, I feel that I have at least made a neutral contribution to my team, but my goal is to be a net positive. In one round, I kill two enemy players before I die. Someone mentions my player name in the chat on the left-hand side of my screen – “Who is this guy?” They then kick me off the server. This is a form of death that I had not experienced in *Half-Life 2*; it feels more personal because I don’t know what I did wrong. Was it because I hid and waited for the last player that I killed? Was I ‘camping’? Or was this server only for an exclusive group of people? Because “who” was this guy?

I start another game. I choose the ‘hostage rescue’ mode once again and let Steam dial me into another server. I’m playing with a different group of people, all speaking Russian once again. This time I am careful with my behaviour, I strive to make a net positive contribution to my team without camping. But on this server, people are camping all the time, and it doesn’t seem to matter. When a vote comes up to kick a different player from the server, I vote ‘No’.

There is no pause screen in *CSGO*. Every round has a ticking clock, and the speed of other players means that the only thing I can do is play. I can’t answer messages on my phone until after my avatar has been killed and I’m waiting for the next round. The better I get, the more time I spend alive, and the less time I spend watching. Suddenly my screen goes black – my laptop has run out of power. I didn’t notice that I needed to connect it to the charger.

In this section, I analyse the player-avatar relationship in *CSGO*, how it is similar to that of *Half-Life 2* (Section 5.1), and how it is different. As I stated in Section 3.5, by understanding the player-avatar relationship, I can understand how the landscape of a game is made available to the player. I identify three principle qualities where my experience as a player in *CSGO* multiplayer is fundamentally different to that of *Half-Life 2* single-player. Rather than a single camera-gun emplaced in a sequential safari landscape (Section 5.1 and 5.2), *CSGO* situates the

player as one of many camera-guns looking through the landscape towards each other. Instead of moving sequentially through a landscape of challenges, I experience a small number of environments with extreme repetition and measure my performance against that of other players. Instead of being a game of progression like *Half-Life 2*, *CSGO* is a game of emergence, and my experience is defined by a social fabric that extends beyond the formal rules and structures of the game itself. Using these observations, I establish how the landscape is made available to the player of *CSGO*. In this chapter, I base my game analysis on the ‘Classic: Casual’ mode of play. This set certain limits, such as the number of rounds played per match and the number of players on each team. Outside the official game modes, *Counter-Strike* servers also host esoteric maps and styles of play, such as *Counter-Strike Surfing*. When I analyse *Garry’s Mod* in Chapter 8, I fill the gap that is left between my ‘Classic: Casual’ experience of *Counter-Strike* and the wealth of mods that essentially pre-figure the open sandbox structure of *Garry’s Mod*.

6.2.1 Camera guns pointing at camera guns

The prosthetic of the avatar in *CSGO* is similar to that of *Half-Life 2*. The first-person keyboard and mouse controls that I learned in the latter seem to transfer well into the former, and any changes to my avatar prosthetic seem relatively minor – instead of walking with the option to hold SHIFT and run, I am running with the option to hold SHIFT and walk. I have a different range of weapons, however, the tunnel vision of the camera-gun avatar (Section 5.1.1) remains the same. My aural experience demonstrates how dramatically my player-experience has changed. The invasion of ambient sounds from the local environments of other players is a dramatic shift in my perceptual space. In *Half-Life 2*, my headphones immersed me in the singular world of the game, whereas in *CSGO*, they immerse me in a networked space that is shared by a number of other players. The ‘sucking’ sound of white noise and the Russian conversation remind me that I am also sitting in a room that is not silent, I am in Europe and the fastest servers have mainly Russian players. I seem to be the same gender as

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most of the other players, but perhaps a little older. There are other people sitting in the world, on their computers, playing with me.

Instead of being a camera-gun surrounded by a landscape, I am now a camera-gun looking at their camera-guns, *through* the landscape. The masculine avatar without a body (Section 5.1.1), the remediated vision of subjectivity and predation (Section 5.1.2), and the Albertian window of the screen (Section 5.1.2) have been transposed into the perceptual space of the multiplayer arena. I am no longer a camera-gun looking out upon a landscape; I am a camera-gun looking into someone else's camera-gun, separated only by the occlusion the game landscape. My perceptual space has been reoriented to the relationship between line of sight and the objects that occlude it. The additional fact that half of the players in the game are my allies and the other half are my opponents adds a second vector, where the line of sight between my teammates is of marginal importance compared to the line of sight between myself and opposing players.



Figure 16: Camera guns pointing at camera guns in *Counter-Strike: Global Offensive*, author's screenshot.

I dance with opposing players, between occluding objects to achieve and exploit a line of sight. Through repetition, the competition over the line of sight teaches me intricate details about the landscape. I know where I should throw a grenade without even looking around a corner, and which doorways expose me to a line of sight that an opposing player is probably already monitoring. Every time I fail to dominate a line of sight, my avatar dies, and I am thrown out of the first-person perspective, and into the perspective of the victorious player, where an action replay shows me exactly how my opponent won the moment.

The shift in perceptual space, from the single player to the multiplayer FPS evidences what phenomenologist Robert Sokolowski describes as the “manifolds of intersubjectivity” (Sokolowski 2000, 32). Now that I share the game environment with other players and compete against them, I am aware that this world and my actions are being observed. Sokolowski writes:

I now see it not only as the thing I would see differently if I were to move this way and that but also as the very same thing that is being seen, right now, from another perspective by someone else. The object is given to other viewers through manifolds that are different from those facing me, and I see the object precisely as being seen by others through viewpoints that I do not share. (Sokolowski 2000, 32)

In *CSGO*, it is not just that others are seeing the game landscape through other viewpoints, it is that these viewpoints have become the primary undeniable mechanic of the game. The *CSGO* landscape has become the common mediator of our experience. This is why the idea of camera guns pointing at other camera guns as the most important shift in how the player is emplaced in the landscape of *CSGO*. The perceptual space of the safari of sequential challenges has transformed into the mutually shared multiplayer landscape where the line of sight is the most important relationship.

6.2.2 Repetition and collective validation

The existential space of *CSGO* emerges out of the extraordinary repetition of play occurring in the same landscapes. A single game of *CSGO* can comprise up to 15 or 30 rounds played in the same game map. The size of a *CSGO* map is smaller and more contained⁸ than the landscapes of *Half-Life 2*, in order that players encounter each other quickly, and rounds usually last only for a matter of minutes. Players also have a tendency to repeatedly select the same small number of maps from the available pool, so that after a few hours on one server, the same group of players might have played a hundred rounds in the same game map. Through repetition and my desire to reach a skill level where I remain in the game for longer, I experience a distinct somatic rhythm, where muscle memory changes my navigation. Through failure and repetition, my movements through the environment become more fluid; I fly through the empty part of the map at the beginning of each round, and slowly wrap myself around the corners where I know I will meet the first of the opposing players. Round after round, I learn to collaborate with my teammates in negotiating the intricacies of each map. Before receiving any positive reinforcement via the game chat, I know when I have played a good supporting role. Through my actions, I can be known as the player who starts each round with a particular tactic – a grenade thrown blindly around a corner, followed by a race to dominate a key position as a sniper. The initial success of these tactics can be reversed, and my predictability exploited by opposing players. If I survive late into the round, I am aware that all my dead team-mates are observing me, and that their adjudication of my performance an opportunity to be noticed and praised or to risk being ridiculed and kicked.

In Section 5.6, I noted how the conclusion of *Half-Life 2* led to the collapse of the gameplay condition, which spelled the redundancy of the skills I had developed with my avatar prosthetic. In *CSGO*, not only have my skills found currency once again, they are valued in a perpetual feedback loop, where myself and other

⁸ I expand upon the size and symmetry of the *CSGO* map in Section 6.3

players can practice and perfect them *ad infinitum*. At the level of player experience, *CSGO* has now introduced two distinct qualities. It is a shared landscape that mediates the mutual gaze of camera-guns, and it is also a shared loop, where the skills acquired using the FPS avatar prosthetic can be mutually appreciated and endlessly honed through extreme practice and repetition.

6.2.3 Informal rules, emergent behaviour and existential space

The third quality that distinguishes player experience from the single player to the multiplayer FPS lies in what Juul described as the game of ‘emergence’ as opposed to the game of ‘progression’. Contrary to the game of progression described in Section 5.2.1, the game of emergence has “a small number of rules that combine and yield large numbers of game variations”. (Juul 2002) Games of emergence favour repetition and tournament structures, and perhaps most importantly, result in “emergent properties that are not immediately deductible from the game rules” (Juul 2002). The emergent properties that I observed in my gameplay notes have already received a good deal of theorisation, which provides a strong foundation for understanding the different set of significances with which the player relates to the landscapes of *CSGO*. I will examine how these emergent properties have been theorised now.

By getting kicked from a server early on, I experienced an example of what Marcus Carter, Martin Gibbs and Michael Arnolds refer to as ‘informal rules’ (Carter, Gibbs, and Arnold 2017). Unlike coded or formal rules, my eviction from the server was based on a majority vote by my teammates based on an informal rule that I was not privy to. Whilst their reasons were never disclosed, the kick revealed an informal rule that was operating in the existential space of that particular server. Even though I never learned what informal rule I had broken, when I joined a new server, I tried to play to a higher standard and camp less in order to not be kicked. My sense of ultimate belonging was to win a round for my team, and ultimate rejection remained the experience of being kicked.

Aarseth notes that Multi-User Dungeons (MUDs) were simultaneously about the momentary escape from society, as well as the creation of a mirror society that functions as a “medium for interaction between real persons in real time” (Aarseth 1997, 144). In his virtual ethnographic study of the social space of *Counter-Strike*, Nicolas Ducheneaut argues that the relationship between player abilities, their discourse in the chat interface, and the social barriers to membership of formalised teams obeys analogous conventions to American college fraternities (Ducheneaut 2010). This brings to mind TL Taylor’s warning that to simply identify and celebrate ‘emergence’ in multiplayer online environments risks a myopic techno-utopian misconception that these cultures would turn out to be “free”, “non-hierarchical” and “unfettered” (T. Taylor 2008, 188). Taylor writes:

Rather than simply identifying “emergent culture” as a prime property of MMOG life and stopping there, we also need a better understanding of the complex nature of player-produced culture and its relation to technical game artifacts. (Taylor 2008, 188)

As a qualifying statement to accompany Juul’s identification of ‘games of emergence’, Taylor focus the question on what exactly might be emerging, and how this reflects back on the structure of the game. When analysing the relationship between player behaviour and emergent culture, David Myer’s “breaching experiment” demonstrates how the existential space of the multiplayer game is not only shaped by the ‘success’ of the player relative to formal rules, but by their ‘success’ relative to the informal social conventions of the game (Myers 2008). By implementing a style of play that was congruent with the coded and formal rules of the game, but antagonistic towards the informal cultural practices of the game, Myers demonstrates an instrumental connection between existential cultural space and the formal rules of the game. My experience of the ‘server kick’ exists at this very intersection between emergent behaviour and informal rules. It symbolically proves Juul’s thesis, that a small number of formal rules combine to yield a large number of possible behaviours,

and Aarseth's thesis that a mirror society with its own conventions and patterns of behaviour emerge on the multiplayer computer game.

I have now established the somatic, perceptual and existential space of *CSGO*. It produces a somatic experience via extreme repetition, a perceptual space based on the competition for line of sight, and an existential space that fills the landscape with the emergent behaviours, social hierarchies, and ludic conventions. In the next section, I examine how this player experience reveals the architectural space of the *CSGO* landscape. In the next section, I will expand Tilley's categories of spatial experience to derive an overall 'shape' of the *CSGO* landscape.

6.3 The shape of the landscape in Counter-Strike: Global Offensive

[Gameplay Notes]

The players have voted to play on the map 'Agency' – the “sleek and modern offices of a prestigious advertising agency”. (Puddy 2013)

A new round starts, and I push my avatar forwards, my teammates and I jump from off a rooftop helipad and run inside a corporate headquarters. Moving past the reception desk, I slow down; there is a corridor on the right that will put us in the direct line of sight of the opposing team. Facing the wall, I look forward, and up slightly, I press 'A', simultaneously looking down the corridor and shooting my rifle, then immediately 'D' to move back across and out of view. I have been shot twice by an opposing player from the upstairs atrium, but I hit them too. I quickly repeat the same move, 'A', shoot and look, but before I can press 'D', my avatar has been killed. My point of view slumps to the ground, and shifts completely to show me what my opponent saw. I am now watching my past actions, peeping around to look and shoot down the corridor, once, and then twice. The death of my avatar is defined by this final line of sight.

The players have voted to play on the map ‘Militia’ – an American Midwest farm being held siege by a rural militia. (Counter-Strike Wiki 2018)

A new round starts. I run up the driveway and throw an incendiary grenade high into the air. By the time it explodes, I am hiding behind a large boulder. I know there will be terrorists on the open grass between the boulder and the house, but I’m not sure if there is anyone hiding in the tractor storage barn. I peek around to the left, snatch a glance, and strafe back behind the boulder. The absence of gunshots suggests that there no one is there. Crouching, I shift to the left and shoot at the first player I see standing near the house. My shots are inefficient; I kill the other player but take significant damage myself. Another opposing player shoots me from the rooftop of the farmhouse and the action replay commences.

In this section, I analyse how the reciprocal gaze identified in Section 6.2 transforms the perceptual space of *Counter-Strike* into a competition over the line of sight. I locate the line of sight as a form of military vision and go on to show how every game map must provide an environment that is balanced for each team according to the line of sight and balanced competition. In doing so, I show how the shape of the landscape in *Counter-Strike* is best understood as an abstract sporting arena, balanced by the ludic simulation of military vision.

6.3.1 A line of sight landscape

In this section, I continue my spatial analysis using Tilley’s categories. From my repetitious multiplayer experience, I discover the undeniable architectural features of *CSGO* maps. In the ‘Militia’ map, there is a fence post at the end of the driveway from which I can access a line of sight to the windows and rooftop of the farmhouse without exposing myself to a ‘Terrorist’ in the tractor barn. In the ‘Agency’ map, there are two doorways that I can run between and monitor the advance of ‘Counter-Terrorist’ players, controlling the line of sight from both the

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upper balconies as well as the ground floor corridor. The repetition and simplicity of this line of sight game simplify the FPS camera-gun into a single rule that defining the spatial logic of the *CSGO*. These environments are representations of the physical environment, transformed into the language of the line of sight and military optics. Every object that the player encounters exists to occlude and moderate the line of sight in an equal and reciprocal way for players on either team. As two camera-guns approach or draw away from each other, they are emplaced in a landscape built entirely for this reciprocal exchange.



Figure 17: The line of sight in the 'Militia' map of *Counter-Strike: Global Offensive*, author's screenshot.

The pragmatism I learn from the existential space of my experience has revealed the logic of the architectural space of the game map. I can abstract a map into a series of pathways and focal points. I can differentiate the design of a *CSGO* building from the design of a real-world building. The architectural logic of a prestigious advertising agency might seek a sense of prestige in the eye of the advertising client, or to create a working environment that benefits the practice of making advertising campaigns. In the *CSGO* agency, there is no client and no advertiser; the aesthetics of the advertising agency are designed to convince

CSGO players that this *is* an advertising agency, but the architectural logic of the agency, revealed by perceptual and existential space, is completely different. The height of the windows, the length of the corridors and the angles of the doorways, are all proportioned to control the line of sight between the opposing teams and to allow avatar navigation. On the Steam workshop page for the 'Agency' map, the designer ('Puddy') has listed the most recent updates to the map. These include altering the windows in a room to remove a sniping position, and lowering a large desk so that it does not interrupt angles of gunfire (Puddy 2013). The provision of natural light is not a design constraint in *CSGO*, nor are there activities in this game that require either a fictional or a virtual table. In terms of the architectural space of *CSGO*, the table and the window function to moderate the line of sight between opposing players. Tilley writes:

[the architectural space] play[s] a fundamental role in the creation and recreation, production and reproduction of existential space and [has] profound structuring effects on perceptual space. (Tilley 1994, 17)

Line of sight is the principal constraint in the architectural space of this game landscape. This line of sight mechanic is produced by the multiple camera-guns looking at each other in the landscape. The degree to which architectural space controls and balances access to line of sight affects the production of existential space in the game. This summary statement is what Tilley refers to as 'cognitive space' (Section 2.4.2). It is the abstract spatial model that I extract from my lived experience. The playing *CSGO* is to experience the mastering of the line of sight. My cognitive model is of a reciprocal landscape, based around a symmetrical competition over the gaze, shared between players. Unlike the linear landscape of sequential challenges in *Half-Life 2*, *CSGO* requires a mirroring relationship. The architectural symmetry that can be observed in the design of a *CSGO* map derives from the reciprocal symmetry of the exchanged gaze.

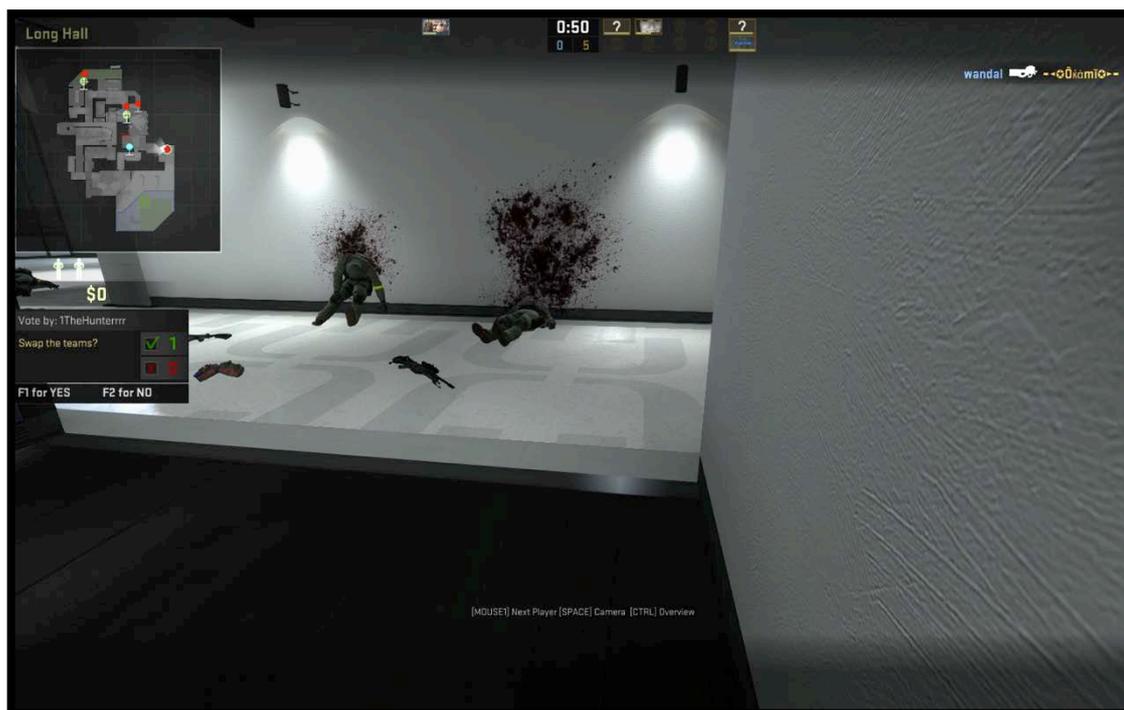


Figure 18: The view of my avatar being killed in *Counter-Strike: Global Offensive*, author's screenshot.

However, the operational quality of the line of sight and camera-gun is nothing new. In *War and Cinema: The Logistics of Vision* (1989), Virilio outlines the relationship between film and military vision. This provides a more adequate context for the type of landscape *CSGO* is simulating. Virilio writes:

The act of taking aim is a geometrification of looking, a way of technically aligning ocular perception along an imaginary axis that used to be known in French as the 'faith line' (*ligne de foi*). Prefiguring the numerical optics of a computer that can recognise shapes, this 'line of aim' anticipated the automation of perception – hence the obligatory reference to faith, belief, to denote the ideal alignment of a look, which, starting from the eye, passed through the peep-hole and the sights and on to the target object. Significantly, the word 'faith' is no longer used in this context in contemporary French: the ideal line appears thoroughly objective, and the semantic loss involves a new obliviousness to the element of interpretive subjectivity that is always in play in the act of looking. (Virilio 1989, 3)

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According to this argument, the monocular line of sight that Klevjer locates as fundamental to the FPS player-avatar also reveals the general objectification of the subjective in modern vision. According to Virilio, the colt revolver inspired the invention of the astronomical revolving film canister, and the normativity of targeted military vision spread across the progeny of modern optics. The assumed empirical objectivity of optical devices such as the microscope and telescope should be undermined by these military origins and the implied loss of other forms of subjective perception (Virilio 1989, p.4, 15). With this in mind, it is not surprising that Klevjer's 'camera-gun' is closely echoed in Virilio's writing:

the pilot's hand automatically trips the camera shutter with the same gesture that releases his weapon. For men at war, the function of the weapon is the function of the eye. (Virilio 1989, 26)

The reciprocal vision produced in *CSGO* is a very accurate simulation of what Virilio is describing. Below is a quote from Dziga Vertov – a World War I veteran who later worked as a propaganda film-maker for Vladimir Lenin, which Virilio reproduces in support of his argument. The military vision contained in this quotation bears a strong parallel to the experience I describe in Section 6.2.

I am the camera's eye. I am the machine which shows you the world as I alone see it. Starting from today, I am forever free of human immobility. I am in perpetual movement. I approach and draw away from things - I crawl under them - I climb on them - I am on the head of a galloping horse - I burst at them full speed into a crowd - I run before running soldiers - I throw myself down on my back - I rise up with the aeroplanes - I fall and I fly at once with the bodies falling or rising through the air. (Virilio 1989, 26)

CSGO reifies the historical relationship between the camera and the weapon. It creates an environment that is structured around the reciprocal exchange of a gun-gaze. The shape of the landscapes produced by *CSGO* should, therefore, be understood as an exchange and competition over military vision. For *Half-Life 2*, I

argued that the linear landscape structure is integral to the Promethean protagonist landscape relationship of the diegetic narrative. The single player landscape is built around the affirmation of the player's progress and their sense of purpose. The balanced landscape of abstract symmetry in *CSGO* is built around repetitive competition over the military optics. In the next two sections, I shift my analysis, and explore how the competitive aspect of *CSGO*, and its requirement of ludological symmetry must also be explored according to the abstract arenas of sport, and how the field of sports geography can help explain the significance of the appropriation of non-game environments into *CSGO* landscapes.

6.3.2 A symmetrical landscape

In Section 3.4.1, I cited Aarseth's observation that multiplayer games tend to produce environments structured by some kind of abstract symmetry in order not to confer an advantage for any player or team. This symmetry can exist explicitly as geometry, or ludologically in the programmatic balance of the software interface. Nitsche observes that *Counter-Strike* maps are not symmetrical per se, but that they achieve the balance of a ludic arena, where opportunities and obstacles are distributed equally for each team (Nitsche 2008, 186-187). Whilst the application of Virilio's theory clearly shows that *Counter-Strike* is a ludic competition of the military gaze, the requirement for ludological balance and symmetry belongs to the theory of sports landscapes.

6.3.3 A sport landscape

Sports geographer John Bale has written extensively about how sport reveals and reproduces socio-political relationships within the landscape. Bale points out that the artifice and calculated balance of the sporting arena is a modern phenomenon. Modern sports grew out of ancient folk games, such as European 'cache' (the antecedent of modern tennis), Mayan stone courts and Native American running tracks, however, a great number of sports have entirely

modern origins, such as basketball (Massachusetts, 1892) and volleyball (Massachusetts, 1895). At the same time, sports enjoy a close historical relationship to the military, and therefore the link between military vision and sports landscapes in *Counter-Strike* has numerous historical precedents. Bale cites the ancient connection between fitness and military training, as well as more modern events such as the Olympic Games (notably Berlin 1936) as examples of the enduring bond between sporting achievement and the military (Bale 2003, 7, 26). Regarding the development of abstract sporting arena landscapes, Bale argues that the advent of modernity led to the rigorous standardisation of rules, and the homogenisation of arenas of play. Bale writes:

“both industrialisation and sport grew out of the changed outlook following the Newtonian revolution of the seventeenth century...affected by the desire for precision, quantification and the quest for records.” (Bale 2003, 57)

The arenas of the modern era saw the gradual artificialisation of the sports environment, where confinement and standardised artificial surfaces such as concrete and AstroTurf reflected this broader quantification. Bale compares this manufactured standardisation to the English Picturesque garden (Section 2.2.1), where the landscape was similarly defined by artifice and design. In designed garden landscapes, from the golf course to the basketball court, pleasure is derived from the rational and repetitive overcoming of specialised tasks (Bale 2003, 151). The artifice of the golf course, the symmetry of the basketball court, and the repetitive development of a skill that both demand, forms a clear parallel for *Counter-Strike* gameplay. In addition to artifice and symmetry, the relationship between scale and gameplay is another criteria where *Counter-Strike* and sport meet. Just as scale and distance determine the gameplay conventions of basketball and soccer, the scale and navigable distances within *Counter-Strike* maps are crucial. *Counter-Strike* maps typically contain a very short distance to traverse before one team meets the other for competition over the line of sight. Furthermore, objectives such as securing bomb sites or rescuing hostages require that the entire distance of the map can be rapidly traversed and

crisscrossed by players, the same way that sports are defined by the distances that players must cover in order to compete against one another. It is not surprising then, that of the most compelling ethnographic studies of competitive *Counter-Strike* players – that by Emma Witkowski, bases a lot of its behavioural comparisons on the author's experience as a professional basketball player (Witkowski 2012). Whilst Witkowski's research focuses more on the bodily relationship between the player and the game, her descriptions of how players divide the map in half by occupying sniping positions and allowing others to traverse the field, shows how the spatial dynamics of sports are clearly reproduced in *Counter-Strike* gameplay. Therefore, the application of sports geography seems to be a useful way to understand the ludic structure of the environments found on *Counter-Strike* servers. In the next section, I look at the wide range of representational environments that are found in *Counter-Strike* maps, and examine what patterns might unify this range of representations, and how sport and tourist landscape theories might account for the ways in which these environments are appropriated as arenas for *CS* gameplay.

6.4 Textures and intertextuality

[Gameplay Notes]

Running over a galvanised iron roof, I was killed by a sniper who was hiding in the alleyway below. The camera view rose up from my avatar, and I could see myself lying dead on the roof, against the backdrop of an industrial area, with a city skyline punctuating the horizon. It was nice to die somewhere with a view, it was more pleasurable than dying in the corridors of the advertising agency.

In this section, I examine the representational diversity of *CSGO* maps, and how the process of making and playing these maps relates to landscape practice. I introduce a typology of the representational environments that constitute the official competitive map pool at the time of writing this dissertation. In reference

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to the expanded metaphor of enclosure (Section 2.3.6,) I examine how the creation of *CSGO* maps requires a reductive objectification that is familiar to what Fuller and Jenkins identified in the adventure landscape (Section 5.2.3). I examine how these landscape spectacles are appropriated and converted into the military/ sports landscape of *CSGO*, and consider how tourism studies (Section 2.3.5) can act as an additional vector, like Bale's sports geography, for understanding the processes by which *Counter-Strike* represents landscape. Finally, I examine a case where the transgressive appropriation of a non-game environment into *Counter-Strike* exposes a limit condition for the representational spectacle of the gameplay-environment and sites of historical violence.

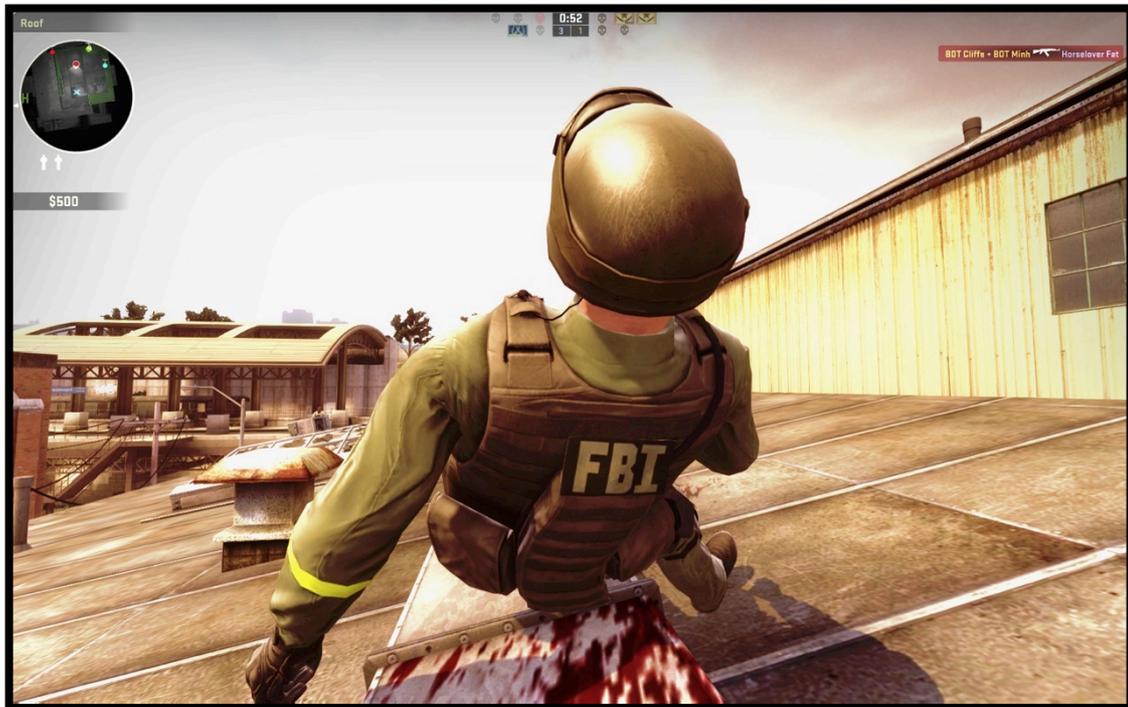


Figure 19: Dying on the rooftop of the 'Assault' map in *Counter-Strike: Global Offensive*, author's screenshot.

6.4.1 Landscape typologies

In Section 5.2, I introduced Fuller and Jenkins' argument that the action-based typology of landscape environments found in computer games has its roots in 17th-century travel literature, where landscapes became the site of action for the

adventurer-protagonist. Using the example of *Street Fighter II*, Fuller and Jenkins describe how a variety of representational settings function as a backdrop to the spectacle of gameplay, and as a narrative link to the international fighting styles represented by the game characters. Jenkins writes:

The game, however, offers players a global array of possible spaces where the individual competitions can occur: a Brazilian dock, an Indian temple, a Chinese street market, a Soviet factory, a Las Vegas show palace. In the Indian sequence, elephants sway their trunks in the background. Water drips from the ceiling into a Japanese reflecting pool. In Spain, flamenco dancers strut and crowds cheer as the combatants struggle for dominance. All of these details constitute a form of visual excess ("eye candy," as computer enthusiasts call it), a conspicuous consumption of space. Such spectacular visions are difficult to program, unnecessary to the competition, yet seem central to the game's marketing success. (Fuller and Jenkins 1995, 4)

The representational pattern of the landscapes of *CSGO* betrays a similar pattern to what Jenkins and Fuller are describing. When playing on *CSGO* competition servers, the types of maps available to the player are usually limited to a map pool that is updated periodically from the thousands of maps by players and developers. When playing on competitive and casual servers, *CSGO* maps are divided into a number of categories, such as 'Hostage Scenario', 'Bomb Scenario' and 'Deathmatch' and depending on which mode a player selects, they will join a server where this gameplay mode repeats across a small rotation of representational environments. The following table compares the aesthetic characteristics of a selection of *Counter-Strike* maps (as of February 2018). In Appendix 1, I reproduce the same table with descriptions of each map summarised from the Counter-Strike Wiki. The green and red boxes represent the most common aesthetic features that I observe when playing on each map. The maps in my table are those currently shipped with the official *CSGO* game (as of February 2018). I have grouped the maps whose distribution of red and green cells (aesthetic features) are similar, in order that the reader can see the

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repetition of aesthetic themes and how these maps tend towards representational typologies, which vindicates the typological argument made by Fuller and Jenkins.

Map Name	Industrial	Workplace	Rustic	Warzone	Tourist Site	Domestic
Cache	Yes	Yes	No	No	No	No
Nuke	Yes	Yes	No	No	No	No
Train	Yes	Yes	No	No	No	No
Canals	No	No	Yes	No	Yes	No
Inferno	No	No	Yes	No	Yes	No
Cobblestone	No	No	Yes	No	Yes	No
Italy	No	No	Yes	No	Yes	No
Agency	No	Yes	No	No	No	No
Office	No	Yes	No	No	No	No
Dust II	No	No	Yes	Yes	Yes	No
Mirage	No	No	Yes	Yes	Yes	No
Insertion	No	No	Yes	No	No	Yes
Lake	No	No	Yes	No	No	Yes
Shipped	Yes	Yes	No	No	No	No
Overpass	Yes	No	Yes	No	No	No
Austria	Yes	Yes	Yes	Yes	Yes	Yes

Table 1: All the maps shipped with CS:GO as of February 2018, coded for their representational features.

Whilst the categories of this typology are simply those that I observed when playing the maps, there is enough overlap to justify the claim that there is a consistency in the diversity of the landscapes in *CS:GO*. I will once again relate this back to the metaphor of enclosure, this time in relation to Descola's disambiguation of the relationship between 'Nature' and modernity. Descola argues that the geometrical objectification of the world, often correlated with the modern rise of landscape painting, privileges the visual experience of landscape to the extent that landscape becomes an aesthetic spectacle, enclosed from other fields of human experience. To remind the reader, Descola wrote:

“Nature, now dumb, odour-free, and intangible, had been left devoid of life. Gentle Mother Nature was forgotten, and Nature, the cruel stepmother had disappeared; all that remained was a ventriloquist’s dummy, of which man could make himself, as it were, the lord and master” (Descola 2013 41).

Combine this with Mitchell’s fourth thesis that landscape is: “both a signifier and a signified, both a frame and what a frame contains, both a real place and its simulacrum, both a package and the commodity inside a package” (Mitchell 1994, 5). What Descola and Mitchell are suggesting that landscape functions as a form of aesthetic spectacle, a ‘ventriloquist’s dummy’ that stands in for itself. The landscape typologies of *CSGO* function in a different way to the Promethean dystopia of *Half-Life 2*. Where the latter re-enforced the experience of the player-protagonist, the former has become more like the “odour-free and intangible” environments described by Fuller and Jenkins. Like the backgrounds in *Street Fighter II*, *CSGO* maps contextualise an otherwise repetitive play activity with their own simplification and repetition. Landscape has been reduced to a discrete set of types in order to provide familiarity and variation to a highly repetitive gameplay activity.

In the next section, I examine how *CSGO* appropriates non-game environments and transforms them into game maps, based on the transgressive question ‘can I play *Counter-Strike* here?’ I consider how the reductive typologies of landscape seen in my taxonomy related to the objectification of landscape experience found in studies of tourism.

6.4.2 Landscape appropriation and conversion

The landscape process of *Counter-Strike* converts a typology of places into landscape maps that satisfy the gameplay conventions of line of sight and symmetry as outlined in Section 6.2. In this section, I argue that this landscape process is based on one simple question – ‘can I play *Counter-Strike* here?’ As I have shown through the work of Klevjer (Sections 5.1 and 6.2), player

experience in an FPS landscape produces a specific mode of being, based on the tunnel vision of the camera-gun and the player-avatar prosthetic. This specificity transforms a landscape into an FPS way of being. This process arguably shares something in common with location-based games such as *Pokémon GO* (Niantic 2016), where the physical environment is redefined by the question ‘can I play *Pokémon GO* here?’ However, *CSGO* takes this a big step further – it meticulously reconstructs an observed environment, and transforms it according to the ludic demands of line of sight and multiplayer symmetry. This is where the physical environment becomes the ventriloquist’s dummy of *CSGO* – dumb, odour-free, and devoid of life, it balances distances and lines of sight, with the rendered environments, collaged and transformed by the Photoshop DJ (Section 5.4.3). The question ‘can I play *Counter-Strike* here’ drives the continual creation of maps that populate *CSGO* servers.

John Bale adds a counter-narrative to the modernist homogenisation of the arena landscape that is relevant for the question ‘can I play my *Counter-Strike* here?’ Bale cites sporting activities such as jogging, skateboarding and tai chi as postmodern examples where urban spaces are appropriated as sports landscapes, outside standardised modernist demarcations (Bale 2003, 129). Of course, tai-chi practitioners are generally more socially accepted than skateboarders, which brings up transgression as an important aspect in the appropriation of landscapes in *Counter-Strike* (I expand on this in the next section).

For a physical environment to be represented in *CSGO*, it has to be entirely converted to the ludic architecture of line of sight and multiplayer balance (recall the height of the table in the ‘Agency’ map, Section 6.3.1). Furthermore, for a physical environment to be represented in *CSGO*, it must also be converted and mediated according to the affordances of the Valve Source Engine (I explore this process in detail in Chapter 7). Therefore, on the level at which an environment is appropriated into *Counter-Strike*, it becomes both an abstracted basketball court as well as an appropriated non-game landscape. By straddling both of these conditions, *Counter-Strike* is similar to Bale’s description of the Grand Prix,

or the Tour de France, where organising bodies convert non-sport landscapes into sport-landscapes (Bale 2003, 153). Bale writes:

The marathon runner, Alberto Salazar, expressed a desire to get away from road and track and return to cross-country running, but even here artifice intrudes; at the world cross-country championships artificial ‘hills’ are temporarily constructed and city streets sometimes changed into ‘country’ by temporarily laying turf over them. (Bale 2003 152)

This is why I characterise the landscape process of *Counter-Strike* as one of appropriation and conversion – an ‘odour-free’ aesthetic is meticulously converted via the artifice of the Valve Source Engine into a balanced arena for a competitive game. A *Counter-Strike* landscape looks like a lake house or a post-industrial wasteland, but it is actually an appropriation of these landscapes, completely reconstructed as an intricately balanced arena for a competitive game of military vision. In the next section, I take a closer look at the type of landscapes that appear in the typology of Section 6.4.1 and examine their appropriation in terms of the aesthetic consumption of tourism.

6.4.3 Tourist landscapes

If I make the comparison between *Counter-Strike* and something like the Tour de France for the appropriation of landscape, I must return again to travel literature and the touristic gaze (introduced in Section 2.3.5). The typology that I observed in Table 1 can be located in the landscape theory of travel and tourism. Much like Descola and Mitchell, Barbara Kirshenblatt-Gimblett argues that various forms of modern landscape require a caricature-like objectification and process of commodification in order to be consumed as a typological aesthetic spectacle. In a similar line to Baudrillard (Section 5.2.2), Kirshenblatt-Gimblett recounts how in the 20th century, theme parks came to influence how tourists expected to experience historic sites, and in turn how these historic sites were marketed to the public. The marketing of the Bikini Islands nuclear test site as an “unmodified

museum of the dawn of the era of the nuclear bomb” and the marketing of seeing a cow milked on a New Zealand farm share the common factor of landscape as a homogenised site of aesthetic consumption (Kirshenblatt-Gimblett 1988, 170). She writes: “increasingly, we travel to actual destinations to experience virtual places” (Kirshenblatt-Gimblett 1988, 171). In *Mythologies* (1972) Roland Barthes describes the tourist guide as a “cultural alibi”, or a “labour-saving adjustment” that reduces geography “to the description of an uninhabited world of monuments” (Barthes 1972, 74-6). Literary theorist Jonathan Culler describes Barthes’ ‘alibi’ as the “tendency of culture to convert history into nature” (Culler 1988, 155). Similar in structure and essence to Mitchell’s landscape thesis of naturalising conventions and conventionalising nature (Section 2.3.8), Culler argues that whilst tourism is often maligned as crass, inauthentic or insensitive, it reveals the general process of signification that operates more broadly in the contemporary production and consumption of landscape. Culler writes:

A semiotic perspective advances the study of tourism by preventing one from thinking of signs and sign relations as corruptions of what ought to be a direct experience of reality and thus of saving one from the simplistic fulminations against tourists and tourism that are symptoms of the touristic system rather than pertinent analyses. Tourism, in turn, enriches semiotics in its demonstration that salient features of the social and natural world are articulated by what Percy calls 'symbolic complexes' and its revelation of the modern quest for experience as a quest for an experience of signs. Its illustration of the structural incompleteness of experience, its dependency on markers, helps us understand something of the nature of semiotic structures. (Culler 1988 165)

What Culler is saying, is that the way that tourism creates self-fulfilling signs (a restaurant in France represents the idea of French restaurants) is a distillation of how consumer capitalism objectifies the world into a reductive system of self-signification. The typological quality of *Counter-Strike* maps can be read as assemblages of signs and tropes, and as landscapes of aesthetic consumption. *Counter-Strike* simply instantiates this by applying the appropriative conversion

of “can I play *Counter-Strike* here?” to the tourist photograph, thereby merging the lens-based objectification of the military gaze with the lens-based consumption of the touristic gaze. A clear example of this is the *CSGO* map ‘Canals’, designed by Iikka Keränen, and inspired by the city of Venice (McVicker 2017). According to Kirshenblatt-Gimblett, a city such as Venice objectifies itself for the touristic gaze; its every feature performs as a sign for itself (a plaza in Venice is a Venetian plaza filled with Venetian restaurants). This pre-packaged spectacle was appropriated by Keränen and converted according to the line of sight landscape of *Counter-Strike*. As a player, I run past signs that point towards museums, and through canals that look like postcards. The appropriation of a tourist landscape is a relatively simple operation, where one form of objectification is converted into another, whilst also toying with the historical narrative of terrorism in the domestic sphere.

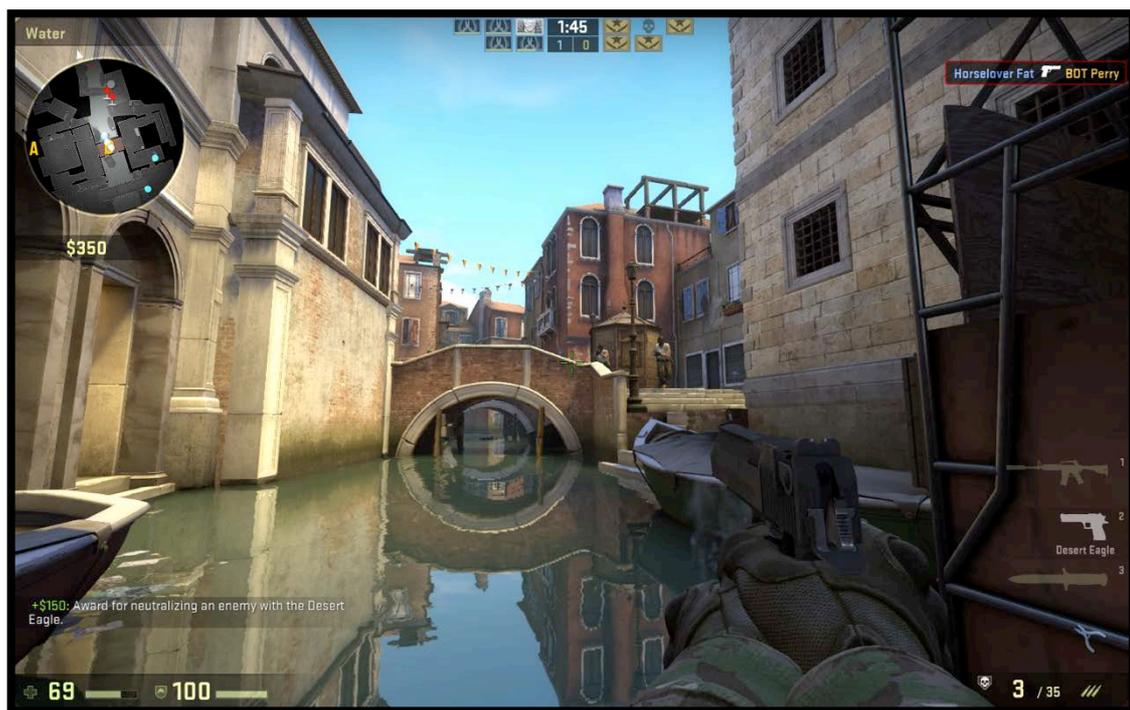


Figure 20: ‘Could I play Counter-Strike here?’ The appropriated tourist landscape in the ‘Venice’ map of *Counter-Strike: Global Offensive*, author’s screenshot.

When it comes to landscape environments that are not overtly touristic, I argue that the conversion and consumption of objectified spectacle are essentially the same. In the *CSGO* map ‘de_Dust’, I consume a vague approximation of conflict in

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the Middle East, in the map 'Militia', I consume the phenomena of the rural siege in North America, and in the map 'Office', I consume my own workplace, appropriated as a site of non-work. Virilio argues that the optical transformation of warfare via the exchange of the technological gaze erased the division between a battlefield and the home front long ago (Virilio 1989, 26). In *A Theory of the Drone* (2015) Grégorie Chamayou argues that new iterations of military optics mean that the distance between civilian and military life is now paper-thin. A drone pilot in Nevada can fire a missile at a wedding in Yemen, and a family car can be driven into a public square under the guise of global conflict (Chamayou 2015). As a landscape, *CSGO* reflects the aesthetic consumption of the world as an objectified, typological spectacle, merged with the homogenising effect of military vision. As a representational enclosure, its military vision prioritises those features that moderate the line of sight, leaving all other aspects of the landscape as odour-free ventriloquist textures, or absent externalities.



Figure 21: 'Could I play Counter-Strike here?' The appropriated workplace in the 'Office' map of *Counter-Strike: Global Offensive*, author's screenshot.

In Section 5.6, I observed that upon finishing *Half-Life 2*, I felt like crawling out of my office via the air-conditioning vents. *CSGO* has no stage of completion, and I can play maps over and over with a sense of collective validation from other players. I enjoy playing *CSGO* in the ‘Office’, ‘Agency’ and ‘Assault’ maps because they resemble environments I usually associate with my own work. I run around the office with other players, shooting at computers and hiding behind indoor plants. Perhaps this act of representation, where everything is reduced to obstacles in line of sight is a form of liberation? The workplace has been abandoned, and we return to its representational shell for our transgressive ludic pleasure. It is fun to play in the office because it means we are not at work. The tourists and the Venetians have left Venice, so we become super tourists, playing our specialised game. Without the ‘cultural alibi’ of the tourist guide, I know how to be a skilful tourist in Venice. Should I take a photo of certain prospects, or maybe have an expensive lunch on a piazza? Should I become an ad hoc historian of its architecture, and if so, for what reason? It is simple to enjoy Venice through the reductive conversion of *CSGO*. As a form of super-tourism, I can quantify my experience with others, and enjoy this spectacle via the consumption of play.

Just as the touristic gaze facilitates consumption via a stylistic aestheticisation, the *Counter-Strike* mapmaker performs a transgression by transforming a non-military landscape into a landscape that can be consumed by a game of military vision. Unlike the player, the *Counter-Strike* mapmaker asks, “can I play the game *here?*” *Counter-Strike* suggests a position where military violence and sport can be treated as the same thing. The confluence of military vision, competitive sports and typological landscape consumption expresses an abstraction of landscape, and a normalisation of the military gaze. The abstraction of landscape is present in the touristic gaze, and the way in which landscapes are objectified as caricatures of themselves is taken on by *Counter-Strike*, which adds a competitive instrumentalisation of the military gaze. In order to understand the landscape representations within *CSGO*, it is necessary to consider the interaction of a number of interrelated processes. The appropriation and conversion of landscapes into *CSGO* can be examined relative to the consumption

of landscape by sports geography and tourism as well as and the transgressive appropriation of landscapes into the language of military vision. In the next section, I examine the relationships between the player, the game and the world through the extrinsic economies surrounding *CSGO* as a professional ESport, as a medium for gambling and as a marketing channel for firearms. In Section 6.1, I showed how the production of *CSGO* must be understood relative to its reliance on professional and voluntary labour. In the next section, I examine how equally significant extrinsic economies have grown around *CSGO*. These extrinsic economies make an indispensable contribution to a landscape analysis of *Counter-Strike: Global Offensive*.

6.5 Counter-Strike in the world

As per the final section of Chapter 5, I will now jump out of my analysis of *Counter-Strike* as a game, and consider the material cultural ecosystem that has developed around it, and formed the economic structures that support its enduring popularity and viability. I will remind the reader that if Picturesque landscape painting could not exist without the wealth generated by the enclosure of labour and property dispossession if there are equally pertinent material economies propping up *Counter-Strike*, they are indispensable for this landscape reading. I examine how sociological and geographical patterns in Bale's sports geography relate to existing ethnographic studies surrounding ESports, and how this comparison sheds light on the development of incentivised purchases and gambling economies in *CSGO*. I then explore how the representation of proprietary firearms in *CSGO* affects the contemporary marketing of firearms. Following this section, I summarise the findings of this chapter and my reading of *Counter-Strike* as a landscape made using the medium of the Valve Source Engine.

6.5.1 The ESports industry

Bale's research on sport and landscape provides a framework for understanding the relationship between *Counter-Strike* and Esports. Bale writes that competitive sports often function as a focal point for other social structures, and the distribution of sports teams and sports arenas, from the professional to the amateur level, typically correlates to geographical distributions of population centres and national and community boundaries. Furthermore, patterns of support for various sports and teams correlate to other socio-cultural variables, such as religion and wealth (Bale 2003, 15). Bale extends this to argue that sports are a powerful way to track the effects of globalisation on local cultural practices. This relates to how telecommunications companies affect the schedule and production of competitions, the influence of international organisations such as the International Olympic Committee or Fédération Internationale de Football Association in selling broadcast and merchandise rights, to the trading of athletes as assets. All of this points to how the professionalisation of sports indexes much larger patterns in international trade and exchange. At this point, the reader might notice the similarity between this argument and that of Section 5.4.2, where I proposed the neo-baroque as a system of signification for patterns in globalised cultural production. I am, essentially making the same point, this time via Bale's sports geography. The ways in which Bale links sport to landscape, through the transformation of physical environments, the relationship between communities and place, and the operation of broader economic processes, serves as an effective introduction for how the development of Esports affects how *Counter-Strike* exists in the world.

T.L. Taylor's ethnographic research into competitive *Counter-Strike* communities illustrates how the relationships one might expect to find in traditional competitive sports are also found in competitive Esports. Regarding the geographical patterns of how and where Esports are played, Taylor examines how technological networks, government policy and licensing laws affected the growth of Esports in South Korea in the early 2000s. Taylor cites the early penetration of broadband Internet as a key technological driver for the Esports

in South Korea (T. L. Taylor 2012, 19-20). The licensing laws for online games in South Korea, whereby a net café could buy multiple subscription accounts without requiring players to buy their own led to a favourable business climate for the growth of online gaming (Taylor 2012, 20). In the case of South Korea, the combination of technological networks, licensing arrangements, and a governmental priority to encourage information technology-based activities, led to the rapid expansion of online gaming and the consequent popularity of professional ESports in South Korea (Taylor, 2012 18). Therefore, the absence of these conditions, such as high internet speeds or access to specialised computer equipment reveals patterns of material social inequality embedded within the demographics of ESports players.

Taylor reveals that the “meritocratic myths” that underpin competitive sports are also reproduced in ESports such as *Counter-Strike* (Taylor 2012, 125). The negotiations of masculinity one might expect to find in a high school are reproduced in the social structure of ESports where patterns of homophobia and heterosexist discussions of the female body are used to leverage social capital amongst male players. Taylor writes:

Pro player talk can certainly be smattered with misogynistic or, at the least, retrograde notions about women. The notion that women are just inherently not going to ever be as good at computer games as men is all too common. Homophobic language, where calling someone “ gay ” is considered a slur and “ fag jokes ” are considered funny, remains a persistent component in parts of game culture. (Taylor 2012, 117)

Similarly, patterns of patriarchal discrimination in sport are also reproduced in *Counterstrike*, where the gendered division of competitions and the sexualised marketing of professional female players are strikingly similar to what exists in other sports. Taylor writes: “The argument is typically that if they were they would either be on men’s teams or competing in matches against men. As one male team captain simply stated to me, “Women just aren’t good enough at Counter-Strike to play against men, so that’s why they have the tournaments for

them.” (T. L. Taylor 2012, 125) Using the simple comparison between the sports geography of Bale and the ESports research of Taylor, it is fair to argue that the sports landscape comparison for *Counter-Strike* is just as valuable for an extrinsic analysis of the game in the world as it is for understanding the intrinsic structure of the landscapes represented by *Counter-Strike* maps.

6.5.2 Weapon skins and gambling

In Section 6.3.3, I recounted how contemporary sports were influenced by the industrial drive for standardisation, and how this drive could be observed in the structure of *Counter-Strike* maps. However, the push to standardise sports was driven by more than the industrial desire to measure and quantify, it was materially motivated by the need to provide a basis for gambling. (Bale 2003, 27) In this section, I show that *Counter-Strike* not only reproduces ethnographic patterns visible in other sports but that the commercial environment *Counter-Strike* has developed economies that reproduce the relationship between standardised sports and gambling.

Taylor describes how the growth of the Cyberathlete Professional League was instrumentally linked to the expansion of *Counter-Strike* as a formalised competitive activity (Taylor 2012, 8). However, the survival of *Counter-Strike* as a long-term platform for competitive play is more closely linked to the economy of ‘weapons skins’ trading. Weapons skins are colourful alterations to the *Counter-Strike* weapons that were introduced by Valve as incentivised purchases and tradeable in-game items. The success of weapon skins relates to the in-game spectator mode, where once a player has been knocked out of a round, they watch the remainder of the game from the perspective of other players, where the weapon is constantly in view. When one player kills another, they can pick up the weapon of their defeated opponent, which saves their team from having to purchase weapons in the next round, and functions as a trophy, or brag. Writing in PC Gamer magazine, Evan Lahti argues that there is a strong correlation between the success of *CSGO*, the introduction of weapons skins, and the

controversial economy that they introduced to the game. One year after *CSGO* was released, it still had not overtaken the older *Counter-Strike: Source* as the most popular version for players. Lahti argues that the introduction of weapon skins directly correlates to the rise of *CSGO* as the dominant online version, and the introduction of ‘souvenir reward’ skins to incentivise watching *CSGO* tournaments online also added momentum to the growth of ESports spectatorship (Lahti 2015).

The colourful nature of weapons skins also marks a distinct departure from the military aesthetics of *Counter-Strike*. As Valve released a number of skin designs, players repeatedly favoured the bright coloured skins over military camouflage. Valve technical artist Bronwen Grimes recounted:

Although we started off thinking military camouflage was cool...it turns out what our community really values are the finishes that look more like paintball guns. We needed a reminder that although Counter-Strike is military inspired, it's not a military simulation. It's a sport. When our customers play, they don't aspire to be soldiers, they aspire to be Elite Counter-Strike Players. So maybe it's not that surprising that the closest real-world analogue we've got to our preferred aesthetic comes from a sport. (Richardson 2015)

This statement reflects the hybrid sport-military landscape that I have already examined throughout this chapter. As well as recreating sport gambling economies, the distinctive colours of weapons skins must be understood according to two important functions that weapons skins have adopted – namely the formation of a virtual currency, and a marketing strategy for real firearms. Writing in *Rock Paper Shotgun*, Emily Richardson argues that the mechanic of loot boxes opening recreates the mechanic of a slot machine, where the semi-regular randomisation of incentives drives player input. The trading of weapons skins, combined with the use of weapons skins as a currency for gambling on the outcome of *CSGO* matches transformed *CSGO* into an irregular online gambling platform. The software that facilitates this gambling is made by Valve, and it

generates an additional revenue stream of commissions for the company. Writing for *Bloomberg Business Week* in 2016, Joshua Brunstein and Eban Novy-Williams argue that this trade also constitutes an illegal gambling practice that has evaded local regulations and involves minors. They argue that in 2015 alone, approximately US\$2.3 billion worth of weapon skins were placed as bets (Brunstein and Novy-Williams 2016).

When the activities of play and spectatorship are instrumentalised for in-game purchases and gambling, and this gambling becomes a key revenue stream for the game, these activities become a key vector for analysing the game as a landscape. If the Picturesque painting is partly defined by the enclosure of labour and property dispossession, without which it could not exist, then *Counter-Strike* is in part defined by the enclosure of modding labour and the unregulated economy of weapon skins gambling on which it largely depends. If the success and longevity of *Counter-Strike* are partly derived from the economy of weapon skins, then this material context is indispensable for how its landscape representations should be understood. The representational environments of *Counter-Strike* are not only structured by the abstract principles of the sporting arena, like sports, they are also funded by gambling, and arguably, by product placement. This latter point is speculative, but I will introduce it in the next section to round off my argument that the landscapes of *Counter-Strike* essentially collapse military and sports into one another, and appropriate environments based on the typological simplifications familiar to tourism.

6.5.3 Weapon skins and firearm sales

Throughout this chapter, I argue that the landscapes of *Counter-Strike* must be understood via a fusion of sports and military simulation. The statement in the previous section that the aesthetics of weapons skins emphasise sports over military themes has become an emergent trend for the contemporary marketing of firearms. Computer game journalist Simon Parkin compares the representation of real guns in computer games to the manufacture of chocolate

cigarettes by candy companies – a mimicry of adult items in children’s toys, which acts as a primer for a future market. Parkin quotes Ralph Vaughn, who negotiates between the Barrett firearms company and game developers, who say that “video games expose our brand to a young audience who are considered possible future owners” (Parkin 2013). Parkin approached Sega, Sony, EA, Activision and Codemasters for comment on the representation and licensing of proprietary firearms in computer games, however, none would comment. But in absence of this, Parkin interviews French company Cybergun, who negotiate licenses for games companies to represent proprietary guns, such as Uzi, Kalashnikov, FAMAS and Colt. Parkin shows that despite the lack of comment from game developers, there clearly are contractual agreements behind the representations of real weapons within computer games. Furthermore, in Parkin’s article, Cybergun state very clearly that there is a market correlation between the sales of real guns and their appearance in popular computer games: “We definitely see sales of particular guns increase when they are featured in popular video games, such as Call of Duty.” Anthony Toutain, Cybergun” (Parkin 2013).

As a concrete illustration of this relationship, in 2012, Electronic Arts included a link on the official website of *Medal of Honour: Warfighter* to the MacMillan firearm company who manufacturer the TAC-3000 sniper rifle depicted in the game (Smith 2012). Journalist Lee Fang linked the weapon skins economy with the sales and marketing of real firearms, where the attempt to attract young customers resulted in a shift towards computer game aesthetics in the firearms themselves, as well as a preference for weapons that appear in computer games evidenced by the purchasing habits of young Americans (Fang 2018). Companies such as Blacksheep Arms specialise in applying coloured ceramic coatings to guns that mimic the ludic aesthetic of computer game weapon skins (see the image comparisons in Figures 19-22) The sales of firearms using computer games aesthetics and the correlation between gun sales and gun violence is perhaps another important area for research, however it would require an empirical investigation is outside the parameters of this dissertation. Suffice to say, the representational slippage between ESports and the marketing of actual

weapons is important to highlight, and provides another compelling example of the contextual significance of the hybrid sport-military landscapes produced by *Counter-Strike*.



Figure 22: Weapon skin for the *Counter-Strike: Global Offensive* weapon SCAR-20. Source: <http://CS:GOstash.com>

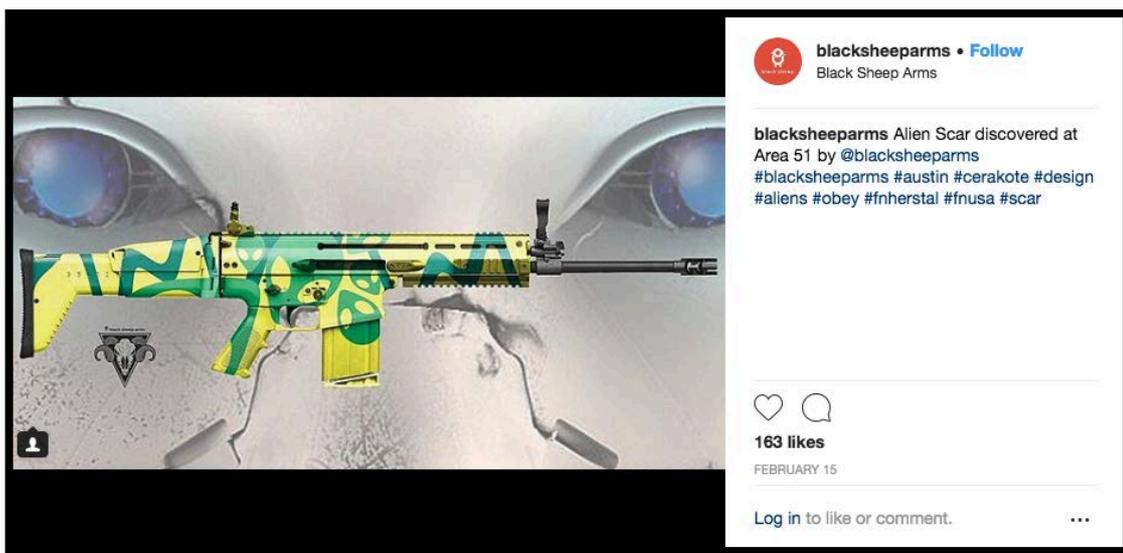


Figure 23: FN SCAR Assault rifle with custom ceramic coating. Source: Black Sheep Arms. Source: Instagram.



Figure 24: Weapon skin for the *Counter-Strike: Global Offensive* weapon Glock-18, Source: <https://CS:GOitems.pro/>

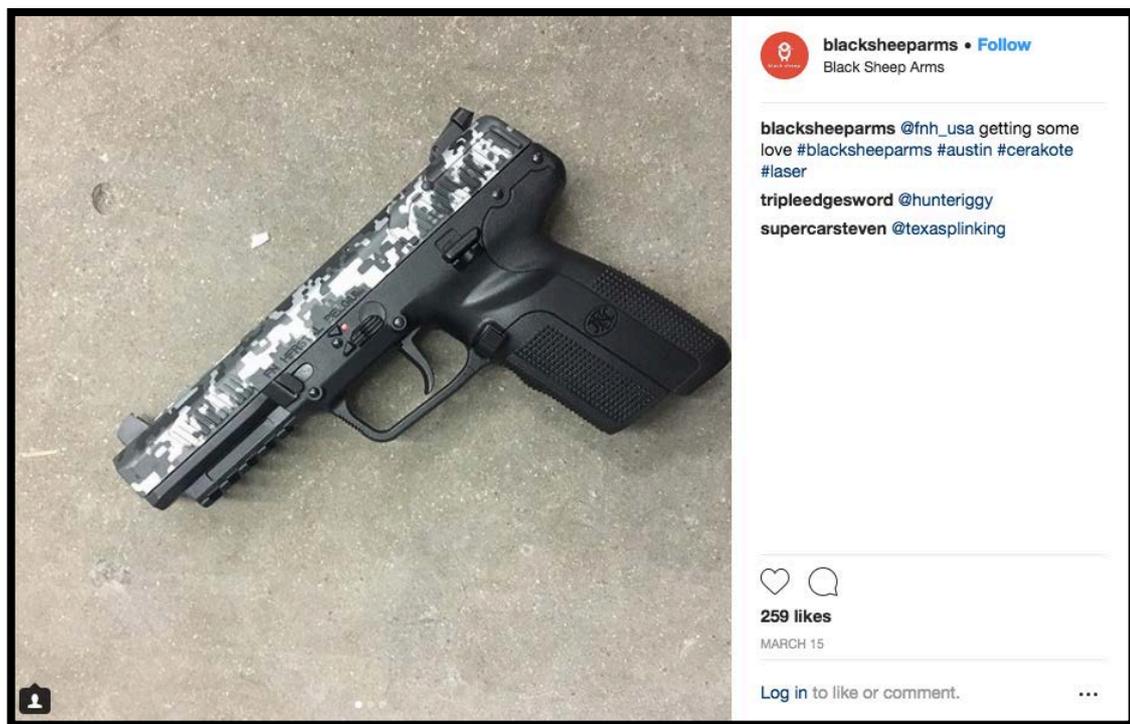


Figure 25: FN 5-7 pistol with custom ceramic coating. Source: Black Sheep Arms. Source: Instagram

6.6 The landscape of Counter-Strike: Military, tourism and sports

In this chapter, I derived a landscape reading of *Counter-Strike* based on play-based experience and an extrinsic examination of how the game exists in the world. I demonstrated how the shift from *Half-Life 2* to *Counter-Strike: Global Offensive* creates an entirely different set of landscape relationships afforded by the mediation of the Valve Source Engine. Compared to the Promethean protagonist landscape of *Half-Life 2*, the sporting landscape of military vision in *Counter-Strike: Global Offensive* in ludic structure and in its materiality as both an amalgamation of player-labour and extrinsic economies.

In *Counter-Strike*, my skills from *Half-Life 2* were redefined through an endless feedback loop of repetition and collective validation. The multiplayer reciprocity of military vision revealed the abstract symmetry and balance underpinning each landscape representation, where a table, a rock, a tree or a desk must be placed in a careful orchestration that balances the field of play. *Counter-Strike* landscapes are a combination of military vision and the abstract symmetry of a sporting arena. Sports landscapes appropriate and convert non-sport environments for ludic purposes. The appropriation of non-game environments into *Counter-Strike*, such as industrial landscapes, office buildings and rural properties, requires a complete architectural conversion in order to balance the line of site game. This often-transgressive appropriation repeats an objectification similar to that of tourism, but the consumption of space via tourism has been replaced with the consumption of place via *Counter-Strike* play. This repetitive sport-like quality allows the player to ask ‘can I play *Counter-Strike* here?’

The economies of ESports and weapon skins demonstrate how the relationship between sports and military vision spreads further than the gameplay experience of the player or the modder. Commercial competitions and gambling reproduce sports geography, but with differences based on the materiality of *Counter-Strike*, and the distribution, consumption and regulatory patterns of digital networks. The combination of sports and military vision also directly

Chapter 6. A Reciprocal Landscape – on Counter-Strike: Global Offensive

informed the observation that such games have been appropriated as a marketing platform for firearms.

In the next chapter, I adopt a slightly different analytical approach and consider the Valve Source Engine from the position of a modder. As a co-author in the project *Autosave: Redoubt*, myself and two other artists attempted to produce a geographically accurate recreation of a historical site in Hong Kong. This case explores the mediation of the Valve Source Engine itself from a practice-based perspective by exploring how a specific site can be represented, and exploring what limitations and abstractions characterise this process. In doing so, I was able to explore the specific representational affordances of the Valve Source Engine and examine the process by which it can create a landscape.

CHAPTER 7: AUTOSAVE: REDOUBT – A CASE STUDY IN REPRESENTATION

To further my investigation into the Valve Source Engine as a medium of landscape, I co-authored a *Counter-Strike* mod, entitled *Autosave: Redoubt*. This mod is a recreation of a historical site in Hong Kong and at the time of writing, it is currently hosted on the Steam Workshop. Up to this point, I have discussed modding as an important practice for the Valve Source Engine. The engine itself derives from a process of software modification, and both *CSGO* and *Garry's Mod* originated as player-made mods. It, therefore, seems logical that I expand my research from first-person gameplay to modding, and create a landscape using the Valve Source Engine. This chapter serves as a bridge to Chapter 8, where I claim that the player of *Garry's Mod* is defined by collapsing playing and modding into a single activity, where the player begins to play the game engine itself. Indeed many of the skills I learned during the production of *Autosave: Redoubt*, such as the creation of custom assets for the Valve Source Engine, directly informed my ability to play *Garry's Mod*. I begin by introducing the notion of the researcher as modder, and give an introductory overview of *Autosave: Redoubt*. I introduce relevant methodological questions borrowed from the field of virtual archaeology and 'documentary games'. I examine the historical subject of *Autosave: Redoubt*, and how historical debates motivated our selection of this site as the subject for a *Counter-Strike* landscape. I give a detailed account of the modding process, the challenges we faced in producing the landscape, and how these challenges revealed certain limit conditions of the Valve Source Engine. I reflect upon the relationship between the source material and the representation we produced, and show how my engagement with modding makes a valuable contribution to my analysis of the Valve Source Engine as a medium of landscape.

7.1 Modding as experience and research

The decision to expand my analysis in this practical way was influenced by platform studies (Section 3.6.3) and the expanded role of player-produced

content for ‘Game 3.0’ (Section 3.6.4). In Section 3.6.3, I introduce two projects that examined Jason Rohrer’s game *Passage* by analysing its source code. As partial implementations of a platform studies approach, both projects demonstrated that this ‘under the hood’ examination can make a significant contribution to scholarship.

7.1.1 The modding ‘we’ rather than the playing ‘I’

This chapter enacts a shift in authorship from the first-person player to the first-person modder (the implied player of Game 3.0 – Section 3.6.4), however, it also enacts a shift from the singular ‘I’ to the plural ‘we’. *Autosave: Redoubt* was of a scale beyond the authorship of a single artist, and was a team effort between myself and the artists Andrew Luk and Alexis Mailles. At times there was a clear split in our labour, where Luk was responsible for historical research, Mailles did the brush architecture and displacement modelling, and I did the custom asset production, lighting and sound design. However, there was so much collaboration and porosity across all aspects of this project that it is simpler to refer to decisions taken and discoveries made using the collective ‘we’ rather than the singular ‘I’.

7.1.2 Project overview

At the time of writing, *Autosave: Redoubt* exists as a playable map for *Counter-Strike: Global Offensive* hosted on the Steam workshop. We built this landscape primarily using the Hammer editor (the level editing software for the Valve Source engine that is bundled with licensed copies of *Counter-Strike: Global Offensive*). *Autosave: Redoubt* is a reconstruction of a series of tunnels, bunkers and pillboxes that exist in various stages of decay in the mountains of Kowloon, Hong Kong. The British colonial government constructed these tunnels in the 1930s, and on the 8th of December 1941, they became the site of the first conflict in the Battle of Hong Kong between Japanese and Allied soldiers. The name ‘Shing Mun Redoubt’ is commonly used to refer to the entire system of

Chapter 7: Autosave: Redoubt – A Case Study in Representation

underground tunnels and pillboxes as well as the main command post (the redoubt). In 2011, a team of researchers led by Professor Lawrence Lai from The University of Hong Kong published an analysis of the site based on a geographical survey of the site. We were given access to this survey data as well as the historical reports published by The University of Hong Kong, which became the primary source for recreating the site within *Counter-Strike: Global Offensive*. We also conducted site visits and undertook a comprehensive study of secondary historical sources that analysed the construction of the site. In Section 7.2 I give a more detailed account of the historical context of the site, and why we felt it was a suitable and interesting landscape to represent in as a *CSGO* map. In Section 7.3 I give a detailed account of how we transferred surveyor's data into the Hammer editor, and the limit conditions of representation we discovered in the process. But first, I introduce literature that contextualises the representation of a historical landscape as a game mod. The first concerns what Ian Bogost and Cindy Poremba refer to as a 'documentary game' and the second is how the field of virtual archaeology evaluates the use of computer game engines for site-specific representation.



Figure 26: A trench and tunnel opening as part of the Shing Mun Redoubt site, author's photograph.



Figure 27: A trench and tunnel opening within *Autosave: Redoubt* gameplay, author's screenshot.

7.1.3 Representation and the documentary game

In their chapter ‘Can Games get Real?’ Bogost and Poremba (2008) examine the ways in which computer games use historical events as a subject of representation. They argue that the highly confectioned nature of computer game renderings and mechanics can be a sort of antidote to the “myth of cinematic transparency” often discussed in relation to documentary film (Bogost and Poremba 2008, 12). Bogost and Poremba write:

Digital games are a popular and powerful medium with a potential yet to be fully explored, and one in which actuality and documentary might still find a place. But to enjoy further success, it must move beyond the mere instantiation of “documentary” as a legacy, and work to define the properties endemic to the genre in digital game form. (Bogost and Poremba 2008, 21)

Rather than seeking to obscure the mode of mediation, they argue that the computer game can explore non-fiction subjects by proposing novel ways of reconfiguring historical events. They propose a framework comprising procedural representation, interactive storytelling, medium self-reflexivity and generative procedural scenarios, where history can be speculatively created using the raw materials of a simulation. The decisions we had to make for the gameplay procedure of *Autosave: Redoubt* most closely approximated Bogost and Poremba's "reflexive" documentary game, the representational affordances of the Valve Source Engine and *Counter-Strike* reflected not only on the ability of the engine to simulate the historical site but how gameplay conventions reflect how this site is experienced by people today. In the next section, I introduce medium-specific debates from the field of virtual architecture, which contextualise some of the challenges we faced in producing our mod, and help to reveal the representational affordances of *Counter-Strike* and the Valve Source Engine.

7.1.4 Representation and Virtual Archaeology

The goal of *Autosave: Redoubt* was to recreate a historical site with a degree of topographical accuracy, using the surveyor's information and historical research as a guide. The use of 3D computer game software for the representation of specific physical landscapes is an established practice across contemporary archaeology. 'Virtual archaeology' strives for a sense of accuracy in representation relative to specific sites, so whilst this literature is a slight departure from the framework of Chapter 3, it is intended as a supplementary narrative to the discussions of computer game representation in Section 3.2 and realism versus 'simulation gaps' in Section 3.6.2.

Architectural historian and new media scholar Ahmed El-Antably conducted an epistemological investigation into the representational affordances of the 3D game software as it applies to site-specific representations of landscape environments. He argues that much like Lefebvre's description of the limitations

of linear perspective (Section 2.3.1), the first-person 3D virtual environment should be treated such that the user resists the temptation to see it as a transparent, or neutral form of representation. In a conceptual sense, such an error can produce what El-Antably refers to as “the fallacy of presentism”, where “present day perspectives are projected on interpretations of the past”. (El-Antably 2010, 6) El-Antably also argues that virtual archaeological representations must make it explicitly clear that they are not trying to reconstruct an original experience. Instead, game technologies should be construed as mediation according to the representational limitations, and affordances of the game engine (El-Antably 2010, 6). In a 2017 review of virtual archaeological practice, archaeologist Paul Reilly and digital heritage recommended that any representation should be accompanied by an interrogation of how the game engine it has been appropriated, and where its limitations and biases lie. Drawing an analogy from the archaeological dig itself, they argue that opaque methodologies can produce “institutional amnesia”, where specialists, diggers and excavation directors can make decisions that highlight certain narratives but diminish or erase others. They argue that the use of 3D game engines should be accompanied by the assumption that their limitations and biases will skew the representation, and that best practice should be foregrounded with an understanding of the biases of the medium. (Beale and Reilly 2017) Virtual archaeology specialists Adrian Herwig and Philip Paar (2002) identify some of the biases and limitations that face the virtual archaeologist. In reference to the Unreal Engine, they point to the scale of the navigable space that the engine can uphold and the number of high detail or dynamic elements that can be simulated at any one time, as boundary conditions that must simplify the subject matter in order for the software to retain the frame rate adequate for a smooth and immersive visual experience. (Herwig and Paar 2002) The relevance of these arguments for this chapter is their focus on the mediation of a specific landscape by a 3D computer game engine. In Section 7.3, I describe how the limitations of scale and dynamic elements specifically apply to the Valve Source Engine. But before that, I offer a second vector that contextualises why *Autosave: Redoubt* was used *Counter-Strike* as a ludic medium of representation.

7.1.5 The implied first-person shooter

Throughout this dissertation, I analyse the relationship between the first-person shooter avatar and the world that this makes available to the player. Klevjer's description of the FPS avatar (Section 5.1.1) identifies the fixed relationship between the camera-gun avatar and the tunnel vision world it produces, to which I added the implicit masculine body. In this section, I extend this description by suggesting that when the actionable prosthetic (i.e. the gun) is removed (creating the 'walking simulator'); the navigable subjective vision still implies the FPS avatar by this very omission. To respond to the hesitation of El-Antably, Reilly and Beale, we proposed that the 3D first-person game engine in virtual archaeology implies the first-person shooter mechanic as a conspicuous absence. Navigating through a virtual historic site with the WASD keys, space bar for jump, a head-bob animation and mouse to look around is arguably a first-person shooter minus the gun, rather than a benign form of spatial navigation. As a response to Reilly and Beale's concerns about "representational amnesia", *Autosave: Redoubt* offers a first-person virtual reconstruction using a first-person shooter game.

7.2 Textures and intertextuality

In this section, I examine the historical context of the Shing Mun Redoubt and how it influenced our representation. I demonstrate how the history of 20th-century military bunkers contains a contradiction between the appearance of ruined structures in the landscape and the reality of how these structures functioned. I show how the geological survey data became an important reference point for our reconstruction, and how the contemporary experience of the site embodies some of the military vision/sport overlaps that I identified in *Counter-Strike*.

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Figure 28: The tunnels and bunkers of the Shing Mun Redoubt superimposed on top of a satellite map of the location, taken from Google Earth.

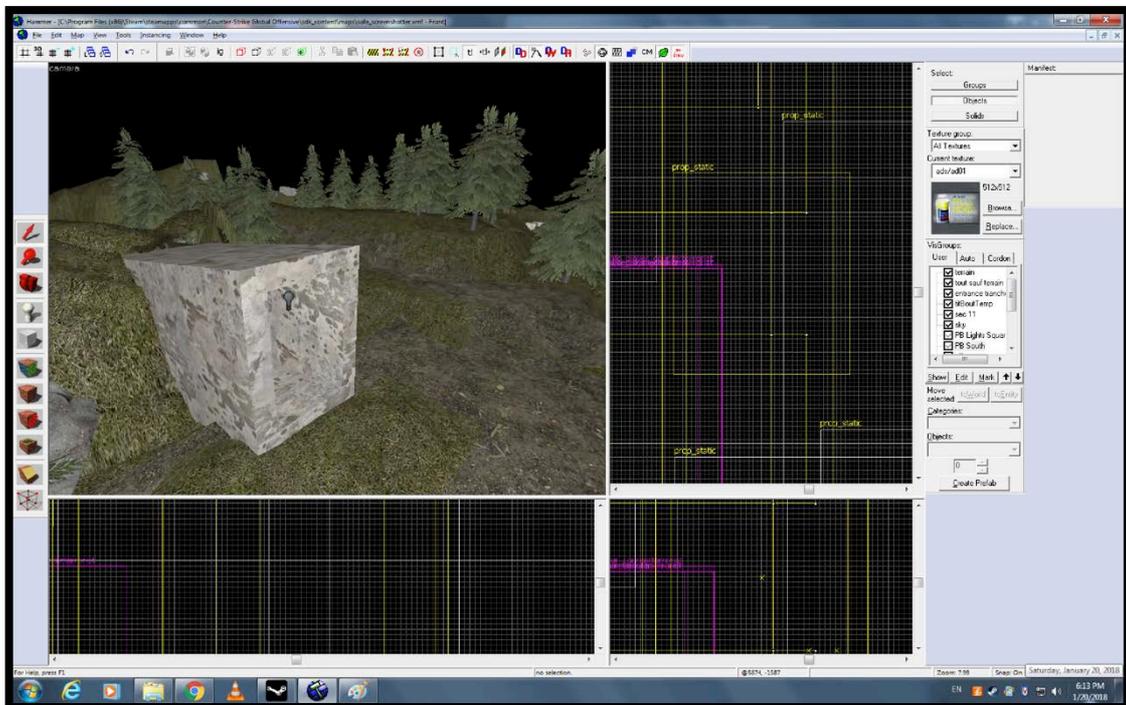


Figure 29: Recreating the Shing Mun Redoubt in the Hammer editor, author's screenshot.

7.2.1 The history of the Shing Mun Redoubt

“short blind chases through claustrophobic concrete tunnels.” (Lai, Daniels, et al. 2011, 26)

This quote is taken from the analysis of the Shing Mun Redoubt led by Lai and refers to the first-hand accounts from soldiers who fought in the conflict between Japanese and Allied forces on the 8th of December, 1941. The design of these structures, the conflict that occurred there, and how these structures exist today were dominant influencing factors in how we designed our landscape representation. The investigation conducted by Lai et al sought to assess the accuracy of reports made by British and Japanese soldiers after the war. It is highly relevant that this investigation used a ‘line of sight analysis’ to evaluate military and survivor records according to the physical structure of the site itself. As I demonstrated in Section 6.3.1, *CSGO* uses line of sight as its primary gameplay mechanic. This was the first connection that made the Shing Mun Redoubt a suitable landscape for the Valve Source Engine. The second connection, which correlates to the first, was that the Shing Mun redoubt is illegally used today as a space for airsoft war games. This once again points to the military/ sports reading of *Counter-Strike*. The image below is a photograph taken by the author during our first site visit in 2016. The sign ‘no playing war games’ is directed towards these airsoft players.

The Gin Drinkers Line is a defensive network of bunkers, pillboxes, and tunnels that stretches across the mountains of the Kowloon Peninsula. Built in the 1930s, it was part of a broader trend in architectural fortifications constructed by European powers between the first and second world wars. Wary of the rise of Fascism in Italy and Germany, the French built fortifications along their Eastern border, known as the Maginot Line. Nearby European nations followed suit, and defensive concrete structures were built along national boundaries around the globe. (Kwong and Tsoi 2014, 61) The intention of these defensive lines was based on theories developed in the aftermath of the First World War. These lines were not meant to hold or repel invasions, but to absorb and slow an attack, to

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inflict mass casualties, and then be abandoned, forcing a weakened invading army to advance, stretching their supply lines, into territory more favourable to the defender. To quote Virilio, by inflicting large numbers of casualties, the “military animal” was to be reduced from a gallop to a crawl (Virilio 1994, 23).



Figure 30: Public notices inside the Shing Mun Redoubt, author's photograph.

The Gin Drinkers Line, later nicknamed the “Maginot Line of the East”, was never a line per se, but rather four battalion-sized fortifications, the largest of which being the Shing Mun Redoubt, connected by paths and tunnels across the Kowloon Peninsula. At the Shing Mun Redoubt, the unpredictable undulation of underground tunnels, constantly zigzagging back and forth and climbing up and down, was intended to make running and shooting with rifles as difficult as possible (Lai, Davies, et al. 2011, 38). The tunnels were named after famous London Streets, including Shaftesbury Avenue, Haymarket, and Piccadilly, in order to help British soldiers already familiar with these streets navigate the underground labyrinth.

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In 1938, due to unforeseen technological changes in contemporary warfare, the British suspended the construction of the Gin Drinkers Line. In 1940, the British War Command determined that Hong Kong was no longer a desirable commitment from a military point of view. Hong Kong was, however, retained in order to legitimise British rule across other parts of their Asian colonies. Therefore the defence of Hong Kong during the Second World War was sandwiched between a technological shift and a shift in colonial priorities. With the entry of Japan into the Second World War, Hong Kong became a symbol of containment, and an indication of British support for the Chinese resistance (Kwong and Tsoi 2014, 115) When in 1941, Canada committed two Battalions to Hong Kong, the British General Christopher Maltby decided to reconfigure the defences of Hong Kong, and re-occupy the previously abandoned Shing Mun Redoubt, this time with only half the number of soldiers it was intended for (Lai, Davies, et al. 2011, 23).

On the 8th of December 1941, Japan's 21st, 23rd, and 38th Regiments were ordered to invade Hong Kong. They reached the Shing Mun Redoubt within two days, and within a matter of hours, the site was captured. In addition to the contradictions in how the Shing Mun Redoubt was designed and defended, the events of the 8th and 9th of December were equally contentious. The inadequate number of soldiers stationed at the site meant that Japanese soldiers could creep above ground and over the structure, unnoticed by the soldiers underground. Communication lines between the pillboxes and the redoubt were broken, and a general sense of disorientation defined the conflict. Soldiers chased each other through the confusing dark tunnels, too confined to shoot their rifles. Remarkably, and quite unexpectedly, these factors contributed to a very low number of casualties, but tragically, two Indian engineers were killed inside the Redoubt (Lai, Davies, et al. 2011, 28).

Concrete bunkers from World War II survive across the globe as relics of European imperialism. Virilio describes these ruins as myths of the present and the absent – present is our reflection of technology and death, and absent is the contradiction that these bunkers rarely functioned as the killing machines they

appear to be. By the time these bunkers were built, the technology of warfare had changed, and these fortresses were viewed from the windows of rapidly moving aeroplanes and tanks (Virilio, 1994). Just as the Maginot Line did not slow the German invasion of France, the Shing Mun Redoubt did not slow the Japanese invasion of Hong Kong. The monumental concrete ruins at Shing Mun and the Maginot Line look like one thing but are in fact another. They are monuments to technological redundancy and colonial indifference, where outmoded defences revealed that imperial priorities, for some time, lay elsewhere. These historical contradictions were a significant motivating factor for the reconstruction of the Shing Mun Redoubt using the Valve Source Engine and *CSGO*. The redundancy of the site as a piece of military technology, the reversals in planning, and the confusion and disorientation that characterised the conflict presented an opportunity to engage in how such sites are historicised today.

7.3 The shape of the landscape

In the other chapters of this dissertation, this section would typically look at how the ‘shape’ of the landscape is revealed via the experience and cognitive reflection of the player. In the previous chapter, I observed that the player-made landscapes of *Counter-Strike* involve a process of appropriation and conversion, where a player-modder asks ‘can I play *Counter-Strike* here’ and the modding process constitutes a response. In this section, I examine the process of appropriation and conversion from the player-as-modder perspective. This chapter explains how the process of appropriation and conversion functions, as well as explains the degree to which the player-modder relationship forces a detailed understanding of how the Valve Source Engine operates, and what kind of landscapes it is mostly geared towards producing. This understanding will address the specific questions raised in Section 7.1.3 regarding “institutional amnesia” and ‘media transparency’, but it will also speak more broadly as to what sort of landscapes the Valve Source Engine is capable of producing, within the specific limitations of *Counter-Strike* maps and gameplay.

7.3.1 Converting survey data into the Hammer Editor

The primary source for *Autosave: Redoubt* was the geological survey files produced for the Hong Kong University study, which combined the elevation of the local terrain with the coordinate points for the tunnels, bunkers and pillboxes of the site. One of our first attempts to import this information into the Hammer editor was to convert the surveyor's files into generic 3D models and port them directly into the proprietary 3D model format supported by the Valve Source Engine. The most valuable resource for developing our working method was the Valve Developer Community website, which offers a comprehensive guide for developing game content in the Hammer editor, produced by the player and modder community. This resource is a vital part of the modding ecosystem. It suggested an initial pathway that could convert contemporary 3D file formats into the proprietary formats used by the Valve Source Engine. We converted the surveyor's (.dwg⁹) files into 3D mesh (.obj¹⁰) files that could be read by the 3D modelling program Blender. Using a community made plugin, we exported a test version of a single tunnel into the proprietary Valve .smd¹¹ file. This file then had to be combined with a ".qc" script¹² and ".vmt" and ".vtf" files¹³. When these files are placed in the correct directories of *Counter-Strike*, the Hammer editor can import the Shing Mun tunnel. The first hurdle was that any customised object imported using this method (referred to as a "custom prop") can only be read as

⁹ The ".dwg" (abbreviation of "drawing") file is a proprietary file format used for 3D data, commonly used in Computer-aided design (CAD) applications.

¹⁰ The ".obj" is a 3D geometry file commonly used across a wide range of 3D modeling and animation applications.

¹¹ An ".smd" or Studiomdl file stores 3D models in ASCII, storing collision, animation and vertex data.

¹² A ".qc" script (Quake C) tells the Source engine how to interpret the scale, material, physics and animations of any object that is imported.

¹³ The ".vmt" (Valve Material Type) and ".vtf"(Valve Texture Format) files tell Source how to render the visual appearance of a 3D model (textures, etc.) and how the surface of objects will respond in a physics simulation.

having convex physics geometry. This means that for an object such as a table, the space in between the table top, the legs and the floor would be considered “full”, such that the physics of the table would read as one large box (Figure 5). By the same principle, a tunnel imported from Blender to Hammer would not allow a player to walk inside it. Furthermore, because of the large size of each tunnel, and the overall large scale of the map itself, we decided that directly importing geometry from surveyor’s files would not result in a functional landscape within the Valve Source Engine.

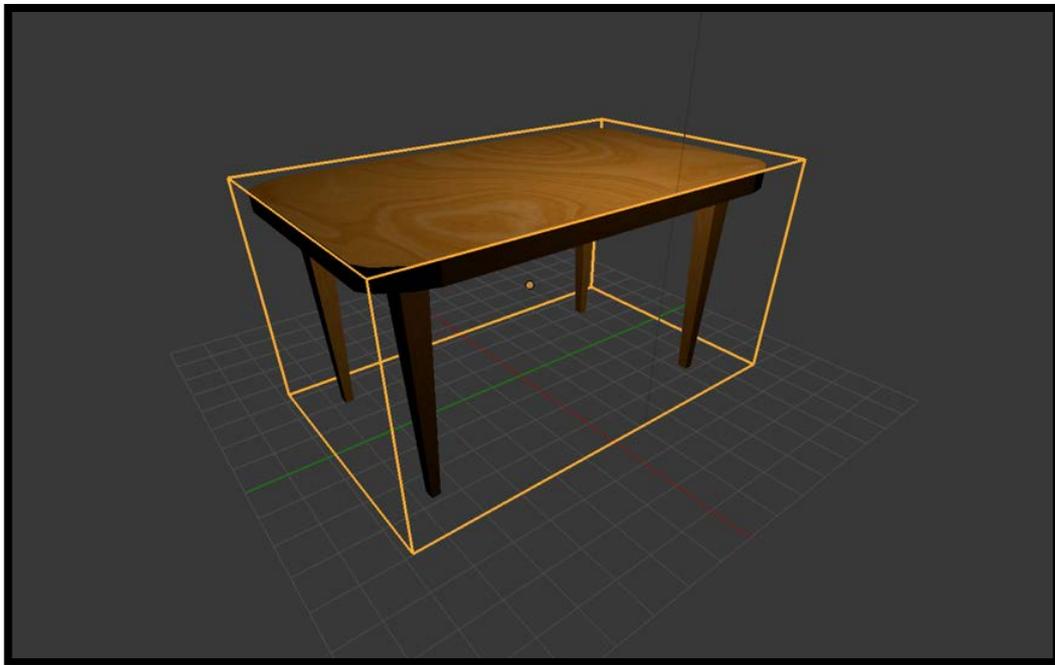


Figure 31: A concave object such as a table is by default interpreted as a convex cube by the Valve Source Engine.

7.3.2 Scaling the landscape to the avatar

Following our initial experiments at converting surveyor’s files into the Hammer editor, it became apparent that the physical scale of the Shing Mun Redoubt, and the virtual scale that a *CS* map established a more important boundary condition of our landscape representation. The first parameter that had to be addressed was how the real-world metric dimensions of the surveyor’s files would fit

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within the maximum size allowed by a *CSGO* map, as well as be congruent relative to the size and navigable space required by the player avatar. In Section 6.3.2, I mentioned that *Counter-Strike* maps are typically of a very compact scale so that players can navigate the space and encounter one another quickly. Despite the congruencies between the Shing Mun Redoubt and *Counter-Strike* that I identified in Section 7.2, the real-world scale of the site is many orders of magnitude larger than the abstract symmetrical maps usually found in *Counter-Strike*. To illustrate this, the image below superimposes the popular *Counter-Strike* map ‘Dust II’ on top of the scaled survey map of the Shing Mun Redoubt. The time it takes to traverse the real tunnels of the Shing Mun Redoubt is significant, and given that a typical competitive *Counter-Strike* round lasts for less than two minutes, it became clear that our process of appropriation and conversion must negotiate a number of challenges that a large *Counter-Strike* landscape presents.

The maximum scale allowed by a *CSGO* map is a cube with a side length of 32,786 Hammer Units. A Hammer Unit is the standard measurement within the Hammer editor and 16 Hammer Units equal approximately 1 foot. (Valve Developer Community 2018) Hammer units have two important consequences for *Autosave: Redoubt*. The first was that in order to ensure that our map ran smoothly without bugs, we decided to crop our landscape safely within the bounds of the maximum. The second was that in order to focus our representation on the experience of the player, we had to use the navigation of the camera-gun avatar as the primary measuring tool (there is no point having a tunnel of an accurate width if the avatar cannot walk through it). These accommodations represented major points of abstraction for the process of the appropriation and conversion of this landscape. In his research on the avatar, Bayliss describes the world of Tomb Raider as being built in ‘Lara units’, such that “the game-space of Tomb Raider is designed to offer affordances that fit the locomotive abilities of Lara Croft, and therefore provides a spatially meaningful game-space” (Bayliss 2010, 178). The initial constraints in scale for appropriating and converting a non-game landscape into *CS* followed Bayliss’ description precisely. If the reader was to measure the Hammer Unit width of

Chapter 7: Autosave: Redoubt – A Case Study in Representation

our tunnels, they would find them wider than the surveyor's measurements, however by converting these measurements to the scale of the avatar, the player *experiences* dimensions that correlate to our experience of walking through the actual tunnels (if we translated the surveyor's measurements directly into Hammer, the player would perceive the tunnels larger than they actually are). The image below is from one of the many developer websites we consulted during our project (worldofleveldesign.com), and provide further recommendations on how CS mapmakers should scale their constructions relative to the navigable affordances of the player avatar. In the next section, I look at some of the specific challenges we faced in converting our site survey data into the Hammer editor and the Valve Source Engine.



Figure 32: Plan view of the popular *Counter-Strike: Global Offensive* map 'Dust II', superimposed on a plan view of *Autosave: Redoubt*.

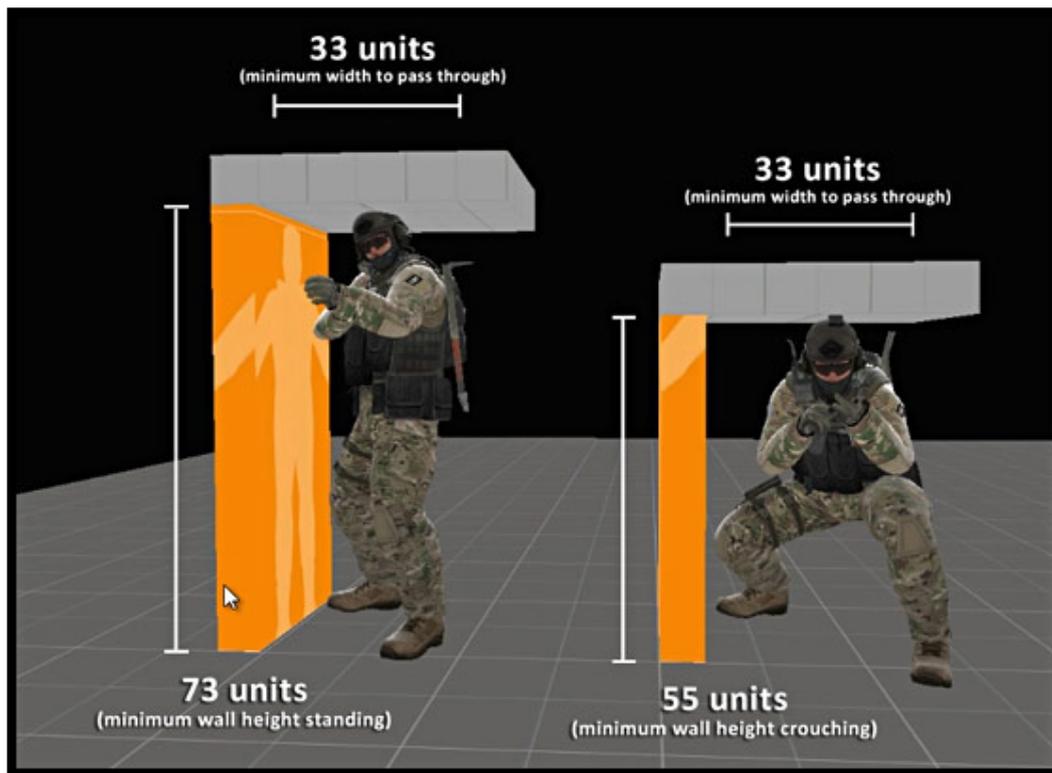


Figure 33: Map editing scale recommendations. Source: worldofleveldesign.com

7.3.3 Translating using hammer units and orthographic plans

Having learned that directly translating the survey data into Hammer was not a viable option and that the conversion had to use the avatar as the fundamental unit of measurement, we devised a system for accurately transferring our site data into the Hammer editor. In addition, based on the advice of the Valve Developer Community, we adhered as closely as possible to the Cartesian grid of the Hammer editor to avoid possible errors and crashes that might arise from building 'off-grid'. Architectural elements use a conversion where one foot equals 16 hammer units, and character models use a conversion where one foot equals 12 units, resulting in a conversion whereby architectural elements allow extra room for players to navigate. Using the 1:16 conversion, we rendered our surveyors data onto a 2D grid that we scaled to Hammer Units. This meant that the tunnels themselves were scaled according to their correct real-world dimensions, and the player would be scaled according to the dimensions of the

tunnels. In real life, I have to bend my head inside some of the tunnels, but in the game environment; this would not have left enough room for the player to move freely without crouching, which would dramatically inhibit the navigation of the environment.

We rendered the 1:16 geometry out as top and side orthographic projections, and then counted the coordinate positions of each wall intersection in the tunnels. In the Hammer editor, an architectural element such as a wall, a ceiling or a floor is built with what is called a 'brush'. Each 'brush' is a rectangular prism that is rendered by the Source engine, and according to the principal of building 'on grid', each brush had to meet at vertical points of intersection. This constraint meant that we were slightly limited in the architectural shapes we could create. Figures 6 and 7 show how we had to adjust certain twists and turns of the real tunnels into something that would be congruent with building 'on grid' in the Hammer system. In Figure 34, the translation process retains a high degree of accuracy, but in Figure 35

, substantial changes had to be made in order to build a particular turn in the tunnel system. This constraint represented an interesting limit condition of the medium. Whilst the player would be unlikely to notice a relatively small deviation in their path, it represented a significant deviation from the coordinate accuracy of our recreation. The line of sight analysis of Lai et al was primarily focused on the firing apertures of the bunkers and pillboxes, which we were able to recreate accurately, but this limit of appropriation and conversion, no matter how invisible to the player, was a fascinating boundary for us to encounter, and we added it to our list of medium-specific affordances, such as the scale of the map and the conversion to the scale of the avatar.

When it came to representing the mountainous terrain outside the tunnels, we faced an even larger problem. The limitation of importing external geometry meant that we could not import the accurate topographical 3D data we had from the survey material. Instead, we were forced to use Hammer's 'displacement' brush tool, which allows for the manual sculpting and shaping of undulating surfaces, but not for the detailed recreation of actual topography. Using an

Chapter 7: Autosave: Redoubt – A Case Study in Representation

In Davey Wredon's game *The Beginner's Guide* (2015) – a self-referential game about modding and experimental design using the Valve Source Engine, the narrator directs the player's attention to the rectilinear nature of the game environment and locates this feature as characteristic of the Valve Source engine.

The restriction of the Hammer brush system and the need to build 'on grid' might also be connected to Casey's critique of the Newtonian surveyor. Casey writes:

The Newtonian surveyor, in contrast, is not concerned with depth: given his superior posture, he is interested only in how many of his geometric projections a flat surface can bear. But the surveyor of place, the true geographer, concentrates on the depth of what he sees spread out below: he moves his body – not his instruments, much less his mind – down into the galley of the shadow of places. (Casey 2002, 223)

Casey is saying that the desire to grid and quantify the landscape is confounded the ability of a *place* to resist the quantification as *space* and that this mode of resistance is evident in what the surveyor cannot quite capture, which brings me back to the fundamental question about representation that this chapter investigates. Like Reilly, Beale and El-Antably suggested, the function of the 3D game engine must be understood according to its limitations, just as the function of the archaeologist or the surveyor must work with a similar awareness of their methodological biases. The reason I bring up this quote from Casey, is that his suggestion that place and the experience of the body be placed at the centre of the survey is a convenient theoretical summation of our own findings, that the player avatar must become the fundamental unit of measurement for the appropriation and conversion of the Shing Mun landscape. It is the experience of the player and the affordances of the avatar that are the fundamental loci of abstraction around which the representation must be made. Subsequent functions, such as the precise way in which the Hammer grid can accommodate geographical coordinates, or how the size of the landscape can be simulated within the limits of the game, flow downstream from the initial conversion of the game the scale of the player avatar. The restrictions of game geometry derive

from the fact that the Valve Source Engine and *Counter-Strike* must render environments quickly to avoid lag between players, and therefore it uses a type of geometry optimised for this function, rather than for the topological flexibility that might better accommodate survey data. Consistent with the player experience, the affordances of the player structures the Valve Source Engine as a medium of landscape, and the experience of making a landscape in Hammer reminds the player-modder that certain limitations exist to serve this overall function upon which the medium is based. Like the materiality of oil painting on canvas derives from the Venetian maritime merchant economy and the size of these paintings derives from their relative commodity status, the representational affordances of the Valve Source Engine derive directly from the instrumental functionality of FPS gameplay.

7.3.4 Lighting for dark tunnels

Because the player is the central unit of measurement and experience for *Autosave: Redoubt*, we faced a challenge when it came to lighting the game environment. The historical events of 1941 happened at night-time and the vast majority of the tunnels contained no source of artificial light, other than the flashlights of the soldiers. In the versions of *Counter-Strike* prior to 2013, the “F” key activated a player flashlight that followed the gaze of the camera-gun (Section 5.1.1). However in 2013, the ‘Arms Deal’ update to *Counter-Strike: Global Offensive* removed the flashlight from the “F” key and replaced it with a function that allows players to inspect their weapon (this relates to the weapon skins economy from Section 6.5.2). Whilst it is possible to add a flashlight object into the game environment, the player is unable to pick it up and use it because the only thing a player can pick up is a weapon. For *CSGO* maps, all weapons are stored on the server rather than locally, in order to enforce the basic rules of the game. Therefore, in order to have a functional flashlight that players could pick up and use, we would need to host *Autosave: Redoubt* on our own custom server and it would not be available as a conventional *CS* map on the steam servers. Given that we wanted to make a functional *Counter-Strike* map, available anytime

via the Steam Workshop, we had to devise another solution for lighting in the game environment.

In a more overt diversion than adjusting the surveyor's coordinates, the issue of lighting required more of a fabrication than a conversion. Without some form of virtual lighting, the rendered representation of a 3D game engine will produce a black screen. For the environment outside the tunnels and bunkers, we were able to use an 'environmental lighting' solution, where an image of a cloudy night sky emits an ambient light source, illuminating the environment enough to communicate the idea of night-time, whilst not making it so dark that the player becomes aware of facing a blackened screen (and might be tempted to adjust their local gamma settings). For the inside of the tunnels, however, another solution had to be derived. We had to invent an artifice that would simulate the dark but navigable tunnels we read about in the historical accounts. The solution was to create an optical illusion using the numerous air vents of the tunnels as light sources. There are not enough vents in the tunnels for this solution to work on its own, so we developed a system where each vent would have one light inside it, but be left dark on either side. This meant that from the player's perspective, the tunnels have a dark ambient light, with a shadow around every vent, and a light piercing through as if cast by moonlight from the outside. Figure 33 illustrates this arrangement.

The nuances and complexities of creating the appropriate lighting conditions added another piece to the puzzle of medium specificity, and another piece of evidence to answer the questions of Reilly, Beale and El-Antably. From the avatar-centric scale of the map to its architectural configuration, and now the use of light, it is clear that the appropriation and conversion of this landscape into *Counter-Strike* requires medium-specific decisions that confirm the 'biases' suggested by Reilly and Beale. As a broader point, this material constraint might be compared to the 'platform studies for painting' example I gave in Section 3.6.3, where prior to the 19th-century, the presence of ultramarine blue relied on the scarcity of lapis lazuli as a traded commodity. The flashlight function being replaced by the weapon-inspect function did not derive from an intrinsic design

requirement but instead relates to the fact that in many ways, *Counter-Strike* is now essentially propped-up by the weapons skins economy (Section 6.5.2).

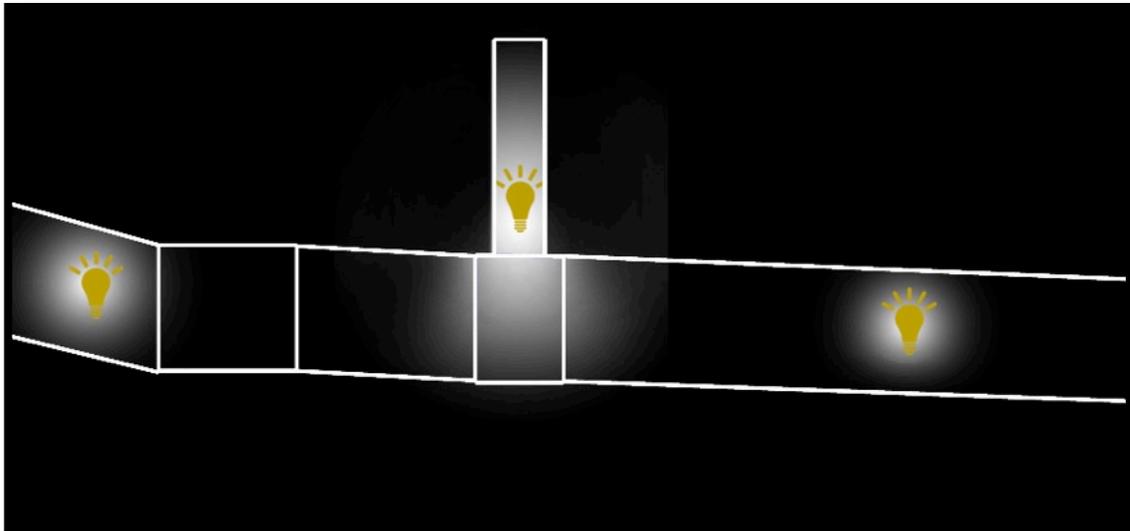


Figure 36: This lighting configuration allowed us to balance the need for ambient light inside the tunnels with an illusion that a light source was coming from the outside.

Moving on from the pragmatic concessions in coordinate conversion and lighting, I will now discuss two final areas where significant representational decisions had to be made. The first concerns the sonic experience of the player, and the second concerns the gameplay mechanic. In both instances, I demonstrate how the *Autosave: Redoubt* team was faced with difficult decisions, where the historical context of our site had to be negotiated according to the affordances and limitations of the game engine and *Counter-Strike* gameplay. The relevance of this for landscape, as I will discuss, returns to the question of historical context, but this time from the perspective of the modder-designer, rather than the player. If the primary objective of the appropriation and conversion was to create a landscape for playing *Counter-Strike* based on survey data, how might the broader representational palette of *Counter-Strike* be instrumentalised in order to engage with the historical context of this landscape – the things that are not immediately apparent from a primary experience of the site itself, or the traversal of its in-game topology?

7.3.5 Sound Design

When designing the sound for *Autosave: Redoubt*, the representational challenge shifted from the problems of conversion and accuracy that I have located alongside virtual archaeology, towards problems of historical representation, that I locate alongside Bogost and Poremba's discussion of documentary games. Similar to the problem of lighting, the sound that the player experiences in *Autosave: Redoubt* introduced a contradiction between historical accuracy and gameplay experience. The sounds within a *Counter-Strike: Global Offensive* map typically consist of footsteps and gunshots. Whilst this might satisfy a simplistic reduction of the conflict that took place in the concrete tunnels, it does not satisfy the historical research we used to contextualise our reconstruction. Just as the lighting was developed to create a representation for a player sitting at a computer monitor, we decided that the sound design also had to address the gulf between the player and the events in 1941. To solve this, we took a poetic approach and created a chain of sounds that trigger as the player traverses different parts of the tunnels and bunker system.

At one player starting position in the redoubt, a radio plays two stations oscillating between a layer of static– the first is a British broadcast about the defence of Hong Kong and the second is Japanese jazz from the 1940s. If the player runs into the tunnels, they experience a long period of silence, which is eventually broken by an aged recording of a woman's voice, which says "I'm not the only one in human history who has paid a heavy price." Turning the corner, the woman's voice fades and is overtaken by Japanese post-war Boogie Woogie jazz. At this point, the player faces a junction between two tunnels. Turning right will start another long period of silence and footsteps. As the eventually approaches a bunker at the end of this tunnel, a man's voice is telling stories in Cantonese about growing up in Hong Kong under the Japanese occupation. Our use of remixed sound samples was a significant departure from the primary source material of the Hong Kong University study. It was based on our reading of the secondary sources, which we attempted to match up with sounds and words that responded to the historical materials we studied. We used the

confusion that characterised the events of the 8th of December 1941 (“short blind chases through claustrophobic concrete tunnels”) as a focal point for a sonic journey encoded into the space. We carefully placed the sounds such that as players run through the tunnels, they become an unintentional DJ, triggering small fragments of music and dialogue, that tell a wider story about the disruption, confusion, and tragedy of the global conflagration.

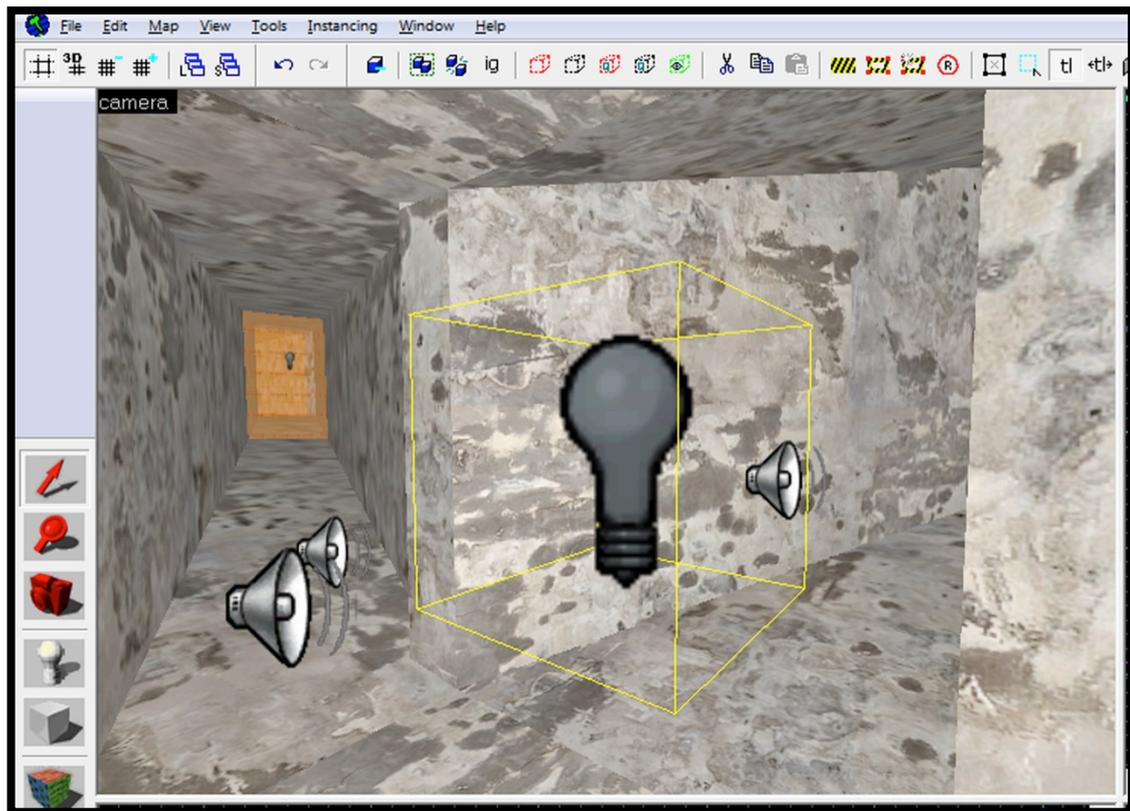


Figure 37: Setting up sound triggers in the Hammer editor, author's screenshot.

This sound design sought to achieve two things. First, the disorienting effect of the tunnel architecture was contrasted by the temporal and spatial location provided by the sound triggers. By remembering where they heard a particular sound, the player could form a cognitive map of the space. Second, our sound design proposed that *Counter-Strike* footsteps and gunshots are not necessarily a realistic representation. This correlates with Bogost and Poremba’s category of the “poetic” documentary game – “a more abstract presentation of raw material designed to evoke mood, loose association” (Bogost and Poremba 2008, 19). To avoid Reilly and Beale’s “institutional amnesia”, we decided that the conventional

Counter-Strike sounds should be disrupted. Our sound design sought a form of poetic experiential realism that might express the atmosphere of these historical events by disrupting the conventional sonic experience of *Counter-Strike* and filling the tunnels with the sounds of 1941. The sense of confusion and geopolitical instability that defined this moment in history became the representational logic of our sound composition. We felt that a quiet map would convey none of this; it would be the equivalent of a map with no lights. We used sound to form a representational link to the historical context of our subject as a way to balance representational accuracy whilst asserting that the medium is neither neutral nor transparent. As I mentioned in the introduction to this dissertation, one of my general criticisms of how landscape theory has been deployed in computer game studies has been insufficient engagement with the historical context of landscape aesthetics. Whilst the engagement with a broader historical context in *Autosave: Redoubt* was from a modder-designer perspective rather than a player-analytical perspective, it was essentially motivated by the same theoretical position. In this case, the use of a modded soundscape sought to address an absence in landscape representation, where the process of appropriation and conversion reduces the contextual significance of a landscape to the touristic objectification of the balanced arena of play (Sections 6.3 and 6.4).

7.3.6 Game mode representation

To extend this contextual representation within the bounds of the *Counter-Strike* format, we made small adjustments to gameplay in order to re-enforce the decisions we made in other aspects of the project. These adjustments resulted in two versions of *Autosave: Redoubt* being uploaded to the Steam Workshop. In October 2017, we held a LAN party and invited friends, colleagues and local *Counter-Strike* player to playtest the two game configurations of *Autosave: Redoubt*. The descriptions of player behaviour in the following paragraphs are based on the observations we made during this playtest afternoon.

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Our first gameplay reconfiguration was to make a one versus one map [uploaded to the Steam Workshop as 'Autosave Redoubt 1v1'], where only two players are in the game. The large scale of the game landscape required that we add the command 'MP_roundtime 25' to the game configuration file in order that the round would last 25 minutes instead of the usual 2, allowing the players enough time to find one another in the underground labyrinth. Our intention was to give the player the experience of being alone in the vast environment of the Shing Mun Redoubt but retaining the gameplay condition of *Counter-Strike* by ensuring that eventually, both players will encounter each other. The two players begin on opposite sides of the map and enter the tunnel system in search of one another. Due to the disorienting nature of the tunnel architecture, the player spends a much longer time by themselves than would occur in a typical *Counter-Strike* environment. When the players finally encounter each other, the game is brought to an end if one player kills the other. In this configuration, making the moment of encounter a moment of mutual finitude confounds the game of optical targeting. The players find one another, and if they actualise instantiate the gameplay condition by shooting, they immediately end the game. This was our first response at the level of gameplay configuration to the historical description of "short blind chases through claustrophobic concrete tunnels."

The second gameplay configuration was to make a five versus five map [uploaded to the Steam Workshop as 'Autosave Redoubt 5v5']. This configuration responds to the medium specificity of *Counter-Strike* and allows players to treat the site as a more conventional *Counter-Strike* map. In this instance, the line of site logic and Virilio's theory of the dysfunctional design of the bunker is simulated as a form of what Bogost and Poremba call "generative" realism. Once the players start chasing each other through the tunnels, the design of the site becomes highly dysfunctional, and superior player numbers cannot be used to trap or outmaneuver an opponent. Instead, one player can easily shoot a number of opposing players simply by waiting for them to round the corner of a tunnel. The first play mode experiments with the finitude of two players encountering one another, whereas this second play mode experiments

with the conventional team experience of *Counter-Strike* relative to the design of the site itself.

In both gameplay modes, we placed very few formal restrictions on player behaviour. To downplay the *Counter-Strike* focus on contemporary weapons, we did not add weapon 'buyzones' into the map, however, players were technically able to add these themselves in using console cheat commands that we consciously did not prohibit. Similarly, by not blocking a wide range of cheat commands in the configuration file, we left the possibility open for players to change and experiment with the landscape that we had created. Players exploited this possibility during our playtest, and by the end of the afternoon, players were 'no-clip' flying through the landscape and exploring our recreation in more unconventional ways. Our decision not to block cheat commands was a continuation of our engagement with the logic of the medium. As El-Antably recommended, site-specific representations should reveal the lens of the medium, rather than obscure it. By allowing players to explore our representation by testing which cheat commands we had and had not allowed, formed a broader experiment in how *Counter-Strike* conventions relate to the use of 3D game spaces as a mode of representation.

In the next section, I summarise how the process of *Autosave: Redoubt* cast light on the representational affordances of the Valve Source Engine, and how this contributes to my overall assessment of this medium of landscape.

7.4 The landscape of Autosave: Redoubt: Using the limits

By shifting from the player to the modder perspective, but remaining constrained by the same engine and (relative to Chapter 6) the same game, it is now possible to see how *Counter-Strike* appropriates and converts a landscape, resulting in something altogether different; something warped and shaped to accommodate a game, a landscape by means of a computer game. In Chapter 6, I identified *Counter-Strike* landscapes as sporting arenas based on the competition

over line of sight and the military gaze. The line of sight analysis of the Shing Mun Redoubt and its architectural survey data provided an interesting subject with which to experiment in the process of appropriation and conversion, a process I have previously encapsulated as a response to the question ‘can I play *Counter-Strike* here?’ The *Autosave: Redoubt* case study rephrases this question into ‘how can I play *Counter-Strike* here?’ By producing a mod, we revealed some of the limitations and affordances that characterise how a landscape is appropriated and converted into *Counter-Strike* via the Valve Source Engine and the Hammer editor.

The first limitation we encountered was that we could not directly import surveyor data into the Hammer editor, and instead had to convert orthographic plans into a coordinate system that could be rebuilt using the native geometry ‘brushes’ of the Hammer editor. Our decision to build ‘on grid’ meant that the architectural structure of the Shing Mun tunnels had to modify certain twists and turns of the underground labyrinth. To make our map playable, the scale of our landscape also had to be adjusted to the experience of the player-avatar. Going back to the body as the locus of experience, and experience as the mechanism by which place becomes landscape (Section 2.4.3), it is reasonable to assert that the avatar is not just the “embodied incarnation of the acting subject” (Klevjer, Section 3.3.2); the *Counter-Strike* avatar is the unit around which the entire landscape is constructed. The limitation of lighting, where the flashlight function was replaced by the weapon-inspect function, was a result of the extrinsic weapon skins economy. To find a trace of this economy within the Valve Source Engine itself was an interesting confirmation of how the relationship between the game and the world influences the experience of the medium. The question ‘how can I play *Counter-Strike* here?’ is answered according to these limitations. I can play *Counter-Strike* somewhere by lighting an environment such that it can be seen by the player on their screen, and scaling an environment such that it can be navigated by the player using their avatar prosthetic. I can play *Counter-Strike* somewhere by representing an environment using the constraints of scale and geometry defined by the Hammer editor.

The limitations we encountered constitute a tangible response to the questions posed by Bogost and Poremba's 'documentary games' as well as by Reilly, Beale and El-Antably's methodological concerns about game engine representation. The initial premise of our reconstruction was that the first-person 3D game engine implies the ludic conventions of the first-person shooter and that by using *Counter-Strike* rather than a 3D engine such as Unity or Unreal, our reconstruction could make a productive use of the medium. The limitations of scale and geometry we encountered in the Hammer editor revealed the biases that Reilly and Beale sought to foreground as a means to combat "institutional amnesia". The form of realism that the Valve Source engine produces is geared towards spaces that will render quickly according to the ludic logic of the line of sight. The relative accuracy we were able to achieve in the architecture of the tunnels and bunkers, contrasted with the approximations we produced for the outdoor terrain was a further testament to the representational priorities of the Valve Source Engine for supporting rectilinear, line of sight architecture. The way in which the landscape had to be built around the scale and functionality of the avatar was also a powerful demonstration of how the properties of the medium have a structural influence on the representation of the subject.

In reference to the categories of documentary games outlined by Bogost and Poremba, we can consider *Autosave: Redoubt* as a 'generative documentary game' based on Virilio's assessment of bunker architecture during World War Two. This was especially clear in our 5v5 playtest, where the labyrinth structure of the underground tunnels did not confer an advantage to either team, and we observed a gameplay approximation of the "short blind chases through claustrophobic concrete tunnels" found in the historical record. We combined the 'poetic documentary game' of the soundscape with the 'reflexive documentary game' located in the contrast between exploring the historical site whilst remaining emplaced within the *Counter-Strike* gameplay condition. The long periods of solitude in the 1v1 game mode encourages players to become lost in a historical soundscape, which this is inevitably interrupted when they encounter one another and the game of military vision re-asserts itself.

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The process of making *Autosave: Redoubt* related to the discussions surrounding history games and virtual archaeology, however, it also relates more broadly to the literature on computer game representation discussed in Sections 3.4 and 3.6. Not only is it the case that the topology of a computer game landscape is measured relative to the mechanics, this undeniable significance can also be read in the structure of the engine itself, and the sorts of geometry that it makes possible. The Valve Source Engine bends the world so as to best accommodate Valve Source Engine games, and all the landscapes that it represents will be affected by the ludic priorities that are encoded into it as a medium. Similarly, the mechanics of *Counter-Strike* understood as a representational constraint, also determine the hermeneutic reading of this landscape. *Autosave: Redoubt* is a landscape according to the Valve Source Engine, and a landscape according to *Counter-Strike*.

CHAPTER 8: GARRY'S MOD

In this final case study chapter, I analyse *Garry's Mod* as a work of landscape. *Garry's Mod* is a sandbox environment built using the Valve Source Engine and available for purchase as a stand-alone artefact. I selected *Garry's Mod* for my final case study because it approaches the point where the player is essentially playing the Valve Source Engine itself because the boundary between playing and modding has been almost entirely obliterated. In Section 8.2.2, I analyse the 'player' as a combination of the playing 'I' from *Half-Life 2* and *Counter-Strike*, and the modding 'I' from *Autosave: Redoubt*. *Garry's Mod* fits various descriptions, such as a virtual environment in which games can be played, or a piece of 3D production software, but for linguistic convenience, I, therefore, refer to the 'player', or sometimes the 'user' of *Garry's Mod*.

When I discuss the shape of the landscape in *Garry's Mod*, I return to the notion of the Valve Source Engine as a platform (Section 4.2) and consider how the structure of the 'sandbox' environment might be understood according to improvised play and Situationist practice. When I examine the intertextual functions of *Garry's Mod*, I show how the merging of modding and playing has instrumentalised the lexicon of assets¹⁴ from Valve Source Engine games such as *Half-Life 2* and *Counter-Strike* into decontextualized props and building blocks. I therefore describe *Garry's Mod* as the game that is played after other games have finished, and suggest that by allowing the player to play within a real-time modding environment, *Garry's Mod* represents one end-point design for a game engine – when the game is removed but the engine is still running, you will arrive at something like *Garry's Mod*. Therefore, if I have positioned the Valve Source Engine as a medium of landscape, this endpoint should also reveal what it is to

¹⁴ Within the Valve Source Engine, assets are typically referred to as 'entities'. I am referring to them as assets in order to maintain a language that is clear and consistent with the terminology I have used throughout this dissertation, however for readers familiar with the Valve Source Engine, I am using the generic term 'asset' to refer to what the Valve Source Engine calls an 'entity'.

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play the landscape medium, and how the hermeneutics of this might make a useful contribution to contemporary landscape studies.

The intertextuality of *Garry's Mod* extends far beyond the lexicon of Valve Source Engine assets that are shipped within the game itself. Players create their own assets and port assets from other games such that *Garry's Mod* starts to resemble a conglomerate of postmodern pastiche. I examine this representational lexicon according to the material circumstances by which *Garry's Mod* exists in the world, and argue that while its visual carnival of assets resembles various descriptions of postmodern theory, the ludic nature of *Garry's Mod* and simulation of the Valve Source Engine converts these assets into something that is more productively described using Alan Kirby's theory of the 'digimodern'. Digimodernism gives a strong conceptual grounding for the content and structure of *Garry's Mod* and helps to outline the landscape paradigm of both *Garry's Mod* and the Valve Source Engine as a whole.

Garry's Mod completes the set of case studies for this dissertation. So far, I have analysed how different design and player configurations of Valve Source Engine games can be understood according to various expressions of militaristic vision, the alienation of the individual and extrinsic patterns of economic production and consumption. In *Garry's Mod*, I demonstrate that whilst the boundary between modder and player has been dissolved, there remain clear divisions between platform owners and users, which relates back to the characterisation of the engine as an enclosure. By examining the experience of playing/using *Garry's Mod*, I show how the Valve Source Engine lexicon comprises a digimodern landscape, and how the relationship between *Garry's Mod* and Web 2.0 platforms such as YouTube, reveals a compelling 21st-century landscape. After this case study, I make my final conclusions on what the Valve Source Engine reveals as a medium of landscape, and evaluate my approach for analysing computer games as landscapes. Because *Garry's Mod* gets so close to a real-time editor of the Valve Source Engine, I examine how the ludic lexicon of *Garry's Mod* can be understood as a landscape enclosure. Returning to the fusion of concepts from landscape enclosures to platform studies that I introduced in

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Sections 2.3.6, 3.6.3, I reach a final cultural studies reading of the representational amalgam that constitutes *Garry's Mod*, and therefore how the Valve Source Engine can be understood as a medium of landscape.



Figure 38: My avatar watching a nationalistic Korean video selected by another player in a *Garry's Mod* sandbox environment, author's screenshot.

8.1 Another game made from another game

The production history of *Garry's Mod* shares a lot in common with the origins of *Counter-Strike*. A young computer programmer named Garry Newman started it as a *Half-Life 2* mod, iterated his production using feedback from the 'Something Awful' web forum, and began to publish a "total conversion mod" –radically new gameplay and of a completely different genre to its source material (Section 3.6.4). In December 2004, Newman released the freely downloadable *Garry's Mod 1*, which allowed players to spawn 'Manhack' NPCs from *Half-Life 2* into the game environment. *Garry's Mod 2* allowed players to spawn assets, relocate them in space with a 'Physics Gun' and connect them together with rope and welding

constraints. *Garry's Mod 3* introduced the 'gm_construct' environment and allowed players to spawn characters from *Half-Life 2* and pose them into any position. *Garry's Mod 4* allowed multiplayer interaction, *Garry's Mod 5* introduced a full spawn menu of assets from *Half-Life 2*, *Garry's Mod 6* allowed players to pose the facial expressions of *Half-Life 2* characters and also included a 'Multitool Gun' that could be programmed by the player to perform complex building functions. In *Garry's Mod 8*, Newman allowed players to alter the game itself using the Lua scripting language, which allowed entirely new game behaviours to be built by players within *Garry's Mod*. In 2006, *Garry's Mod 10* was released as a licensed game for purchase on Steam (Pearson 2012). The iterative history of *Garry's Mod*, its symbiosis with community feedback and its eventual licensing as an independent product parallels the process I described for *Counter-Strike* (Section 6.1.1). It recreates the transition from an ecosystem of player-generated content to a new commercial enclosure, repackaged by a new End User License Agreement (EULA) (Section 5.5.2 and 6.1.3).

The configurable nature of *Garry's Mod* blurs the boundaries between modding and playing, and its ability to absorb and simulate assets from other games suggests that if you finished playing any game, but the software kept running, you would essentially end up with *Garry's Mod*. I consider Garry's Mod to be not only the final act for the Valve Source Engine but also perhaps the final act that reflects back on all other computer games. It is a design feature that has been made by a number of games, and one that has important implications for the material relations of modding and the enclosure of creativity (I expand on this in Sections 8.3.2 and 8.5.1). In the next section, I return to my research approach, and start to examine *Garry's Mod* from the perspective of a player-modder, which I will then expand out into a broader cultural analysis.

8.2 A player in *Garry's Mod*

[Gameplay notes]

The first Garry's Mod server I join is a public 'gm_construct' sandbox. I spawn in and hear the fractured composition of in-game sounds – footsteps, gunfire, and the twanging sound of the Half-Life 2 crossbow, interrupted by distorted voices over game microphones cutting into the soundscape. The landscape is a large grassy enclosure surrounded by apartment buildings, with a small body of water in one corner. The apartments are of the sort that I remember from Half-Life 2 – Eastern European, 1970s. The first player I encounter has a charred corpse for an avatar and is building something out of abstract gridded blocks. I realised that I don't have a microphone on my headset, so I stand next to him, dumb. Someone runs past and shoots me. My avatar collapses to the floor, and I see it for the first time. I am Dr Kleiner from Half-Life 2. A player with an anime avatar runs past me, carrying the offending shotgun. I lie on the grass, screen tinted red, watching the other players go about their business. I click my mouse and respawn. The charred corpse is still building with blocks, and the anime avatar is nowhere to be seen. My efforts to see what is happening in the game take on a more careful approach. I run around strafing, like I would in Counter-Strike or Half-Life 2, and try to balance my curiosity with what players are building, whilst making myself a harder target to hit. Within a minute or so I am run over by a player driving the buggy from Half-Life 2, and again, I see my avatar fall to the ground, screen tinted red, and the buggy career past my fallen avatar. I repeat this process a few too many times, until I finally switch from my PC to my laptop, and search "how to play Garry's Mod", and start to read the 'Steam Beginner's Guide to Garry's Mod'.

Returning to Tilley's first category of landscape experience (Section 2.4.2), I begin my analysis of *Garry's Mod* by examining somatic space (the space of unselfconscious action where the body structures the world in perception). I

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describe how my embodiment in the game combines the player-avatar relationships from *Half-Life 2* and *Counter-Strike*, with the modding experience that I described in *Autosave: Redoubt*. I give a detailed description of how my learning to use *Garry's Mod* relied on a suite of online resources, much like how I would learn to use a new piece of software. In doing so, I demonstrate how the somatic space of *Garry's Mod* is a combination of FPS player-avatar relationships, and the relationship one has to a piece of software.

8.2.1 The somatic space of *Garry's Mod*

In my gameplay experience, I did not immediately understand the behaviour of the players around me, nor did I understand what I could do in the *Garry's Mod* environment. Not understanding the interface and not understanding how to play confounded my somatic experience. Exiting the game and consulting the *Steam Beginner's Guide to Garry's Mod* produced a somatic experience, not unlike that which the *Autosave: Redoubt* team had with the Valve Developer Community (Section 7.3.1). Sean Duncan (2011) observes a similar phenomenon for players of *Minecraft* (Mojang, 2011). Duncan writes that “unsurprisingly for gamers in the 2010s, *Minecraft* players rarely seem to have had much difficulty with the problem of “what to do next” after firing up the game” (Duncan 2011). Duncan’s refers to the familiar set of user interface features between games and other types of software, combined with the willingness of players to consult extrinsic sources such as YouTube tutorials. This type of game experience, where play and learning are complemented by Web 2.0 platforms is an illustration of the ‘Game 3.0’ phenomenon I have already described in Section 3.6.4. At this level of somatic analysis, learning to play *Garry's Mod* feels similar to learning to use the Hammer editor. At the level of somatic space, my experience of *Garry's Mod* was an experience of not understanding the conventions of the multiplayer environment, and not understanding how the player-avatar prosthetic combines with the modding functions that I could observe in the behaviour of other players. In the next section, I transfer this somatic observation to a redefinition

of my player-avatar experience, and describe in more detail the role of the 'player-modder'.

8.2.2 Merging the playing "I" with the modding "I"

As I stated in the introduction to this case study, *Garry's Mod* merges the player-avatar relationships of *Half-Life 2* and *Counter-Strike* with the modding relationship of *Autosave: Redoubt*. To remind the reader, I will briefly recap the key points of the player avatar relationship, and the key definitions of modding, to illustrate how they describe the experience of the player in *Garry's Mod*.

In Section 3.3.2, I outlined the relationship between the player, the avatar and the character, and highlight the ways in which the affordances of the avatar mediate the type of experience that the player can have in the game. In Section 5.1.1, I made a more focused examination of the FPS avatar, combining Galloway's characterisation of alienating subjectivity, Klevjer's description of the camera-gun, and Rose's description of the masculine experience of space as 'without-body'. In Section 6.2.1, I focused on the multiplayer nature of *Counter-Strike*, and the repetition of its gameplay environment to describe the reciprocal avatar relationship of camera-guns pointing at camera-guns. Because *Garry's Mod* is built using the Valve Source Engine, it is not surprising that the avatar has similar properties to those described above. However, because line of sight and the landscape of conquest have diminished in their undeniable significance, the weapon can no longer be considered as the primary prosthetic of the player. The interface of the spawn and tool menus overtakes the importance of the weapon and gives the player the ability to create and manipulate the content of the environment. The player avatar relationship then becomes analogous to the position of the modder I adopted in Chapter 7. In Section 3.6.4, I defined the modder as someone who makes alterations to the game at various levels, from a 'partial mod', where graphics, textures and environments can be changed, to a 'total conversion mod', where a radically different game is created. My activity as a *Garry's Mod* player is similar to my activity as a modder with *Autosave: Redoubt*

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– I make alterations to graphics, textures and the environment, but do not produce a radically different game. I can spawn assets into the game, manipulate their properties, and upload scripts that make changes to the game in real time – all of which are functions that would previously only be available at the level of the Hammer editor. The game-editor like qualities of *Garry's Mod* poses the question as to whether it is a game at all (I examine this more detail in Section 8.2.2), however it also poses the more interesting question as to how the ability to import and resample game objects within a real-time multiplayer game environment reflects back on how computer games represent broader trends in cultural production and consumption, which I examine through the lens of landscape.

From a player/user perspective, the process of importing a new asset into a *Garry's Mod* environment is similar to importing a new asset using the Hammer editor (see Chapter 7), which I have illustrated with the comparative screenshots in Figures 39 and 40. The key difference is that in *Garry's Mod*, this process happens in the real-time simulation of the game environment, mediated by the affordances of the FPS avatar. The tree is imported from a first-person point of view and positioned using an FPS weapon-tool, rather than being imported in a third person point of view in the 3D and orthographic views of the Hammer editor. The experience of importing a tree into *Garry's Mod* encapsulates my summation of the player-avatar relationship as a combination of camera-gun experience and modding. It is for these I characterise the playing "I" of *Garry's Mod* as a hybrid of the modders and players I have discussed so far in this dissertation.

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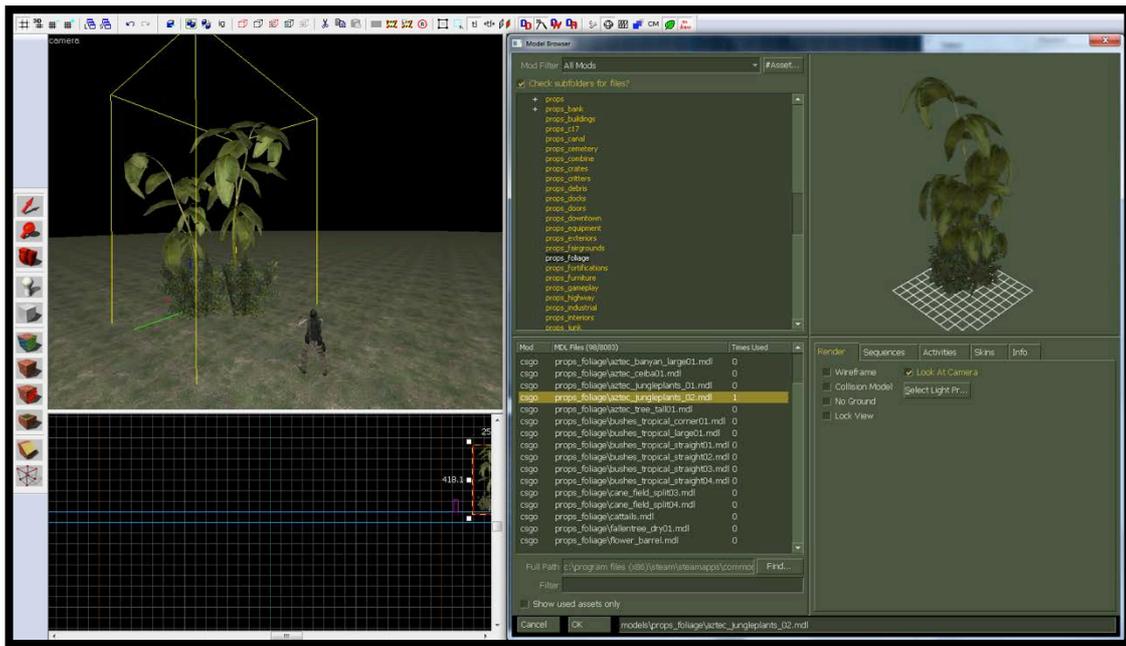


Figure 39: Adding a tree into a game map within the Hammer editor, author's screenshot.



Figure 40: Adding trees into *Garry's Mod* from the player perspective, author's screenshot.

8.2.3 Learning *Garry's Mod*

After my first session in *Garry's Mod*, I consulted extrinsic sources to learn how to play. In addition to the *Steam Beginner's Guide to Garry's Mod*, I watched two YouTube tutorials – “*Garry's Mod for Beginners! (How to Play Garry's Mod Basics: What is it, How Garry's Mod Works)*” (Grobeman Gaming 2017) and “*Garry's Mod Beginner's tutorial (COMMENTARY) BETTER VERSION*” (EscBoss 2014). These tutorials helped me find my way around the basics of the *Garry's Mod* interface. By practising in a single-player version of the ‘gm_construct’ landscape, I learned how to spawn assets into the map, and how to manipulate their properties. Using the Physics Gun (a blue version of the Gravity Gun from *Half-Life 2*), I learned how to move and rotate objects, and to toggle their physics properties from objects that could fall down and roll around, to static immovable items that could be suspended in any position. I learned to make a tree hang upside down, to import a soldier from *Half-Life 2* and to move the soldier into a yoga pose. Using the Tool Gun, I learned how to connect wheels and thrusters to a bathtub and make a driveable bathtub car. This understanding of the actionable menus was missing from my initial experience of *Garry's Mod*. I had to leave the social space of the multiplayer server and seek the advice of other players via various Web 2.0 platforms. These players taught me what I needed to know, and what I was unable to ask players to do during my initial session, because I didn't have a microphone on my computer, and I didn't know how to address players in the chat. But as I found later, such requests usually answered by players suggesting YouTube and forums anyway. My experience felt like that of a child in a playground – some questions you have to answer for yourself, especially if you are the new kid. This experiential parallel between the school playground and the *Garry's Mod* landscape derives from an examination of my experience of the somatic space of *Garry's Mod*. In Section 8.3.1, I compare the perceptual space of *Garry's Mod* and the playground, as a means to unfold the shape of the *Garry's Mod* landscape.

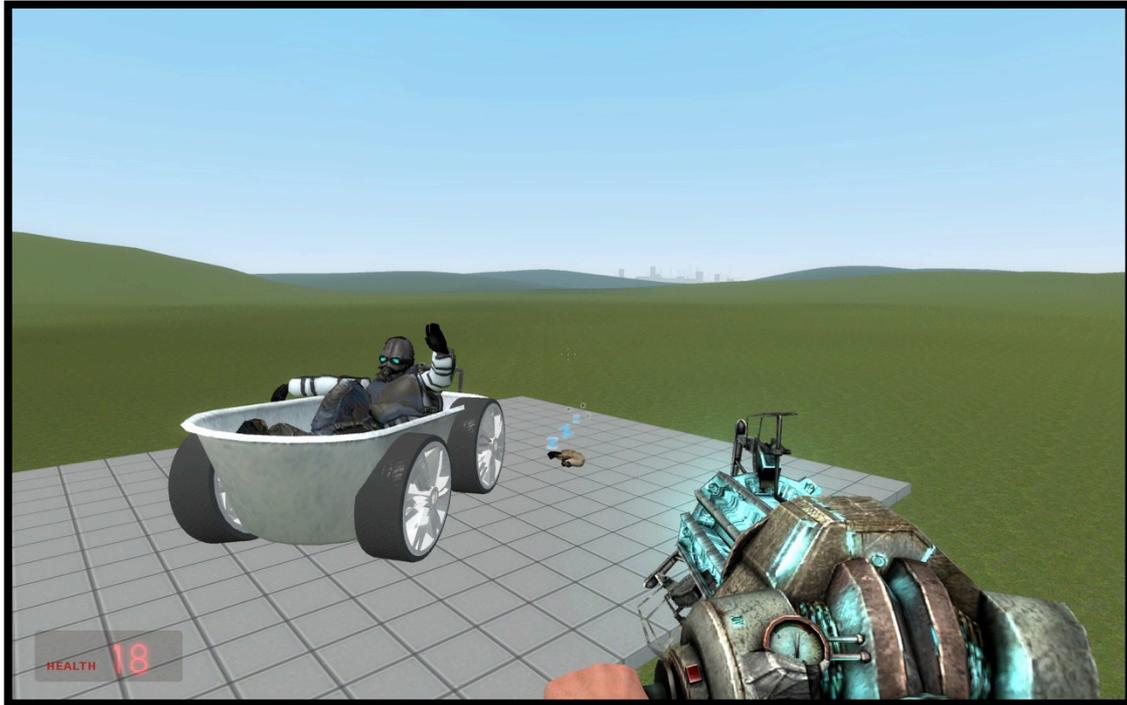


Figure 41: The driveable bathtub car – a common first project for learning to build in *Garry's Mod*, author's screenshot.

8.2.4 Modding *Garry's Mod*

In this section, I describe the process of expanding the lexicon of objects available to me as a player, by downloading asset libraries from external repositories, and by making my own customised asset. I explore what the Valve Source Engine needs in order to simulate a new asset in *Garry's Mod*, and the player effort that is required to expand the lexicon in this manner. The reason for this is that unlike my experience of a linear landscape in *Half-Life 2*, or the symmetrical landscapes of *Counter-Strike*, *Garry's Mod* breaks down my relationship to the landscape at the level of game mechanics. I cannot understand the landscape according to my role as a hero protagonist, or according to the reciprocation of the line of sight. In this section, I seek a new understanding of the computer game signification of elements within the *Garry's Mod* landscape.

After learning how to spawn assets and combine them into new constructions in *Garry's Mod*, I learn that I can save these asset combinations into personalised prefabricated arrangements, which can be re-spawned and iterated into more

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complex constructions. The saved constructions built by players expand the lexicon of *Garry's Mod* via iteration. A far more visible expansion occurs at the level of adding custom assets.

To expand my *Garry's Mod* asset inventory, I downloaded the 'Skyrim Snpcs' package, built by the player Silverlan, and re-uploaded to the Steam Workshop by the player Sgt Hotdog. This package contained the 3D meshes, animations and other data for a range of characters from *The Elder Scrolls V: Skyrim* (Bethesda 2011), which had been ported from the original Bethesda files, and scripted and compiled to be compatible with *Garry's Mod* (Silverlan 2012). I conducted a comparative playtest to ascertain the parameters for one of these *Skyrim* assets relative to other assets in my *Garry's Mod* inventory. After spawning the dragon Alduin, without the spells or magic I might use in *Skyrim*, it took me 49 shots with my *Half-Life 2* rocket launcher to defeat this *Garry's Mod* version of the dragon. However, I was also able to kill the dragon with one shot from my GGN40 Skullsmasher anti-material rifle.¹⁵ As a point of reference, I can shoot down a *Half-Life 2* Combine Gunship with 3 shots from my rocket launcher, but the gunship is immune to damage from my GGN40 Skullsmasher. The absurdity of this experiment illustrates that this is not the same dragon as appears in *Skyrim*. As a game made from other games, the representational logic of *Garry's Mod* flattens all of its assets into a new common landscape. I do not experience a dragon from *Skyrim*, but what a dragon from *Skyrim* is according to *Garry's Mod*. Building on Frasca's claim that the player and the game work together to form sign relationships (Frasca 2007, 196), I describe *Garry's Mod* as a game that simulates other games, and produces new sign relationships based on how assets from other games are used within *Garry's Mod*, and how they bring a level of referentiality into the *Garry's Mod* landscape. The Valve Source Engine sets the lowest common denominator for all representations within the game, and therefore peculiar properties of *Skyrim* asset points to the exact standard of representation of *Garry's Mod* and the Valve Source Engine.

¹⁵ A custom weapon uploaded to the Steam workshop by player Heavy-D ("designed by Dr Seuss in WWI to shoot down Nazi starships) (Heavy-D 2013).

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To make my own asset for Garry's Mod, I consulted the Valve Developer Community, YouTube tutorials and other Garry's Mod forums to work out exactly how to port an asset into something that can be spawned into the game. At this level of gameplay, as modding, I needed to become familiar with the *Garry's Mod* library file structure in order for my asset to be congruent with *Garry's Mod* without generating errors.¹⁶ At this point, my experience from making *Autosave: Redoubt* directly informed my ability to play in this manner. Using the 3D program Blender, I modelled and exported a 3D mesh, colliders, animations and skeleton into the esoteric file formats used exclusively by the Valve Source Engine, such as SMD model files and the texture-related VTF and VMT files (Section 7.3.1). This relied on a custom Blender plugin, and small pieces of customised software written by the community to transform generic file formats into proprietary forms. I compiled the Valve files using a Quake C script, which determined the interactive and physics properties of the asset. I then bundled the resulting files into the GMA (*Garry's Mod* Add-on) format and uploaded it to the *Garry's Mod* workshop. The *Garry's Mod* website and Steam Workshop host a multitude of customized maps, player models, weapons, vehicles and other assets. In working my way from a 3D modelling program to spawning my custom asset in *Garry's Mod*, I became familiar with an entirely new series of file formats, intermediary programs, script commands, and the detailed structure of my *Garry's Mod* file directory. My experience in *Garry's Mod* is mediated by the player-avatar-game relationship, but also by the modder-game relationship. I am familiar with the game through the actionable prosthetic of my avatar, as well as through the file structure and format of the game software and the instructions and support of the player community as expressed across various Web 2.0 platforms. In the next section, I examine how this experience leads to an overall understanding of the shape of *Garry's Mod*, its perceptual space, and what sort of landscape *Garry's Mod* is starting to reveal.

¹⁶ The comments section for *Garry's Mod* add-ons frequently discuss errors generated both by modded components as well as their mode of player installation.

8.3 The shape of the landscape in *Garry's Mod*

[Gameplay notes]

I return to the multiplayer sandbox server with a microphone headset. I toggle into no-clip mode and start flying around looking for other players. I get killed once or twice, so I spawn some weapons and return fire. 'Gm_construct' has a small body of water in one corner. With most of my avatar concealed underwater, I peek up and kill another player using the sniper crossbow from Half-Life 2. Within seconds I am kicked from the server. Apparently, I was playing the wrong game.

I join another Garry's Mod server, 'Ruu's Playground', which is running on the 'gm_bigcity' map. On my desk, I have a list of player controls and console commands that remind me how to use the spawn and build menus and how to chat with other players on the server. I spawn into a grassy square enclosed by a forest of skyscrapers; the tallest buildings look like the New York twin towers. Holding down "C" I change my avatar from Dr Kleiner to a decapitated soldier from Half-Life 2. Holding down "X" I experiment by greeting the other players on the server, careful not to stand out too much, yet signalling my desire to play. As I set about spawning some large building blocks onto the grass, a young Irish accent answers my greeting with a cheerful "Hello!" Hazzarding my best Irish slang, I ask, "what's the craic?" which is well received, and the player "Batman" and I chit chat as I start to rope my blocks together. I have just about finished, and am holding it up in the air with my physics gun, it looks about thirty metres long, and I am quite pleased with my large kinetic contraption. Batman tells me he has just finished building a cart and asks if I'd like to come for a ride. I am thrilled at the invitation to play and suggest that I join my blocks to the back of the cart. Batman tells me that in order to connect my blocks to his cart, I need to adjust the permissions on my game objects. Using the voice chat, he guides me through my on-screen menu until I grant him collaborative access to my

game objects. His cart consists of a small rectangular crate with circular saw blades for wheels (projectile weapons from *Half-Life 2*). While we are attaching my blocks to the back of the cart, a third player appears and kills my avatar. Batman complains that this was uncalled for, but I laugh and say it's fine, secretly thrilled to have the support of a more experienced player. I respawn and the three of us return to the cart. Batman duplicates the cart to make three carriages, and off we go, careening around 'gm_bigcity', laughing as our avatars flail around and the saw blades skid and scratch across the road. I jump out of the cart and am immediately thrown into a pool of toxic sludge, which starts rapidly taking health points from my avatar. Batman lifts me up into the air with his physics gun, but we agree it would probably be funnier if I just drop back into the sludge, die, and respawn.

My first observation is that my experience in Ruu's Playground is most analogous to the ludic social space of a children's playground. My second observation is that the sandbox environment of *Garry's Mod* essentially comprises the landscapes of *Half-Life 2* and *Counter-Strike*, except with the goals, rules and validation removed. Whilst *Garry's Mod* might not be game per se, the confrontation between the player/user and the idle gameplay environment has profound significance for how we understand the overall effect of how the Valve Source Engine represents and encloses the world. My third observation is that within the sandbox simulation, *Garry's Mod* hosts a large number of player-made games, and in doing so, becomes a platform of its own, and a microcosm of the entire process of playing and modding that I have described in my previous case studies. In this section, I use Tilley's second category of landscape experience – perceptual space (the egocentric space that connects intentionality to movement and perception), to build a picture of the most important features of the *Garry's Mod* landscape. I introduce the conceptual tension between the sandbox mode and the platform to explain why it is important to understand *Garry's Mod* as an enclosure of player creativity and to explain why the sandbox functions as an important reflexive structure for the player to confront the nature of computer game representation. When the computer game landscape removes its

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structured challenges, the landscape of the Promethean protagonist dissolves, as does the sport of reciprocal exchange. When the landscape lexicon of the Valve Source Engine simply exists as a sandbox, it is up to the player to define and discover its shape.

8.3.1 The new kid in Ruu's Playground

The experience of starting to play *Garry's Mod* is fundamentally different from that of starting to play *Half-Life 2* or *Counter-Strike*. There is no discernable 'direction' in this landscape – my experience is not characterised by a sequence of challenges, nor structured by the competition over the line of sight. By comparing my experience to that of a child in a playground, I evoke Aarseth's characterisation of computer games as "games in virtual environments" (Section 3.3.1, footnote 3). Through YouTube tutorials, I learn that I can toggle the physics properties of my avatar. By pressing "V", I can enter "No-Clip" mode and fly anywhere in the game environment irrespective of the position of other players or objects. This game topology neutralises the possibility of a landscape of linear challenges or a line of sight landscape. Instead, the game environment becomes an enclosed playground, where the only relative direction I perceive is my own proximity to the improvised activity of other players. I play and experiment with players on the server to see what games we might improvise within the affordances available to us. My experience as the new kid in Ruu's Playground was the first time I felt that I had played Garry's Mod successfully.

In 2001, philosopher Hubert Dreyfus attempted to produce a set of qualitative criteria for the types of existential spaces that might be experienced online (Dreyfus 2001). Dreyfus differentiates between the risk-free consumption of spectacle, what Søren Kierkegaard called the "aesthetic sphere" and the serious engagement that involves personal risk and the production of a stable identity, what Kierkegaard refers to as the "ethical sphere" (Kierkegaard 2001, 103) (Dreyfus 2001, 80). Dreyfus is interested in the relationship between personal risk and meaningful encounters in virtual environments. Using the case study of

Second Life (2003), Dreyfus focuses on the lack of empathic expression in user avatars to argue that the shared moods and “focal practices” that generate meaning in the real world are not present in the virtual world of *Second Life*. Even according to Dreyfus’ limited criteria, the production of existential space via a shared mood in *Garry’s Mod* is easy to identify. The shared mood between the Batman and myself was the defining quality of my experience in Ruu’s Playground. It was created by talking in the verbal and written chat, by sharing information on how to play, and by our collaborative actions within the affordances of the game landscape. The difference between my experience with Batman and the server kick I described in the same section (which I return to in Section 8.3.3), was not just that I was acting with greater awareness and skill, it was that I was socialising, experimenting, and sharing experiences with someone else, and laughing about them together. Dreyfus writes: “the sense that the shared mood is shared is constitutive of the excitement...it is what binds the participants together in a focal event and makes the occasion in a self-contained world.” He continues: “to determine whether this practice that helps make life worth living in the real world is reproducible in virtual worlds we must begin by considering to what extent moods can be experienced, communicated and shared” (Dreyfus 2001, 109-110).

My experience in Ruu’s Playground satisfies Dreyfus criteria for focal events – a life is being lived. But what sort of life is it? And how might this life be read as a landscape experience? This focal event constitutes Tilley’s third category of landscape experience – existential space – mobile, produced through the actions of members of a group, resulting in social meanings, sacred spaces and human attachment (Section 2.4.2). Whilst I enjoyed my experience in Ruu’s Playground, there is something more significant to be found in riding around in a cart with saw blades for wheels, dressed as a headless soldier, with Batman at the wheel. In the next section, I examine more closely the significance of the sandbox landscape and what happens when the game is removed but the simulation keeps running. In Section 8.3.3, I examine how the sandbox is formalised into new games based on player-generated rules, how this architecturally divides the

existential space, and how the contrast between the sandbox and the formalised games of *Garry's Mod* to reveal the cognitive space of *Garry's Mod* as a landscape.

8.3.2 The enclosure of the sandbox landscape

In Section 3.4.1 I described how Aarseth sought to characterise computer games as 'games in virtual environments'. *Garry's Mod* appears to take this to an extreme, by providing the real-time simulation of the game environment, but without the coded rule systems of games such as *Half-Life 2* or *Counter-Strike*. The shape of the *Garry's Mod* landscape is in many ways defined by the absence of the structuring mechanics – the game is gone, but everything else appears to have remained in place.

In 2007, Juul describes how the relationship between goals and configurability relates to the expressive potential in computer game sandbox environments. (Juul 2007) The "open and expressive" sandbox lets players pursue their own personal goals, moderated by the resistance of the simulation. Juul notes that the resistance of the simulation will always prohibit certain actions, but that this mediation will still create a functional hierarchy between in-game objects. Juul is relying on the ambiguity of the term 'game' to refer to the affordances of the simulation as well as a goal-oriented scenario. The *Garry's Mod* sandbox has a complete absence of goals. The resistance of the simulation, where one might look for Leino's gameplay condition (Section 3.1.3) is only present in the vulnerability of the player-avatar. The avatar is capable of damage and death as in *Half-Life 2* and *Counter-Strike*, however, the significance of this vulnerability is reduced to an inconvenience at worst, and a humorous expression at best (see the gameplay notes for this section). For these reasons, I do not describe *Garry's Mod* as a game in and of itself. *Garry's Mod* is better described as a virtual environment in which play occurs, a simulation of game pieces, and a game environment in the ambience act (Section 5.2.3). *Garry's Mod* removes the hierarchy of in-game objects, ludologically flattening them into an endlessly expandable lexicon, where limitations are only set by the representational limits of the Valve Source Engine (Chapter 7).

Garry's Mod dramatically expands our ability to read the Valve Source Engine as a medium of landscape. Lee Shuen-Shing (2003) describes how “critical games” and “art games” introduce a form of medium-reflexivity by removing certain game elements from the computer game simulation. This reflexivity is clearly present in *Garry's Mod*, irrespective as to whether or not it is classified as an ‘art game’ or a ‘sandbox’. It makes the player confront the underlying condition of the Valve Source Engine as a representational medium and a game environment. Lee quotes American game designer Greg Costikyan in saying that “a game without struggle is a game that’s dead” (Costikyan 2002) in order to define critical games and art games as resurrected “dead games” that reflects on the computer game form as a means of expression. On the game without struggle or a win-condition, Lee writes:

A player's score is an empty sign. His effort to stave off death in these game spaces through retrial is futile, only signifying a possible misunderstanding of the games. They are dead games, by Costikyan's criteria. However, it is not until the games go belly up that their ulterior motive emerges. Both games are meant to morph the player from an in-gaming loser into an off-gaming thinker. (Lee 2003)

Lee cites case studies such as the *Arena* art mod by the collective Jodi and Brody Condon's *Adam Killer* (2011) as examples where removing struggle functions as a reflexive critique on the first-person shooter. The entropic abstraction that Lee observes when the ‘game’ is removed from the game neatly encapsulates the medium reflexivity of *Garry's Mod* as a whole. *Garry's Mod* surrounds the player with assets from other games, but somehow they have all been set to idle mode. Their surface representations and mechanics have been simulated, but the game is no longer in session. Nothing will attack me unless I program it to, and there is no game unless I make one. I remain in the game simulation, rendered in real time, emplaced as both an FPS avatar and a modder with a toolkit. The game has neither begun nor finished, it is waiting in its potential form. I could play a game at any moment, but it feels as if there is no point to it.

So how does this relate to landscape? Well, in Chapter 5, I was able to derive a succinct landscape structure from the confluence of linear challenges and dystopian representational tropes. In Chapter 6, I expanded this out to suggest that *Counter-Strike* has transformed the trope landscapes of *Half-Life 2* into a landscape practice of aesthetic objectification, appropriation, conversion, and consumption via play. Chapter 7 helped me understand how this appropriation and conversion takes place, but now I must come to grips with what happens when the formal structure of the game is removed, and all we have left is the game landscape itself. The resistance and validation that exists in *Counter-Strike* (Section 6.2) are absent in *Garry's Mod*, and after five minutes of running around shooting other players with rocket launchers, I get bored and search for something else to do. I spawn a Lamborghini and race around Ruu's Playground, but after crashing it a number of times, I lose interest and delete it from the game. I load a level from *Half-Life 2* complete with NPCs and the linear challenges laid out for Dr Gordon Freeman, but this time I play with the affordances of a *Garry's Mod* player/modder (a true God mode). I fly high above the landscape and gaze down upon City 17, I spawn in dragons from *Skyrim* and watch them fight the Combine NPCs for me. The linear landscape of sequential challenges has dissolved, and the city looks like a film set because there is nothing behind the single row of buildings tracing the original landscape line. The safari is over, and *Garry's Mod* has become a confrontation with myself. In this mode, I am allowed to more directly question what is meant by the abstraction of the game engine. I had never taken the time to pause and think what a tree was in *Counter-Strike* until I had stopped playing *Counter-Strike*. I found that it was a 3D mesh with collision properties that could be placed and fixed anywhere. These properties are the only qualities of 'tree' that survived the abstraction of the simulation. In this sense, I am also facing the absence of everything that was not simulated. All that was left of the tree was a mesh and collision properties, within the simulation, this was the only raw material from which I could appreciate the notion of a tree. *Garry's Mod* reveals the extreme end of a conceptual enclosure, similar to that described by the Nature/Culture dualism in Section 2.3.7 – the world is quantified into an asset library, and all that remains is all that can be

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conceptualised by the simulation. Cubitt argues that the "return to nature" depicted in cultural media relies on a fetishized Nature, resulting from the enclosure of the physical environment whereby the only survivor was the aesthetic object of contemplation. The only Nature that can be returned to is a fetish object, the sole survivor when all other externalities have been enclosed and rejected. But at the same time, because *Garry's Mod* removes the instrumental structures of play that appear in games such as *Half-Life 2* or *Counter-Strike*, I no longer have a stable idea of what these entities actually are. In *Garry's Mod*, a tree seems to share the same properties as a brick or a refrigerator. The only way these entities could become something was to be played with. The retreat from the design position of *Garry's Mod* is a retreat from the lowest common denominator of the simulation that the game engine affords.

Using Roger Caillois' distinctions of play activities, the landscape of sequential challenges (*ludus*) has been replaced by the open sandbox of improvised experimentation (*paidia*) (Caillois 2001 [1961], 13). Faced with the absence of structured play, I am emancipated from the gameplay condition (Section 3.1.3) and confronted by the underlying condition of the virtual landscape and the enclosure of the Valve Source Engine itself. Before I deconstructing the landscape enclosure, I am reminded of Caspar David Friedrich's painting *The Monk by the Sea* (1808-10) and the formal philosophical concerns of Romanticism and the astonishment of the sublime (Section 2.2.1). Gazing out into the void of computer game representation, I am confronted by my diminutive relationship to it. I am no longer the protagonist, nor is my purpose measured by the repetitive competition over line of sight. I am only measured by my ability to respond to a vast set of representations and relationships. Lee writes:

in the longer process of critical game playing to investigate and understand what it is all about, what happens to the player is that he becomes less and less of the game, and more and more of "me." (Lee 2003)

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In *Counter-Strike*, by understanding line of sight and collision properties, I can understand the procedure of the game, my purpose as a player, and the minute differences between the height of a desk and the angle of a window (Section 6.3.1) It's easy to make the distinction that without the sequence of challenges of *Half-Life 2* or the repetitive competition of *Counter-Strike*, that *Garry's Mod* is just boring to play, but this is to avoid the most interesting point. With the ability to import any asset, to make anything, to travel anywhere in the game landscape, and to make any game, I am confronted with the paralysis of my own imagination, and my own purpose. An analogous experience might be the life of the contemporary billionaire, playing life in God Mode. There must only be so many times I could race a Lamborghini around the city, only so many walls to crash them into, until I must to confront myself, surrounded by the rubble of my enrichment. I search on YouTube, "what to do in *Garry's Mod* when I'm bored?" In *Garry's Mod*, I can watch YouTube. Having created the grand enclosure of the game engine, or extreme wealth, I am faced with the question – what should I do now? What can I do with all of these things? What do they mean? The only way I can answer that question is to pour over the fragments of what was enclosed, to see what survived the lowest common denominator process of reduction and simulation. How much tree survived in the tree asset? How much rock survived in a rock asset? Very little it would seem. But this is what I have to work with now. *Garry's Mod* is a powerful example of the Nature/Culture divide writ large. It has enclosed all things at the expense of the world, and now I can only confront myself with the spoils of this enclosure.

Outside the confrontational void of sandbox paidia, *Garry's Mod* functions as a platform for players to make their own games – (games in virtual environments – Section 3.3.1). In the next section, I examine how *Garry's Mod* exists both as a sandbox as well as a platform for making formal games. The tension between these two versions of *Garry's Mod* then becomes the basis for my examination of intertextuality, how *Garry's Mod* exists in the world, and how it can be understood in direct relation to Cubitt's expanded notion of enclosure, and as the culmination of my previous discussions of the economic materiality of the Valve Source Engine.



Figure 42: *The Monk by the Sea*. 1808-10. Caspar David Friedrich, oil on canvas, Alte Nationalgalerie, Berlin.

8.3.3 The platform landscape

In addition to the sandbox mode of *Garry's Mod*, there are myriad community-servers that offer games built inside the affordances of *Garry's Mod*. In this section, I examine how *Garry's Mod* can be characterised as a platform for modding. So far, I have focused my analysis the on sandbox servers with a minimal number of formalised rules, however my anecdote of being kicked from a server hints that even sandbox servers are regulated by player-imposed rules. Figure 43 shows the server list that appears when I start looking for a multiplayer game.

The range of game modes that exist across *Garry's Mod* servers can be contextualised by the scheme of formal and informal rules outlined by Marcus Carter, Martin Gibbs and Michael Arnolds. Carter et al distinguish between the coded rules that the game software uses to limit player behaviour, the formal rules that are possible within the software (but prohibited and punished by a regulating official), and the informal rules that represent implicitly accepted

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patterns of play (Carter, Gibbs, and Arnold 2017). The game modes of *Garry's Mod* are differentiated by variations across all three of these rule layers. For example, the coded rules of a DarkRP (role play) server typically disable numerous actions from the spawn and tool menus and add additional elements to the heads-up display of the game. The formal rules will be communicated to the player when they enter the server and will be enforced by other players and server administrators. The informal rules are how players regulate each other's behaviour at the margins of the formal rules. Certain behaviour might not break server rules, but it might be disruptive enough to result in a player being kicked or banned from the server. The server kick that I recounted in the *Garry's Mod* sandbox was not the result of a hidden rule, nor was it the result of a calculated transgression (as in the case of David Myers mentioned in Section 6.2.3). It was simply the result of my not reading the terms and conditions of the sandbox server before I started playing, which resulted not choosing PVP (player versus player) before I started sniping other players with my crossbow (however given that I too was being attacked, it appears that the server administrators had a variable tolerance for this formal rule).

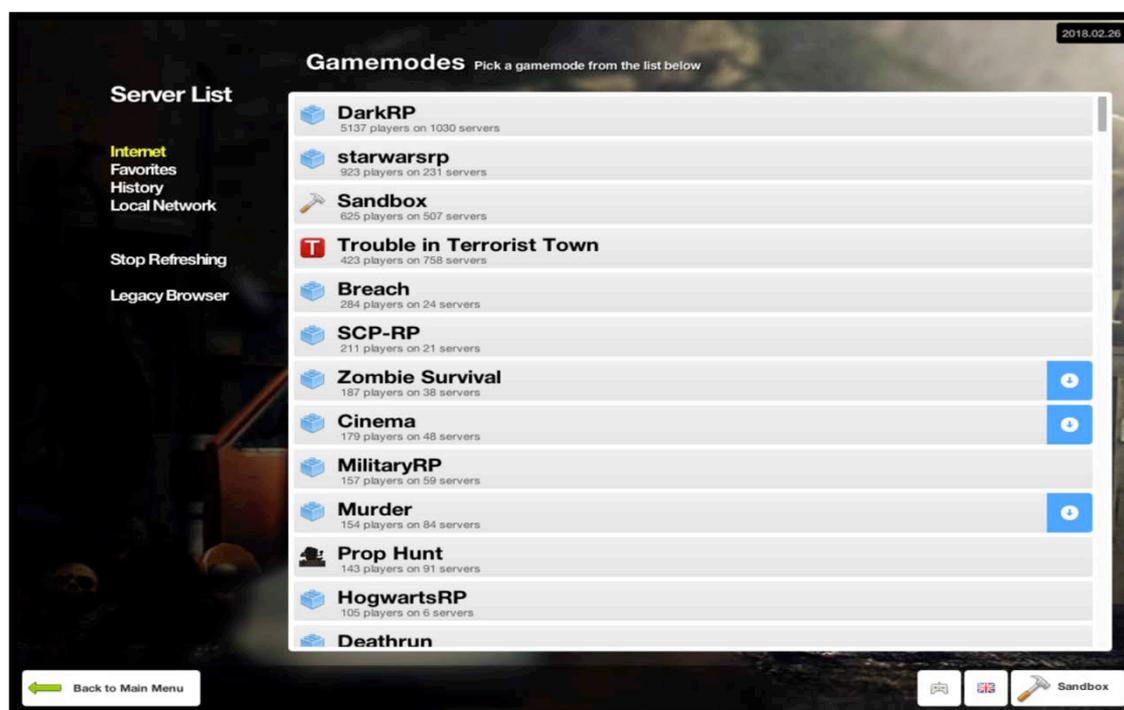


Figure 43: When searching for a *Garry's Mod* game to join, this interface ranks game modes according to which currently has the most players online, author's screenshot, 2018.

A number of the most popular game modes played on *Garry's Mod* servers, such as 'Trouble in Terrorist Town' and 'Prop Hunt 2' was developed during a game-jam event hosted by Garry Newman's Facepunch Studios in 2009 (Facepunch Studios 2009). In Section 3.6.3, I made the connection between the Valve Source Engine and platform studies and argued that it functions as a platform for user-generated content, such as the maps of *Counter-Strike*. By repeating the same function, *Garry's Mod* has become a microcosm of Valve Source Engine modding. It facilitates playing and modding, and its custom games illustrate how *Garry's Mod* has transformed into a platform of its own. *Garry's Mod* has added a new layer of enclosure to the process described so far this dissertation. This is the most important shift in understanding the materiality of *Garry's Mod* and its landscape representations. In Section 5.5.1, I described how the Valve Source Engine originated as a licensed modification of the Quake engine. In Section 6.1.3, I described how *Counter-Strike* transitioned from a player-made mod of *Half-Life* into an independently licensed game, and in Section 8.1, I described how *Garry's Mod* transitioned from a player-built modification of the Valve Source Engine into an independently licensed product. This pattern of mods being enclosed within a proprietary game engine has been completely recreated within *Garry's Mod*. Some player-made game modes are simply hosted on *Garry's Mod* servers, some are shipped as part of *Garry's Mod*, and some build their own internal business models via player donations to the server.

I am not seeking to position *Garry's Mod* as unique in its combination of modding and playing, it is a design decision that is possible for any computer game engine. It is realised when the simulation encloses the act of modding and becomes a platform for player-generated games. This feature can be observed in other more recent examples, such as *Tabletop Simulator* (2015), *LittleBigPlanet* (2008) and the forthcoming game *Dreams* (developed by Media Molecule for PlayStation). On the level of Tilley's architectural space, the formal games within *Garry's Mod* demarcate different types of game-spaces within the simulated environment of *Garry's Mod*. These formal games represent a retreat from the confrontational nature of the *Garry's Mod* sandbox I described in Section 8.3.2. By introducing the

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goals by which the players can quantify and qualify their experience in the environment, *Garry's Mod* returns to something of *Half-Life 2* and *Counter-Strike*. But having already analysed the landscape of the single player *Half-Life 2* and the multiplayer *Counter-Strike*, and the limitations of representation within the Valve Source Engine via *Autosave: Redoubt*, it is the self-reflexivity of the *Garry's Mod* sandbox that seems most relevant in this chapter. Given that my previous landscape readings relied so heavily on the confluence of audio-visual representation and game mechanics, now that the game landscape has seen the mechanics reduced to the simulation of the Valve Source Engine alone, I want to uncover one final reading of landscape based on this new condition. I want to find a reading of landscape where the player is simply playing the Valve Source Engine, a landscape teeming with content, but devoid of goals or ludic structure, a landscape of the Valve Source Engine.

In the next section, I analyse the significance of the *Garry's Mod* asset lexicon, how it approximates theoretical structures such as Situationist practice and postmodernism, and how the ludic sandbox landscape might, in fact, require a new conceptual formulation. After analysing the intertextual content of *Garry's Mod*, I consider how *Garry's Mod* exists in the world, and by the progressing through my methodological framework; I derive a reading of *Garry's Mod* as a work of landscape.

8.4 Intertextuality

[Gameplay notes]

I type “weird Garry's Mod server” into YouTube, and watch ‘WEIRDEST SERVER EVER’ by MsBreezy (MsBreezy 2016b). The video begins from the subjective point of view. The player walks out of a building into a public square, framed by a crumbling industrial city and a stormy sky. The player passes a host of other players with their player names floating above their avatars. I can hear a distorted version of the theme song from

The Fresh Prince of Bel-Air, combined with Adolf Hitler's closing speech from the Triumph of the Will. The narrator of the YouTube video says "what the fuck?" and then asks two other friends to meet him over at the Kool Kid's Klub, where they start playing a game of chess with another player, who is using a Donald Trump avatar. As the three players are running around outside through a toxic waste dump, stabbing each other and choking back their laughter, they joke that this must be "what hell is like". Around the corner from the waste dump, there is a mini-golf course. An aiming interface appears on the screen, and the players start talking in mock British accents, imitating televised golf commentators as they putt. "Guys, I swear this server is like an ADHD dream. It's a like a 4chan server. If you go into the cinema rooms, you'll usually find YouTube poops and porn playing" (MsBreezy 2016b).

After watching half of MsBreezy's video, I switch to Garry's Mod go looking for the server myself. I find it in the 'Cinema' game mode - the Swamp Cinema server. Outside the cinema, I play on the mini golf course and then try the stabbing game in the toxic waste dump. But neither of them seems as fun as they appeared in the video. It seems like it would be more fun to try with friends. I go inside the cinemas. Garry's Mod cinemas simulate regular cinemas by using YouTube flash plugins, creating a YouTube party rendered inside a virtual multiplex. I walk past the candy bar, grab a bucket of popcorn, and go into the first theatre. The first video that plays is "CupcakKe-Deepthroat", and the second is "Top 10 Scary British Urban Legends."

The extreme intertextuality within *Garry's Mod* prohibits me producing the sort of cogent analysis of cultural reference points that I produced for Chapter 5 and introduces some challenging contradictions when it comes to analysing what sort of landscape it is producing. *Garry's Mod* doesn't just simulate Source engine assets and environments as modular sandboxes, it is continually being refilled and rebuilt with player made content. Assets from other games are added to the lexicon, along with assets referencing the broader ephemera of popular culture.

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In this section I examine how *Garry's Mod* flattens the vast culture it refers to, once again with reference to Descola's notion of Nature as 'dumb, odour free and intangible'. I examine how the carnival of representation in *Garry's Mod* resembles Jean François Lyotard and Fredric Jameson's descriptions of postmodernism as a 'rubble of broken signifiers'. Finally, in reference to Huizinga's claim that play gives order to disorder; I challenge my own comparison of *Garry's Mod* to postmodern rubble, and suggest that the ludic experimentation afforded by *Garry's Mod* functions both as a structure of emergence, and enclosure.

8.4.1 An enclosed Source Engine lexicon

As I stated in Section 8.3.2, the sandbox of *Garry's Mod* simulates a large number of assets from other games in an idle, non-game state. If I load the 'gm_mc_hillside.bsp' map into *Garry's Mod*, I can play the *Garry's Mod* sandbox in a *Minecraft*-style landscape, but I cannot mine or craft. This *Minecraft* landscape is coded using the same file structure as *Autosave: Redoubt* (a combination of .bsp, .vmt and .vtf files), and therefore can only function according to the physics properties of the Valve Source Engine. If I import the Alduin dragon from *Skyrim*, it is only Alduin according to *Garry's Mod*. Similarly, when interacting with the 'gm_mc_hillside' landscape (figure 41), I am not interacting with a destructible voxel-based *Minecraft* landscape; I am interacting with a textured static mesh that is uploaded via the proprietary file formats of the Valve Source Engine. In Section 6.4.1, I showed how Descola's description of enclosed Nature, as "dumb, odour free and intangible" was a useful description of the appropriated environments consumed in *Counter-Strike* as an aesthetic spectacle. In *Garry's Mod*, we are facing the same phenomenon, but with a process of appropriation that has dramatically accelerated to appropriate and convert assets and environments from an impossibly vast array of games and popular culture sources. As my gameplay experience attests, the representational lexicon of *Garry's Mod* has become a chaotic cultural conglomerate, unified only by the common mediation of the Valve Source Engine. Playing *Garry's Mod* as Dr Gordon

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Freeman is not playing it as a Promethean protagonist, it is playing as an ironic signification of a Promethean protagonist. The diegetic game world has become completely 'deniable' (Section 3.2.3). A crate is now the same as a tree, and I can build a spaceship using either of them. The crate, the tree, the dragon and the *Minecraft* hillsides are only what the Valve Source Engine simulates them to be. They are defined by a mesh, a texture, and the coded properties of a .qc script (Section 7.3.1). *Garry's Mod* now reveals the homogenising enclosure of the Valve Source Engine. This landscape is a remix where all that exists is that which has been enclosed, and all that can exist exists only according to the affordances of the enclosure. It is a landscape of infinite representation, afforded by a most dramatic simplification and simulation.

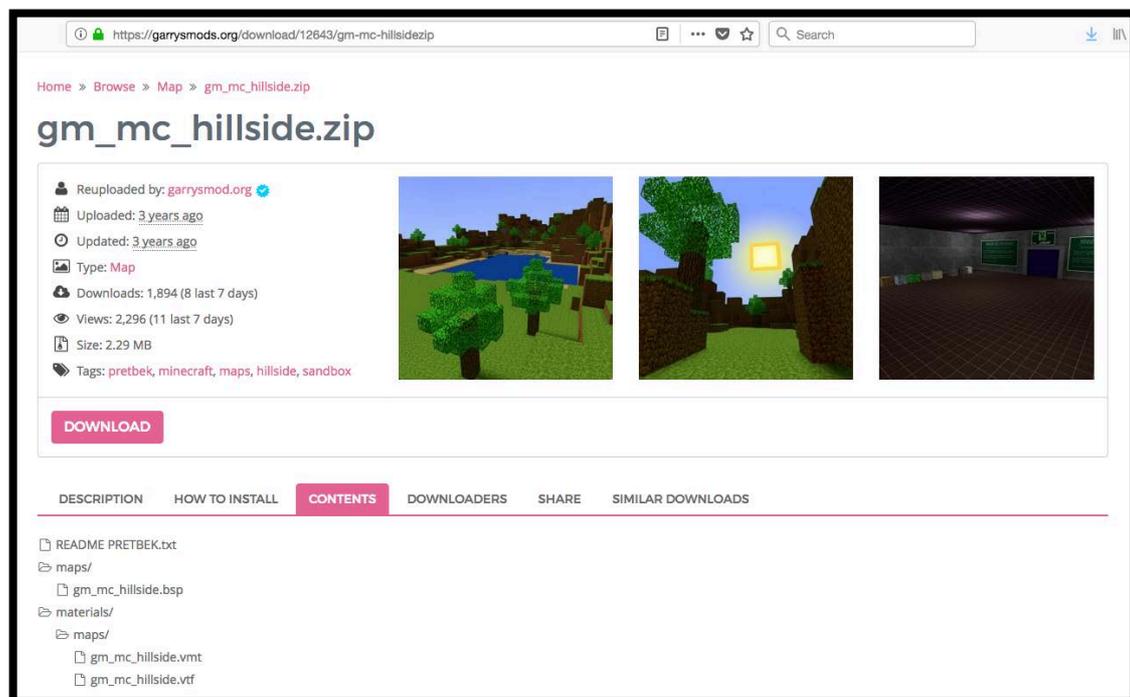


Figure 44: The 'gm_mc_hillside' map addon, hosted on garrysmod.org

8.4.2 Postmodern rubble and networked landscapes

Garry's Mod has an average of around 25,000 players at any given time, and there are currently over 1.25 million assets on the *Garry's Mod* Steam Workshop page (Steam Charts 2018) (Steam Workshop, 2018). The spectacle of representation

that results from *Garry's Mod's* expansive absorption of other game entities recalls what political theorist Fredric Jameson's describes as the "random cannibalization of all styles of the past" and "the play of stylistic allusion", which he uses to characterise postmodernism as the aesthetic language of capitalism (Jameson 1991, 65). Jameson identifies self-referentiality and appropriation, similar to what I observe in *Garry's Mod*, as rooted in the consumer desire for a world populated only by images of itself. So from the outset, if *Garry's Mod* is considered to be a landscape, it accelerates the sampling that I identified in the textures of *Half-Life 2* (Section 5.4.3) and expands this to its entire lexicon of ludic representation.

In the late 1970s, philosopher Jean François Lyotard characterised postmodern society as existing not in a Newtonian anthropology of structuralism and universal grand narratives, but in the pragmatic relativism of "language particles" (Lyotard 1979, xxiv). For Lyotard, the transmission of meaning between two individuals, via a signifier and a signified, cannot be based on the assumption that these individuals share the same rational ontology. Instead, hermeneutic institutions only exist in "patches" of "local determinism" (Lyotard 1979, xxiv). When the arbitrary centre of grand narratives are removed, knowledge and discourse tend towards perspectivism, micro narratives and local temporary institutions that can supply temporary rules of engagement. Lyotard characterises this in terms of Wittgenstein's term 'language games'. He writes:

It is useful to make the following three observations about language games. The first is that their rules do not carry within themselves their own legitimation, but are the object of a contract, explicit or not, between players (which is not to say that the players invent the rules). The second is that if there are no rules, there is no game, or not, between players (which is not to say that the players invent the rules). The second is that if there are no rules, there is no game, that even an infinitesimal modification of one rule alters the nature of the game, that a "move" or utterance that does not satisfy the rules does not belong to the game they

define. The third remark is suggested by what has just been said: every utterance should be thought of as a "move" in a game. (Lyotard 1979, 10)

Lyotard's characterisation of the local, temporary and fragmented nature of knowledge and communication under postmodernism seems to be a reasonable framework with which to describe the simulation of *Garry's Mod* – a sprawling network of temporary servers that independently establish formal and informal rules of engagement. Whilst this theory seems more rooted in political philosophy than it does in geography, it is a framework that at least takes a step towards explaining the structure of *Garry's Mod* as a landscape, beyond simply the symptoms of its audio-visual representation. One of the points of this dissertation is to say that the notion of landscape and computer games simply existing via an aesthetic comparison of, let's say, paintings of mountains and mountains in games, would be to miss the point entirely. The paintings of 18th-century mountains, I demonstrated in Section 2.3.3, only make sense when they are understood as part of a broader network of production and consumption. By linking the intertextual representations of *Garry's Mod* to a suite of broad political philosophies, I am attempting to uncover a similar broader cultural signification. The postmodern rubble of signifiers within a *Garry's Mod* landscape, and the temporary networked patches that make up its chain of servers is an important structure in building this overall landscape reading.

The expansive in-game lexicon shares only the common simulation of the Valve Source Engine, therefore its horizontal ontology has no fixed hermeneutic meaning, and instead, meanings and significations are constantly produced according to micro-moments of play.

In his essay 'Postmodernism or The Cultural Logic of Late Capitalism' (1991), Jameson gives a more specific historical qualification for the postmodern condition. Where Lyotard suggests that this tendency exists in a latent form throughout history, Jameson argues that the semiotic fragmentation and local relativism of postmodernity is an index of the evolution of global capitalism. For Jameson, the self-referentiality and pastiche of cultural signifiers in *Garry's Mod*

would be symptomatic of the crisis of representation caused by capitalism – pastiche replaces signification with “schizophrenia in the form of a rubble of distinct and unrelated signifiers” (Jameson 1991, 72). For Jameson, pastiche signifies a collapse in the historical imagination and an apocalyptic consciousness, where visions of collapse and catastrophe replace the ability to imagine alternative futures. For the millenarian, obsessive historical resampling is all that remains and signifies the “moment of truth” for globalised capitalism (Jameson 1991, 88). Jameson writes:

The technology of contemporary society is therefore mesmerizing and fascinating, not so much in its own right, but because it seems to offer some privileged representational shorthand for grasping a network of power and control even more difficult for our minds and imaginations to grasp – namely the whole new decentered global network of the third stage of capital itself. (Jameson 1991, 79-80)

Viewed as a postmodern spectacle, the lexicon of *Garry's Mod* might read as a signifier for the immense globalised networks of capital and exchange that are otherwise too large to be comprehended. In this way, *Garry's Mod* would evidence a heightened version of the neo-baroque that I observed in the intertextual composition of *Half-Life 2*. (Section 5.4.2) However, as I explained in Section 8.2, the ludic lexicon of *Garry's Mod* is a direct result of player activity – it is the product and the medium of the player/modder. To take the reader all the way back to Section 3.3.1, the signification of computer games must be understood according to the locus of player actions and experience, not simply according to aesthetic spectacle. This might sound like I am walking back my neo-baroque claims in Section 5.4.2, but I am not. In *Half-Life 2*, the player was far less involved in the aesthetic composition of the landscape, and therefore my reference to cultural production via the implied author of Valve artists and developers is a reasonable application of the neo-baroque formulation of Ndalianis. But in *Garry's Mod*, the player is directly implicated in the representational composition of the environment. As an extension of the appropriation and conversion that the modder makes in *Counter-Strike*, one

plays *Garry's Mod* by converting the spectacle of popular culture into the simulation of the Valve Source Engine and the *Garry's Mod* sandbox. In *Homo Ludens*, Huizinga refers to spaces such as the arena, the tennis court and even the court of law as exhibiting the form and function of a playground – “temporary worlds within the ordinary world, dedicated to the performance of an act apart” (Huizinga 1964 [1955], 10). Within the playground environment, Huizinga argues that play creates a new sense of order – “into an imperfect world and into the confusion of life it brings a temporary, a limited perfection.” (Huizinga 1964 [1955], 10) Huizinga continues that the player takes a chance, makes an attempt, in order to resolve the tension and uncertainty of the play situation. This formulation might extricate *Garry's Mod* from the apocalyptic stasis of postmodernism, and recast it as a projective world of ludic re-evaluation, where order is sought through chance and experimentation. Whilst the lexicon of *Garry's Mod* might appear to be a postmodern rubble of signifiers, its ludic function might produce a new order beyond pastiche and spectacle. In the next section, I explore how participatory play intersects with the postmodern rubble remix, via the comparison between *Garry's Mod* and the playground.

8.4.3 A Situationist playground

As I suggested in the previous section, the historical and theoretical context of the sandbox/playground provides an extrinsic mechanism for understanding the function of *Garry's Mod* beyond the aesthetic spectacle it displays. In this section, I examine how playgrounds figure in the architectural theory of the mid-20th century, and how this can be used to build an understanding of *Garry's Mod* as a playground landscape.

The emergence of architecturally designed playgrounds in the mid 20th century derived from a specific set of geopolitical circumstances. Sociologist and scientist Merijn Oudenampsen describes how Aldo van Eyck, one of the pioneering structuralist architects of the 1950s, began designing children's playgrounds in Amsterdam as a reaction against the rationalising homogenisation of post-war

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European urban planning. For van Eyck, playgrounds were a subversive strategy to promote social interaction and ludic creativity as a way to resist capitalism. Van Eyck's playgrounds employed a modular lexicon of play equipment with a non-hierarchical syntax that sought to maximise the expressive *potential* of a space, while allowing children to appropriate the playground into their own imaginary narratives of play – a climbing frame becomes a house when a blanket is thrown over it, or a look-out post when you climb on top of it. (Oudenampsen 2013) Van Eyck's structuralist playgrounds rejected the notion of the architectural *tabula rasa* (blank slate), and instead treated each site as an integral part of the community and its urban fabric.

According to Oudenampsen, the artists Constant Nieuwenhuys and Asger Jorn, who went on to found the Situationist Internationale heavily influenced van, Eyck. What these artists shared with van Eyck was the leveraging of play as a strategy to resist the homogenising tendency of modern capitalism. In *The Society of the Spectacle* (1967), one of the key Situationist texts, Guy Debord traces how late industrial society shifted from treating human labour as the primary commodity, to treating representation and appearances as a primary currency. As a broad simplification, Debord argues that under capitalism, the world of direct experience has been replaced by a world of representations. The world of spectacle colonises and commoditises the attention span, and the private consumption of representations repurposes human society as a resource for sustaining the economy (rather than the economy as a resource to sustain society). Debord writes, "all that once was directly lived has become mere representation" (Debord 1995 [1967], 12). The spectacle does not simply refer to a world flooded with images; it refers to a world where social relationships only exist through the mediation of representation. For Debord, the society of the spectacle defines the individual as the spectator, who lives an increasingly private existence, and enjoys social relations only through the mediation of representation. This raises an important question for *Garry's Mod* – is the player/user of *Garry's Mod* a spectator or a participant? And is the focal moment of Dreyfus (Section 8.3.1) within the bounds of participation or spectatorship?

Juul's description of the expressive potential of a sandbox game (Section 8.3.2) illustrates that the core theories of the playground have transitioned across into the sandbox computer game. But the contemporary reader will note that this corpus of theory, deriving from the post-war decades of the 1950s and 1960s has been completely transformed by more recent economic developments. For example, the correlation between play, diversity and subversion has been more or less neutralised by the commodification of difference and the precarious reality of the 'gift economy' constitute the absorption of many of the radical theories of the 1960s. Speaking to this point directly, Terranova writes:

The high-tech gift economy is a pioneering moment that transcends both the purism of the New Left do-it-yourself culture and the neoliberalism of the free market ideologues...Commodification, the reimposition of a regime of property...is the main strategy through which capitalism tries to reabsorb the anarcho-communism of the Net into its folds. (Terranova 2000, 36)

Therefore to appropriate these Situationist ludic theories would be to miss the economic enclosure of *Garry's Mod*, and therefore to arrive at an utterly implausible reading of *Garry's Mod* as a landscape.

Oudenampsen argues that van Eyck's playgrounds represent a live experimentation with architectural theory, which position play and Huizinga's 'homo ludens' as an oppositional strategy to the homogenising effects of modern capitalism, which van Eyck perceived as threatening the social fabric of the urban environment. But the patterns of production that produce the expressive lexicon of *Garry's Mod* sit firmly within the paradigm of Game 3.0, where player labour is enclosed by the proprietary game system (Section 3.6.4). This is consistent with the lexicon of inchoate rubble from media culture that comprises the *Garry's Mod* environment. In the next section, I examine how the tension between *Garry's Mod's* aesthetic relationship to postmodern spectacle and its historical link to playgrounds and Situationist play can be explored using cultural

theorist Alan Kirby's term 'digimodernism'. I then use 'digimodernism' to generate my overall reading of *Garry's Mod* as a landscape.

8.5 *Garry's Mod* in the world

In this section, I introduce Kirby's notion of 'digimodernism' as a characterisation of the intertextual content and the computational affordances of *Garry's Mod*, and as the basis of my final landscape reading. Using Aarseth's *Cybertext* as a model, Kirby argues that digimodernism, exemplified by computer games, transcends the apocalyptic feedback loop of postmodernism, and produces a haphazard and unpredictable process that results from extrinsic socio-historical factors are encapsulated in the landscape of *Garry's Mod*. I return once again to the notion of enclosure and examine how by combining playing and modding within a single system, *Garry's Mod* becomes an enclosure of creativity that will be repeated by any game that implements this design decision. Finally, I examine a claim made by Kirby, that digimodern texts are haphazard, emergent and unpredictable, and discuss how *Garry's Mod* can be used for unexpected purposes.

8.5.1 A digimodern enclosure

Alan Kirby argues that if postmodernism began, as Jameson claims, with the institutionalisation of modernism in the 1950s, and the perceived failure of Marxism to achieve lasting social and political transformations, then 'digimodernism' began with the institutionalisation of postmodern pastiche, where postmodernism ceases to adequately describe cultural texts. Kirby points to animated movies such as *Toy Story* and *Shrek* as landmarks in the emergence of digimodernism. These films construct "an infantilized adult and a cool kid as a pair of viewers embraced by an all-encompassing postmodern aesthetic" (Kirby 2009, 14). In these films, the dislocated lexicon of postmodernism was reduced yesterday's style, Pixar was purchased by Disney, and the sequels to both movies presented "unstructured and hyped-up fragments that, as well as breaking no

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new ground as content or style” transformed the postmodern aesthetic into “a tiresome, convoluted and recycled postmodern blizzard” (Kirby 2009, 16). Like the subject matter of the films themselves, the lexicon of postmodernism began to function as a discarded children’s toy, driven by the movements of a new cultural logic.



Figure 45: Watching TV with other discarded children's toys in *Garry's Mod*, author's screenshot.

The intertextual lexicon of *Garry's Mod*, combined with player experience and the shape of the landscape, seems to fit comfortably within Kirby's description of the digimodern text. In *Garry's Mod*, children's toys and appropriated game fragments are driven by the textuality of computerisation. According to Kirby, the computer game is the paradigm digimodern text. Aarseth's *Cybertext* and the function of ergodic literature (Section 3.1.2) form the backbone of Kirby's cultural explication. Based on Aarseth's use of 'scriptons' and 'textons' (Section 3.1.2) Kirby uses the terms 'grammar' and 'rhetoric' to refer to the relationship between the mechanism governing the text, and the content being driven by the machine. Kirby uses digimodernism to expand on what he calls the grammatical structure of the ergodic text to synthesise a critique of the rhetoric of these new cultural forms.

Kirby describes the digimodern text as:

a machine: considered as a system by which meaning is made, not as meaning. Postmodernist features denote either a textual content or a set of techniques, employed by an antecedent author, embedded in a materially fixed and enduring text, and traced or enjoyed by a wilful reader/viewer. The traits of digimodernist textuality exist on a deeper level: they describe how the textual machine operates, how it is delimited and by whom, its extension in time and in space, and its ontological determinants. (Kirby 2009, 51)

Digimodern texts are made by many users, the text becomes indistinguishable from the platform, and a chaotic structure of collective authorship continually redefines its lexicon, shaped by the haphazard structure of networked environments. Digimodernism destroys the society of the spectacle because it is manually oriented; operations of the hand are co-dependent with the audio-visual information flowing across networked computers. Following the logic of Web 2.0, digimodern texts are evanescent and haphazard, with other notable examples being chat rooms, YouTube and Twitter. Users, players and text-makers are not equal because Web 2.0 is a deeply hierarchical space (Kirby 2009, 59).

What I am looking for in the landscape of computer games is not dissimilar to what Kirby is looking for in the rhetoric of the digimodernist text – he wants to know what vision of society is revealed through the 'grammar' and 'rhetoric' of the digimodern text. For a start, by transforming the Valve Source Engine into a playable digimodern text, *Garry's Mod* has turned the lexicon of the computer game into a collection of ludic memes¹⁷, which start by recasting the rhetoric of the antecedent games with a consistent film of lacquered irony.

¹⁷ 'Meme' is a neologism coined by Richard Dawkins in his 1967 book *The Selfish Gene*, which refers to how cultural concepts are cognitively reproduced throughout a community, similar to the reproduction of genes. (Dawkins 2006

As I said in Section 8.4.1, I do not play *Garry's Mod* as Dr Gordon Freeman; I play as an ironic signification of Dr Gordon Freeman. I play *Garry's Mod's* Pedobear¹⁸ hide and seek game in a Lego Worlds landscape, trying to earn enough experience points to buy an anime avatar so that I could run away from the Pedobear in style. Earning experience points on the server gives me enough credit to buy the anime avatar, which contextualises the Pedobear meme as the game antagonist. Countless similar servers exist, where the antagonists might be the heads of Donald Trump and Hillary Clinton, and the landscape might be a reconfiguration of The Lost Coast from *Half-Life 2* (MsBreezy 2016a), or simply just any other configuration of popular culture transformed into ludic memes. *Garry's Mod* presents a mirror landscape that deconstructs the pantomime of *Half-Life 2* and *Counter-Strike*. Underneath the formal rules of *Half-Life 2* and *Counter-Strike* is the Game 3.0 meme landscape of *Garry's Mod*. Alongside the linear protagonist safari of *Half-Life 2* or the tourist landscape of reciprocal military vision of *Counter-Strike*, I now place the Game 3.0 meme landscape of *Garry's Mod* as the third cognitive space revealed by my landscape analysis of the Valve Source Engine.

To expand on the notion of a Game 3.0 meme landscape, Kirby's digimodern analysis of YouTube is a useful analogue for how *Garry's Mod* might be understood. According to Kirby, the 'grammar' of YouTube facilitates a freely available platform for short videos to be uploaded, watched, and commented on. The 'rhetoric' of YouTube (what it actually says) is entirely haphazard and generates a particular ethnography of the Internet. YouTube's lexicon is

[1967]) In a more recent book chapter, Bogna Konior refers to memes as "units of digital culture with substantial cultural and now also political capital gained through circulation" (Konior 2018).

¹⁸ Pedobear (short for paedophile) is a cartoon bear that developed between the Japanese 2channel image board, and 4chan. It is an Internet shorthand used to make fun of paedophiles, or to imply that someone has sexual interest in children. Pedobear is commonly depicted chasing young anime girls.

generated by YouTubers, who comprise the 'recorder/sharer' (of existing broadcast content), the 'historian/enthusiast' (who shares archival content), the 'home movie-maker', the 'video blogger', the 'instructor', the 'amateur reporter', the 'budding performer', the 'aspiring film-maker' or the 'online businessperson' (Kirby 2009, 119). A similar typology might be made for the implied player of *Garry's Mod* – the 'asset uploader', the 'instructor', the 'role-player', the 'builder', the 'machinima maker', the 'troll', and so on. Whilst the grammar of *Garry's Mod* is ludic experimentation with the Valve Source Engine, the rhetoric of *Garry's Mod* reveals something similar to YouTube – a haphazard ethnography of online culture. As Kirby predicts, the configurable and generative nature of the digimodern text produces unpredictable results and anthropological structures. Kirby writes:

Anonymous, multiple and social authorship. Of these reformulations what happens to authorship in the digimodernist text especially deserves attention. It becomes multiple, almost innumerable, and is scattered across obscure social pseudocommunities. If not actually anonymous it tends to a form of pseudonymity, which amounts to a renunciation of the practice of naming (e.g., calling yourself "veryniceguy" on a message board or in a chat room). This breaks with the traditional text's conception of authorship in terms tantamount to commercial "branding," as a lonely and definite quantity; yet it does not achieve communality either. (Kirby 2009, 52)

Thinking back to Dreyfus and the focal experience (Section 8.3.1), it is now more accurate to say that the focal experience occurs within the affordances of digimodern rhetoric. Kirby maintains Jameson's location of postmodernism in capitalist consumption, but removes the spectacle and the spectator, and inserts the collective, non-trivial activity of the cybertext. Kirby draws a parallel between the structure of Web 2.0 platforms (the digimodern text), neoliberal self-branding, and the sort of 'desocialised autism' that is required to interact in these 'pseudocommunities'. The standard 'hello' in *Garry's Mod* is to shoot someone with a rocket launcher, and the swamp of memes that constitute its

rhetoric (or lexicon) should, according to Kirby, be understood through a consideration of the extrinsic socio-political context that drives digimodernism. This context is shaped by contemporary factors such as climate change, overpopulation, increasing urbanisation, increasing surveillance, the near impossibility of solitude, the economics of flexibility and precarious employment, the valorisation of hyperactive social skills and the increasing contempt of knowledge, in favour of conspiracy theories and pseudoscientific quackery (Kirby 2009, 230). At this point, the reader should think back to the extrinsic material contexts that I used to introduce 18th and 19th-century landscape painting (Section 2.3). These included the agricultural revolution, the enclosure of public lands, the expansion of colonialism, the normative centrality of the white male gaze, the desire to remythologise conquered territories, and the repositioning of Nature as an enclosed 'other' in the face of Enlightenment empiricism and industrialisation. What Kirby has achieved is to look at the grammar and rhetoric of the digimodern text and link it to a specific suite of circumstances. These extrinsic circumstances contextualise the landscape experience of *Garry's Mod*.

At this point, the reader will also notice that some of Kirby's critiques of Web 2.0 platforms resemble those that I introduced in Section 3.6.4 when writing about modding, playbour, produsers and Game 3.0. In the next section, I return to these concepts and see how they can be adapted into the framework of *Garry's Mod* as a digimodern landscape. I bring to a conclusion the process of modding and enclosure that I have weaved through my dissertation thus far. I examine how the material economic context of modding, playbour and produsing allows a reading of *Garry's Mod* as a landscape that encloses the creativity of its users.

8.5.3 The enclosure of creativity

Garry's Mod is the culmination of the modding process that began with the purchasing of the Quake engine in order to make *Half-Life*. In the previous section I showed how as a contemporary medium of landscape, *Garry's Mod* has

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reproduced the dominant economic paradigms of its time. Like YouTube, *Garry's Mod* is haphazard, unequal, and exists in the murky framework of proprietary software and community-generated content. It produces an auto-ethnography of its users, but one that is owned end enclosed by the proprietor of the platform. In this section, I want to highlight the significance of this enclosure of player labour. If 18th-century landscape paintings were funded by the enclosure of public lands, these 21st-century computer game landscapes appear to be funded by the enclosure of player labour. The collapsing of modding and playing is not a feature that is unique to *Garry's Mod*. It is as a design decision that has been made a number of times, where play and production have been merged within the enclosure of the medium.

The economic history of *Garry's Mod* is similar to that of *Counter-Strike*. The modder, in this case, Garry Newman and his company Facepunch Studios, buy a proprietary license of the Valve Source Engine. Using this license, *Garry's Mod* forms an enclosure, and marks the transition from an unpaid mod to a commercially independent title, and redefines its players according to this new boundary. The commercial license re-encloses the mod, (Küchlich 2005) and transports Newman, like *Counter-Strike's* Minh Le and Jesse Cliffe (Section 6.1.1), from the economic condition of the modder to the economic position of the licensed game developer. Retrospectively, the feedback exchange that existed, between the informal development community of the Something Awful forums (Section 8.1) is transformed by the enclosure, into unpaid research and development work. As Küchlich points out, the licensing of a mod reveals the underlying economic problem of modding within commercially licensed software platforms – what might begin as a communal process is eventually defined by what side of the EULA the modder is on.

In the Valve Corporation's Steam online distribution system, the EULA functions as a non-negotiable gateway between players and the games they have purchased, and any changes to this agreement over time can prohibit a player from accessing products they have already purchased. In 2012, the Valve Corporation faced a litigation action from a German consumer advocacy group

due to the restrictive conditions that the Steam EULA placed on its users. This litigation focused on the degree to which Steam users could control their access to the games they had purchased. (Cheong 2012) (Usher 2012) Regarding the broader paradigm of cloud computing distribution services, Cubitt writes: "Cloud computing has tended to serve monopolization, specifically through patent and copyright, and to produce information silos" (Cubitt 2017, 23).

Cubitt later writes:

What digital media have demonstrated is that a different type of economy is possible, one grounded in collaboration and peer-to-peer systems, most familiar in the examples of the Linux software environment and Wikipedia. Equally, it is clear that proprietary solutions will benefit only sectors of a global network, not the whole system. For that, we require social as well as economic reactions to the emerging energy crisis of information. (Cubitt 2017, 25)

By understanding the licensing of the mod and its distribution as an enclosure, I highlight the separation between the game programming done by Newman, and that done by the players of *Garry's Mod*. Indeed, Garry Newman himself provides an analysis of this division. When weighing the costs and benefits between players, modders, game developers and Valve, Newman concludes that Valve and Game Developers are the biggest winners, which represents the inverse of how the wealth from these activities should be distributed. Newman writes:

So obviously Valve and Game Devs are the biggest winners right now. That's the wrong way around in my opinion. The modders should be getting the majority share of the revenue from this – that just seems like common sense. It's obvious that Valve and the game developer need to make money here too, enough to cover costs at least – but it's the modder's work that is making the money. I don't know whose choice that is though, but it feels like someone is being a greedy asshole. This is something that will get better with time. (Newman 2015)

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Whether or not these conditions will improve in the future is beyond the bounds of this dissertation. As a material condition of landscape, I have outlined the generic condition as it exists for *Garry's Mod* players relative to the economics of Web 2.0 and Game 3.0 (Section 3.6.4) – the labour and creativity of users and content is enclosed by game, its EULA and the platform. However, there are important sub-hierarchies within this generalisation – remember what Kirby said about digimodern space – users, players and text makers are not equal because Web 2.0 is deeply hierarchical. There are a number of third-party add-ons (for example the Prometheus System) that allow server administrators to facilitate in-game donations to contribute to the running of an individual server. Similarly, server developers such as Swamp Servers (the authors of Swamp Cinema – Section 8.4) run donation programs through Steam. Perhaps the most prominent form of monetisation on the modding side of the enclosure is the revenue generated by uploading *Garry's Mod* machinima on YouTube. Performativity and machinima form a crucial part of how *Garry's Mod* is consumed. As I mentioned in Section 8.2.2, the complexity of *Garry's Mod* requires skills more akin to learning a new software tool than learning to play a game, and therefore YouTube videos form a key part of learning new *Garry's Mod* skills. Similarly, for the digimodern production of ergodic memes, the role of machinima is vital. The YouTube channel Vanoss Gaming has over 21 million subscribers, has posted a large number of *Garry's Mod* machinima videos and generates significant revenue from the YouTube platform (Youtubers.me 2017). With only 820,000 subscribers, MsBreezy (my guide to Swamp Cinema) would generate a significant, but comparably modest revenue. Kùchlich's analysis and Newman's comments concur that these examples of generating revenue from Game 3.0 activities remunerate only a tiny minority of *Garry's Mod* players. The vast majority of *Garry's Mod* players, modders, server administrators, and machinima makers, will be playing on a licensed copy of the game, voluntarily exchanging their time, creativity and labour for the pleasure they derive from these activities.

The broader effect of this enclosure of creativity within digimodern platforms is what political theorist Nick Srnicek refers to as 'platform capitalism', where the

economic shift from products to services (exemplified by Google, YouTube and Amazon) is “grounded upon the extraction of data and the generation of network effects” (Srnicsek 2017, 98). According to Srnicsek, platform capitalism represents the overall disenfranchisement of users, where the monetisation of user data generates a material gain for the platform owner that dwarfs any benefits seen by the producers of this data. For every Garry Newman and Vanoss Gaming, there is a multitude of modders and content creators whose work only generates income for the platform. As I mentioned in Section 2.3.6, Cubitt compares this enclosure of people into users (or players), and of users into a data resource to be harvested, to the Enclosures Acts of the 17th century, where data and knowledge have been enclosed and alienated from the user (Cubitt 2017, 162).

The transformation of a computer game engine into a digimodern platform is not unique to *Garry's Mod* or the Valve Source Engine. In the introduction to this case study, I cite Media Molecule's forthcoming *Dreams* as another example where play and modding have been collapsed together within the enclosure of the game simulation. Media Molecule's Mark Healy describes *Dreams* as “a collection of tools” (PlayStation 2018), and in the promotion trailer, Media Molecule invites the user to “play our dream” and “shape something of your own”. (PlayStation, 2017) This statement encapsulates the enclosure of creativity that is occurring in *Dreams*, *Garry's Mod*, and similar games that deploy this configuration and material enclosure. The simulation is part game, part software, and the player is free to make their own games and share them with other users of the game system. These creative works will be unified by the lowest common denominator afforded by game engine simulation (Section 8.4.1) and enclosed by how the EULA allows or prohibits players to own or share their creations.

This analysis might seem a long way from the single-player landscape of challenges that I identified in *Half-Life 2*. However, without this media studies context, any analysis *Garry's Mod* would fail to grasp the materiality of these landscapes, and the networked relationships that reveal how these landscapes actually function. The aim of this dissertation is to make a contribution to landscape studies via an examination of the historical function of the Valve

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Source engine as a medium of landscape. In these latter sections, I have illustrated that the representational content, in both audio-visual rendering and game mechanics is intrinsically linked to this broader notion of the platform and the proprietary digital enclosure. I have shown how the player experience and the intertextual content of *Garry's Mod* exemplifies Kirby's definition of the digimodern text, where the rubble of postmodern signifiers is repurposed as a participatory and a haphazard language, speaking in desocialised tongues about climate change, overpopulation, increasing urbanisation, the economics of precarity and the near impossibility of solitude. The enclosure of creativity reveals the material nature of the *Garry's Mod* landscape. Like the Picturesque and Romantic landscapes discussed in Chapter 2, *Garry's Mod* is a paradigmatic enclosure of Game 3.0 and platform capitalism. Whilst this enclosure is a vital contextualisation for *Garry's Mod*, it is not a deterministic conclusion. In my final piece of analysis for *Garry's Mod* as a landscape, I will return to Kirby's characterisation of the digimodern as haphazard and emergent and explore some of the emergent and unexpected outcomes of *Garry's Mod*.



Figure 46: Creating game environments in *Dreams*. 2018 [forthcoming]. Screenshot from a demonstration by Media Molecule developer Mark Healey, YouTube Video uploaded by PlayStation. 2018

8.5.4 The unexpected uses of *Garry's Mod*

Kirby's formulation of digimodern texts predicts that platforms such as *Garry's Mod* are likely to result in haphazard and unpredictable outcomes. I have already demonstrated how learning to play *Garry's Mod* is like learning a new piece of software, and given the vast range of tools and operations that players can learn within *Garry's Mod* (which are constantly being expanded by new tools produced by other players), it is not surprising that *Garry's Mod* is being *used* as a piece of software for more instrumental purposes. In this section, I examine instances where *Garry's Mod* has been used as a piece of software rather than something to play with and introduce an example of the unpredictable emergence that a digimodern text can produce.

In their 2006 paper 'Unreal Editor as a Virtual Design Instrument in Landscape Architecture Studio', architects Ralph Johns and Russell Lowe demonstrate how real-time 3D game engines such as *Garry's Mod* can function in an educational setting, and that the shift from 3D modelling applications such as 3DS Max or SolidWorks to first-person real-time simulations might transform the relationship between digital design and virtual environments. Johns and Lowe write:

The enhanced ability to immerse oneself in a fully responsive three-dimensional world and the ease with which these results are made possible by the latest game editors (and even in-game editing) will drive a new understanding of the 'basics' or 'fundamentals' of new media use in landscape architecture. (Johns and Lowe 2006)

In his doctoral dissertation, engineering student Yizhe Chang demonstrated how the physics simulation and complex mechanical assemblies supported by *Garry's Mod* facilitate its appropriation as a web-based collaborative platform for engineering assembly design.

Chang writes:

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Garry's Mod is a Source-engine-based 'physics sandbox game' which, instead of predefining any gaming scenarios, allows players to freely build their own contraptions, such as cars, rockets and catapults, using tools and models provided...beyond the gaming features, Garry's Mod allows game developers to import 3D models from third-party modelling software (e.g., 3ds Max) and construct their own game scenarios by 'Lua script', a computer language with a simple syntax. (Chang 2016, 47)

Because Chang appropriates *Garry's Mod* for the specific purpose of engineering assembly, his analysis and evaluation is completely outside the frame of reference one might expect for a game-based environment, and focuses on the component order of gear chain assemblies and the feature slots that are coded into assets, which determine how they function in complex constructions.

The observations of Chang, Johns and Lowe take the configurability of *Garry's Mod* and demonstrate how it can be repurposed as a piece of production software. But there is one important conclusion missing from their experiments. If *Garry's Mod* is a digimodern machine that gives new meaning to instrumentalised postmodern rubble, appropriating it for architecture and engineering arguably disrupts the implied *tabula rasa* of computer-aided design programs (such as SolidWorks or 3DS Max). In Section 2.3, I derided the neutrality of Cartesian space as an illusory spectre via Harvey, Rose, Lefebvre and Tuan. Given what we already know about the cultural and material context of *Garry's Mod*, the appropriation of *Garry's Mod* as a piece of engineering or design software also functions as an interesting infusion of cultural context into the abstraction of 3D software. Because *Garry's Mod* collapses the practical distinctions between players, users, designers and developers, it also implies that the implicit boundary separating the architect and the engineer from the civilian has also been removed. If *Garry's Mod* is used as a platform for engineering or architectural design, it seems fitting that such activities might be interrupted, disrupted or challenged by other players inhabiting the virtual environment of a *Garry's Mod* server. Whilst I assume that Chang worked in servers only open to the participants in his study, it would be an interesting

proposition for engineers, architects or landscape architects to work within the unpredictable digimodern environment of *Garry's Mod* community servers. Such an experiment would bring to mind the claims of Edward Castronova (2005) that the design principals emerging from the socio-ludic conventions of virtual worlds will exert an increasing influence on the policies of the non-virtual world. I expand upon this proposition in Section 9.2 of my discussion.

Kirby's digimodernism proposes that the mass-authorship and ergodic structure of a Game 3.0 platform breaks the feedback loop of postmodern textuality. The temporary order of play described by Huizinga becomes the *modus operandi* of digimodern pseudo-communities, and the megalomania of participatory consumerism is repurposed as a quasi-autistic language where 'rocket launcher' means 'hello' and hyperactive social skills can be the business model of a *Garry's Mod* machinima director, who temporarily traverses the enclosure of the produser to become a YouTube sensation. Kirby is not necessarily optimistic as to what this haphazard transgressive culture might produce (perhaps validated by the content of the Swamp Cinema server); he is simply giving an account of its structure and influences, which I have appropriated as the most logical way to understand the landscape of *Garry's Mod*. Upon evaluating what the cultural mechanisms of digimodernism reveal, Kirby writes:

The death of competence is digimodernist because the latter stumbles on to a blasted landscape violently rearranged by a postmodernism that in retrospect played into the hands of a triumphalist and totalizing consumerism. (Kirby 2009, 245)

For Kirby, the ergodic participatory structures of digimodernism are tasked with trudging through the wasteland laid by consumerism. Digimodern action is the cultural practice that crawls out of the enclosure of the Web 2.0 swamp, characterised by climate change, overpopulation, increasing urbanization, increasing surveillance, the impossibility of solitude, the economics of flexibility and precarious employment, the valorization of hyperactive social skills and the increasing contempt of knowledge, in favour of conspiracy theories and

pseudoscientific quackery. With this in mind, it is fitting that the final unexpected action that I introduce from *Garry's Mod* might be considered as either an act of terrorism or an act of liberation. Kirby's defines digimodern texts as highly mutable, haphazard and capable of unpredictable outcomes. Whilst the bizarre configurations of Garry's Mod servers satisfy this to a certain degree, the use of *Garry's Mod* proposed by a group of cybersecurity analysts provided the most compelling example. At the 2012 International Conference on Security and Management, a team from Rochester Institute of Technology analysed *Garry's Mod* as a potential channel of covert communication. The client render model of multiplayer online games such as *Garry's Mod* means that while player interactions occur on the server, the rendering of the environment only occurs on the player's computer, which opens the door for these games being used as visual channels of covert communication. To illustrate their case, the authors devised a system where one player spawns a group of 55-gallon barrel assets, each with their RGBA (red, blue, green, alpha) values altered. Because RGBA values can be decoded into ASCII decimal values between 0 and 255, the colour of each barrel can represent four numbers, which in turn could be transcoded into letters and words. By temporarily spawning a set of coloured barrels, two players could exchange a hidden message that would not be recorded anywhere on the server logs, as it would only be visually rendered on the computer of each player. By logical extension, the authors argue that the entire landscape of *Garry's Mod* could be utilized as a covert stenographic language (Deffenbaugh et al. 2012).

Whilst obscure, and certainly not a paradigm game action, the repurposing of *Garry's Mod* as a secure channel of covert communication is highly significant. One of the fundamental shifts of Web 2.0 has been the acknowledgement that privacy and anonymity have been obliterated by surveillance and algorithmic targeting, made clear by the 2013 Edward Snowden leaks. If *Garry's Mod* is used as a tool of covert communication, it turns the game into an entirely different piece of software, and into something that is the antithesis of Web 2.0, the paradigm I previously claimed it exemplifies. A stenographic landscape built from the functional affordances of *Garry's Mod*, re-purposed as a private channel

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in a public world, is an exemplary digimodern landscape. *Garry's Mod* is built from the rubble of postmodernism but can be used as a private channel of communication within the panoptic networks of Web 2.0. The content of what might be communicated through such landscape stenography is unknown, the important thing is the paradoxical relationship it achieves – a Web 2.0 platform being exploited to achieve online privacy reveals how this landscape can function antithetically to its materiality.

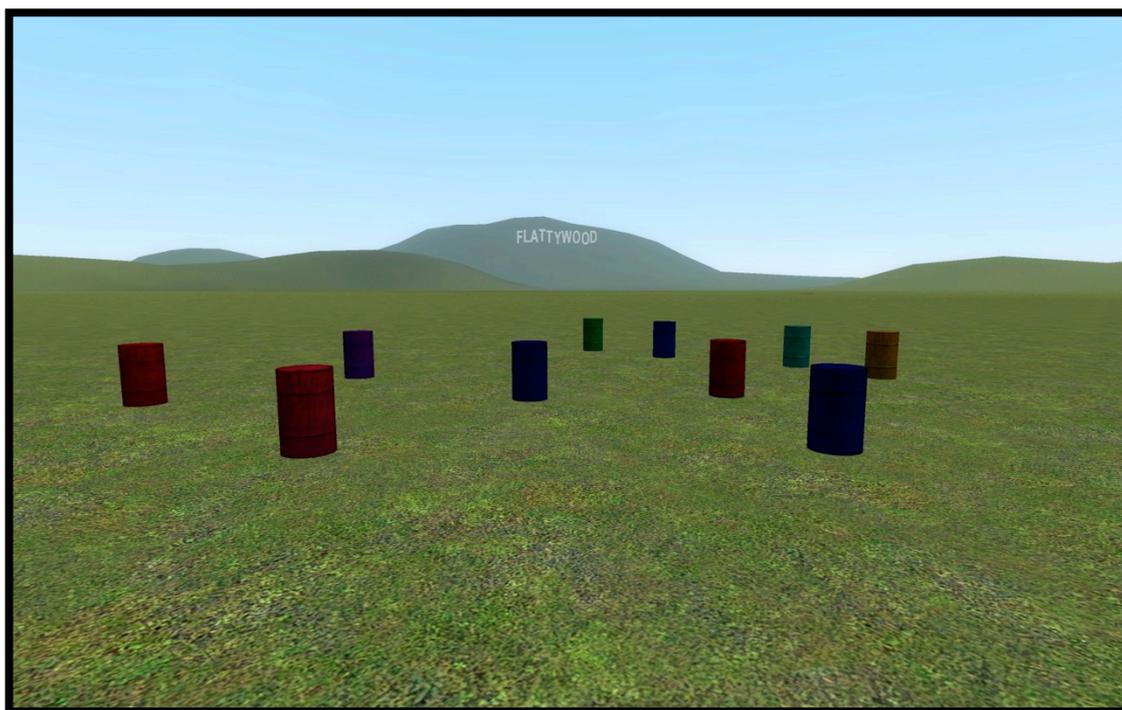


Figure 47: A recreation of coloured barrel landscape stenography in *Garry's Mod*, author's screenshot.

This might not be a perfect parallel, but thinking back to the relationship between Romantic pastoral painting and colonialism, it was not uncommon for representations of landscape to thematically present one thing, whilst unwittingly recording another. In Section 2.3.3, I outline how Romantic and pastoral landscape paintings were historically linked to a colonial form of cognitive dissonance, where visible results of the land management practices of the dispossessed were symbolically erased and redefined as 'natural', or indeed 'God-given'. But as Gammage, in particular, has shown, the paintings produced during these colonial periods often served to represent with a degree of

accuracy, the physical results of Indigenous agriculture, and serve as a historical record that disputes the colonial legalistic fiction of *terra nullius*. For 19th-century Romantic pastoralism to later serve as evidence of dispossession in the broader context of contemporary land rights claims might be an analogous function to the landscape stenography of *Garry's Mod* – the framework of platform capitalism and the surveillance culture of Web 2.0 have facilitated a secure channel of private communication.

8.6 The landscape *Garry's Mod*: The digimodern swamp

The open sandbox and modding environment of *Garry's Mod* complete the circle of my landscape reading of the Valve Source Engine. Playing the game has become playing the engine, and the ludic lexicon has become a direct reflection of the socio-historical relationship between the player, the game and the world. My review of landscape and computer game studies led me to combine play-based experience with a cultural and media studies examination of how the player and the game exist together in the world. In doing so, I came to the conclusion that *Garry's Mod* presents the player with the world according to the Valve Source Engine, and this world reflects the socio-economic patterns by which the Valve Source Engine exists in the world.

In *Garry's Mod*, the relationship between player experience, computer game representation and the extrinsic materiality of the game itself, have become so closely intertwined, that I was able to derive a satisfying answer for what sort of landscape can be revealed via a comprehensive analysis of a computer game. In the unselfconscious action of somatic space, I felt like the new kid in the playground, learning how to interact. The actionable prosthetic of my avatar had expanded, combining the playing “I” with the modding “I”.

The shape of the landscape solidified around the idea of the playground –an enclosed site that gives a temporary order to the chaos of an impossibly vast lexicon of assets. When I wrote about landscapes being appropriated and

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converted into *Counter-Strike* maps (Section 6.4.3), the question 'can I play *Counter-Strike* here?' was answered by the enclosure of landscape as an aesthetic spectacle. The impossibly vast lexicon in *Garry's Mod* suggests that the question has been expanded to 'can I appropriate the world into *Garry's Mod*?' It appears that the answer is 'yes, but only the world according to the Valve Source Engine.' A *Garry's Mod Minecraft* landscape cannot be mined or crafted, and a tree only differs from a refrigerator according to the properties set by its .qc script (Section 8.4.1, Section 7.3.1). *Garry's Mod* flattens the world into a ventriloquist's dummy that is used to perform a new digimodern landscape.

To understand the *Garry's Mod* landscape, I returned to the idea of enclosure. *Garry's Mod* is a strong example of how a landscape medium operates as a form of enclosure via the logic of its simulation as well as the economic structures it creates between its owners, users and players. The character of the *Garry's Mod* landscape lexicon indexes the socio-historical context underpinning the digimodern landscape – climate change, overpopulation, increasing urbanisation, increasing surveillance, the near impossibility of solitude, the economics of flexibility and precarious employment, the valorisation of hyperactive social skills and the increasing contempt of knowledge, in favour of conspiracy theories and pseudoscientific quackery. The *Garry's Mod* is a haphazard Web 2.0 swamp, a landscape of temporary pseudo-communities, built out of the megalomania of participatory consumerism. Digimodernism allowed me to rationalise the enclosure of the world in the Game 3.0 landscape and the haphazard unpredictability of how these landscapes function. As a landscape, *Garry's Mod* is enclosed by the materiality of its medium, yet liberated by the global instability that holds the enclosure together, and that structures how players behave inside it. It is a landscape enclosed by consumption, which produces an auto-ethnography of a digimodern community whose behaviour is haphazard, emergent and unpredictable. When I went looking for the unpredictable and the emergent, I found two things. The first was the potential for an architectural design studio built in the conceptually sound digimodern swamp rather than on the conceptually impossible the modernist tabula rasa. The second was a covert

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stenographic landscape, a landscape for privacy built in a context where privacy should be impossible.

CHAPTER 9: CONCLUSIONS

In this thesis, I have demonstrated how computer games can be analysed as landscapes and the value of doing so. This was motivated by the question that if historical representations of landscape, such as a *Mr and Mrs Andrews* (Section 1.1), reflect the paradigmatic relationships of their historical moment, can the same hermeneutic insight be derived from the study of computer games? I was fascinated by how the visual representations of this painting indexed geopolitical shifts associated with the Agricultural Revolution as well as the gender dynamics between its two primary subjects, and also how the material status of the painting itself could also be understood as a commodity within these same frameworks. Inspired by the work of geographers, art historians and anthropologists, working in the field of landscape studies, I was interested to see what historical narratives and processes might be encoded within the landscapes of computer games. Based on my previous experience in art history, I was particularly interested in the dynamic relationships between representation, the physical environment and the material context in which these representations were made, and the context by which they are made available to the player. I conducted a review of existing literature from landscape and computer game studies and derived an approach that combined the experience of playing the game, with a cultural and media studies analysis of how the player and the game exist together in the world. This approach sought to remedy a deficit I perceived in existing computer game studies, where references to historical landscape narratives often lacked a consideration of broader socio-historical factors. To understand a computer game in terms of landscape requires an understanding of all of the factors both intrinsic and extrinsic that make the computer game landscape what it is. From the collaged textures of the rocky cliffs in *Half-Life 2* (Section 5.4.3) to the height of a table in *Counter-Strike* (Section 6.3.1), to the angle of a tunnel in *Autosave: Redoubt* (Section 7.3.3), to the colour of a barrel in *Garry's Mod* (Section 8.5.4), these representations required a specialist approach that considers them as games from the perspective of the player, as well as material artefacts that exist together with the player in the world. By exploring the notion of the Valve Source Engine as a medium, I looked at how the material

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context of the game and the engine within a broader field of production and consumption might enrich a landscape reading of these games. Over time, this engine traces a number of important developments across contemporary computer games, and the games I selected encompass a reasonably broad configuration of computer game practices.

As a single-player first-person shooter, *Half-Life 2* (Chapter 5) presents the predatory vision of the masculine camera-gun (Section 5.5.1) as the prosthetic lens that makes the landscape available to the player. The subjective experience of the first person presents a landscape of action and challenges, following the direction implied by the single prosthesis – the weapon that points down the z-axis, and that defines the actionable relationship to the landscape. This landscape is a linear sequence of challenges that confirm and quantify the actions of the player, resulting in a clear sense of purpose (Section 5.2.1). The relationship between the player and a landscape of pre-structured challenge and exploration has its precedent in the New World exploration novels of the 17th century, where conquered and colonised spaces were presented to readers as sites for adventure and achievement (Section 5.2.3).

Within the diegetic fiction of the game, the relationship between Dr Gordon Freeman and the landscape of *Half-Life 2* can be summarised according to Robin Kelsey's theory of "not belonging" to the landscape (Section 5.3.2). The relationship between the ruined sites of modernity in *Half-Life 2* and films such as *Terminator 2* betrays a similar vocabulary of 'ruined modernity' and the narrative theme of the Promethean dystopia. (Section 5.4.1) The conglomerate of architectural references that comprise the environments of *Half-life 2* and the collage of photographic textures that furnish their surfaces reveal to the player how the materiality of this landscape derives from patterns of production typical to globalised capitalism and post-modernity (Sections 5.4.2 and 5.4.3). My concluding remarks about feeling both unemployed and hung-over after finishing *Half-Life 2* (Section 5.6) was a deliberate extension of Aarseth's observation, intended to relate my intrinsic experience of being a protagonist in a landscape that quantified and rewarded my existence, with the extrinsic

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economic alienation that fuels my fantasies of apocalyptic heroism. The linear landscape of sequential challenges in *Half-Life 2* created a contrast to how I experience my life outside the game, and I fantasised about a similar instrumental qualification. The speculative daydream ‘could I apocalypse’ (Section 5.3.1) was my response to the alienating complexity of capitalist subjectivity, and the apparent simplicity of climbing out the air conditioning duct of my office into a world structured only by linear challenges and a shotgun.

I use the relationship between *Half-Life* and *Half-Life 2* to introduce the material context of the Valve Source Engine. The Valve Source Engines originated as a proprietary modification of the Quake engine (Section 5.5.1), which introduces how the shifting boundaries between the player, the modder and the developer underpins the materiality of the landscapes discussed in this dissertation. Cubitt’s expansion of the landscape term ‘enclosure’ helps to contextualise these material boundaries that structure how players relate to the Valve Source Engine. I extend this argument by bringing in the work of Terranova and Kücklich (Section 5.5.2) and liken the End User Licence Agreement of the Valve Source Engine to the ‘Ha-Ha’ boundary that delineated the properties of the rural aristocracy in 18th-century English landscape design. The license enforces the ownership of the medium, the players invest professional and creative energy in their modifications, which are all then owned by the licensee. The boundaries separating developer, modder and player are some of the dominant relationships that define the material context of these landscapes.

Counter-Strike (Chapter 6) expands the shifting boundaries of enclosure that I outlined in relation to *Half-Life 2*. By focusing exclusively on repetitive multiplayer competition, the sequential linearity of *Half-Life 2* is transformed into a reciprocal symmetry, structured by camera-guns looking at camera-guns. (Section 6.2.1) The landscape environment of *Counter-Strike* is based on a similar FPS avatar, but it is not structured around the confirmation of the individual. The reciprocal nature of the multiplayer game means that it can no longer be a landscape of individual confirmation. Repetition and validation remove the

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‘unemployed’ end-point of *Half-Life 2* (Section 5.6), and players can share and refine their first-person shooter skills *ad infinitum*.

The balance and repetition of *Counter-Strike* gameplay transform landscapes via a combination of military vision and the ludic symmetry of the modern sporting arena. With the qualification of navigable distance, line of sight is the only rule that structures the richness of the landscapes that populate *Counter-Strike* servers (Section 6.4.2). Within this logic, the height of a table or the position of a tree can only be understood according to the mutual balance of line of sight between the two opposing teams (Section 6.3.1). The touristic gaze redefines an environment based on the question “could I consume this place as a tourist?” The appropriative question “can I play *Counter-Strike* here?” combines the touristic objectification of the world into self-fulfilling signs (a restaurant in Venice represents a Venetian restaurant) with the stylised ludic consumption of *Counter-Strike* gameplay, whereby the environment becomes a series of obstacles to the line of sight. This appropriation and conversion results in a typological convergence, whereby similar kinds of landscapes populate the competition pools of *Counter-Strike* servers (the industrial, the workplace, the rustic, the war zone and the touristic) (Section 6.4.1). Landscapes are instantiated as tropes, shaped by the abstractions and reductions they have undergone. Landscapes built to host *Counter-Strike* play are furnished by the combined objectification of the military and the touristic gaze.

The materiality of *Counter-Strike* presents a fascinating example of how emergent economies can redefine how the game exists in the world. The sub-economies of ESports and weapon skins gambling that have developed within the overall framework of *Counter-Strike* demonstrate how the game itself exists in a dynamic relationship with contemporary commercial forces (Section 6.5.2). The weapons skins economy helped to ensure the long-term popularity of *Counter-Strike* as an ESport, which, like the patronage of the Picturesque painting (Section 2.3.2), becomes an indispensable factor for the signification of these landscapes. The standardisation of *Counter-Strike* sports landscapes is linked

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with the development of a platform for gambling, and changing strategies for the marketing of weapons to young people (Section 6.5.3).

The production of *Autosave: Redoubt* (Chapter 7) facilitated my shift from a playing to a modding perspective and allowed me a detailed insight into the technical features of Valve Source Engine landscapes. In the field of virtual archaeology, I found a useful set of practical questions which, when applied to *Autosave: Redoubt*, helped to focus my observations of computer game representation. I was able to highlight the representational biases and limit conditions whereby the site data of our project conflicted with the affordances of the Valve Source Engine. The requirement to construct geometry 'on grid' forced the *Autosave: Redoubt* team to adjust the architectural structure of our site into something that would be congruent with the topological structure of the Hammer editing environment (Section 7.3.2). Whilst our survey data contained scale units that could be converted into Hammer units, ultimately our primary scale reference was how the tunnels 'feel' relative to the vision and navigation of the avatar, revealing the avatar as the fixed point around which the entire landscape of the game is built. The landscapes of *Half-Life* and *Counter-Strike*, from the Lost Highway (Section 5.1.3) to the Venetian 'Canals' (Section 6.4.3) could, therefore, be better understood as constructions of brushes, displacements and props (Section 7.3) within the Hammer grid system, built around the fundamental unit of the player avatar. The modding process also taught me how to convert and script customised 3D models into importable assets for the Valve Source Engine. Understanding this process of mediation became a key insight for understanding the enclosure and the ludic lexicon of *Garry's Mod*.

Garry's Mod is the logical conclusion of the interactions between modding, playing and game development that I advance over the course of the preceding chapters. *Garry's Mod* combines the playing "I" of *Counter-Strike* and *Half-Life 2*, with the modding "I" of *Autosave: Redoubt*, where the real-time simulation resembles both the experience of the FPS avatar, with the graphic user interface of the Hammer editor. The structured repetition of *ludus* in *Counter-Strike* is

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replaced by the void of *paidia* of the *Garry's Mod* sandbox, and the player is confronted with the vast ludic lexicon of the Valve Source Engine, without any clear game to be played (Section 8.3.2). Encountering these game assets in a real-time sandbox simulation prompted me to describe *Garry's Mod* as “the game that is played after all other games have finished” (Chapter 8 Introduction), the game is over but the engine remains. *Garry's Mod* was a more difficult game to enjoy because rather than responding to a world defined by a simple set of rules, I had to respond to my own creative impulses of what I could or should do in that world. I was playing the game that was waiting in the background. Without the strict competitive format of *Counter-Strike*, I had to learn a whole new way of interacting with other players. The communicative language of team play or domination dissolved, in its absence, I discovered collaborative building, improvised play, (Section 8.3.1) or shared enjoyment of the Web 2.0 ecosystem (watching Russian YouTube videos in Swamp Cinema – Section 8.4). I was facing the world dissected and uploaded as an asset library, waiting for me to make something of it. To play *Garry's Mod* is to experiment with the logic of representation of the Valve Source Engine. By treating *Garry's Mod* as a landscape, the medium of the Valve Source Engine reveals the process and the mode of enclosure that it relies on. Entities are transformed with the specific purpose of affording a first-person shooter world of action, and as such, this is the logic of enclosure it can represent with. It is a lexicon of shooter colliders, but without the shooter game, a new world has to be built using the abstract entities of the simulation.

The ability of *Garry's Mod* to enclose the world through the expansion of its lexicon at the hands of its user community replaces the question ‘can I play *Counter-Strike* here (Section 6.4.2) to ‘can I appropriate the world into *Garry's Mod*?’ The answer is ‘yes, you can appropriate the world, but only the world according to the Valve Source Engine.’ *Garry's Mod* is the extreme outcome of how Descola describes Nature and how Cubitt describes enclosure. *Garry's Mod* objectifies the world for the consumption of experimental play within the affordances of the Valve Source Engine. This type of game is the underlying landscape logic of the first person computer game. It is the rules by which the

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world can be ludologically represented. And by playing with nothing but these rules, the player engages with the underlying reflection of their own world, manifest as a playable artefact.

I analysed the landscape lexicon of *Garry's Mod* according to a combination of Alan Kirby's formulation of 'digimodernism' and the broader notion of enclosure that I have been developing over the course of the dissertation. The ludic content and emergent behaviour of *Garry's Mod* resembles the content and structure of Web 2.0 platforms and led me to describe *Garry's Mod* as the "YouTube of computer games" (Section 8.4.1). The enclosure of *Garry's Mod* is that of the End User License Agreement and the enclosure of creativity represented by this economic structure of modding culture. Returning to *Mr and Mrs Andrews*, just as enclosure formed an important framework for both the materiality as well as the visual representations of the painting, the digimodern enclosure forms a key extrinsic historical paradigm for what is being represented and reflected in the landscape of *Garry's Mod*. The design feature of *Garry's Mod*, where playing and modding are combined in a real-time simulation, has been repeated by a number of other games, such as Media Molecule's forthcoming *Dreams* (Section 8.5.3). The digimodern enclosure of creativity is, therefore, a landscape paradigm for Game 3.0 (Section 3.6.4) and the exploitation of economically enclosed modding.

The haphazard structure of digimodern texts predicts that unexpected behaviours will emerge from these platforms. The speculative use of *Garry's Mod* as a covert language (Section 8.5.4) reflects the indeterminate nature of online culture –a space of extreme surveillance and economic exploitation, as well as a configurable and unpredictable language of expression and creation. The example of *Garry's Mod* functioning as a covert stenographic landscape is an interesting case where the panopticon of Web 2.0 is confounded by the unexpected use of a paradigmatic Web 2.0 (or Game 3.0) platform. A covert stenographic landscape built from the ludic lexicon of *Garry's Mod* is a digimodern landscape *par excellence*.

9.1 Reflections on the game engine as a medium of landscape

This dissertation analysed the Valve Source Engine as a landscape medium, in order to see what social and historical processes it reflects back through the environments it creates. The approach I developed sought to prove the hypothesis that computer games more broadly reflect the landscape relationships that are contemporary to their production and consumption. Towards the end of this dissertation, I was fascinated by the notion of *Garry's Mod* as an enclosure of the world according to the Valve Source Engine. This enclosure was not simply contingent on the computational structure of how the engine simulates a landscape, it was also a direct result of the relationships that the engine upholds between people, from proprietors and developers to modders, players and machinima-makers. The conclusion of this analysis revealed the broader meaning of what a computer game landscape is, how it can be experienced, and how it exists in a broader socio-historical context. The obvious question at the end of this dissertation is, how would a parallel analysis of another contemporary computer game engine either replicate or contradict the reading I derived from the Valve Source Engine. At this point, I hypothesise that if my case study was replaced with a different engine and series of games, then a different set of specific qualities would emerge, however, I believe that the landscape conclusions that I summarised throughout my chapters and in my conclusion, would bare a high degree of cross-platform generalizability. I base this hypothesis on the fact that the play structures, thematic content and extrinsic relationships that the Valve Source Engine creates between people are reasonably endemic to contemporary computer games. As I stated in my introduction, the generic features of my case studies were one of the principal reasons for their selection. I would be intrigued to repeat this analysis with a different game engine to confirm or deny this hypothesis and to explore the crucial points at which different game engines reflect different landscape relationships.

9.2 The Digimodern Swamp as a Design Environment

In the final stages of my *Garry's Mod* case study, I suggested the idea of a landscape architecture design studio housed in the digimodern swamp of *Garry's Mod*. In my search for unexpected emergence in *Garry's Mod*, I discovered the existing instrumentalisation of *Garry's Mod* as both an engineering tool, and a proposed covert channel of communication. These examples point the way forward for an interesting digimodern landscape practice. Digimodernism allowed me to rationalise the enclosure of the world in the Game 3.0 landscape medium, with the haphazard unpredictability of how these mediums function. *Garry's Mod* is a haphazard landscape of temporary pseudocommunities, built out of the megalomania of participatory consumerism. If *Garry's Mod* is the landscape swamp of overpopulation, environmental degradation, and the host of conditions that characterise this historical moment (Section 8.5.1), these are the muddy banks onto which contemporary landscape practice might emerge. Whilst the enclosure of the Valve Source Engine might have dissected the world into sterile taxidermied fragments, the digimodern swamp they have agglomerated might be the site for the resurrection of ghosts or the genesis of mutants. Based on Castronova's assertion (Section 8.5.4) that the practices of virtual worlds will assert an increasing influence on the practices of the non-virtual world, I propose that *Garry's Mod* should be used a practical space of experimentation and design. This experimental design practice, inspired by the radical architects of the 1970s, such as Constant Nieuwenhuys and Superstudio, would seek to extend the deconstruction of Cartesian neutrality to the implied tabula rasa of architectural CAD software. At the expense of the tabula rasa of architectural CAD software, *Garry's Mod* might be a conceptually fertile ground for contemporary landscape practice. In the antagonistic swamp *Garry's Mod*, where 'rocket launcher' means 'hello' and there is no difference between a Lamborghini and a lettuce, architects and designers can iterate new digimodern constructions, interrupted by the shifting ludic conventions of the digimodern landscape.

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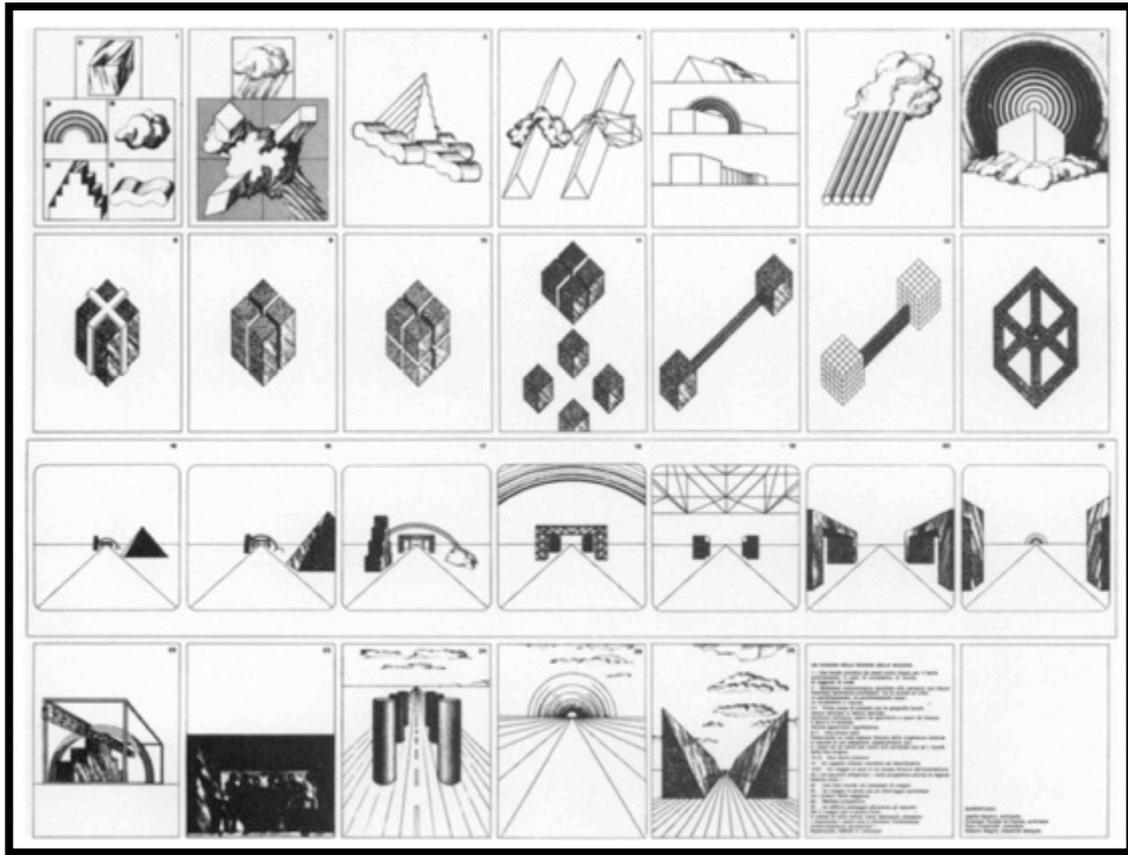


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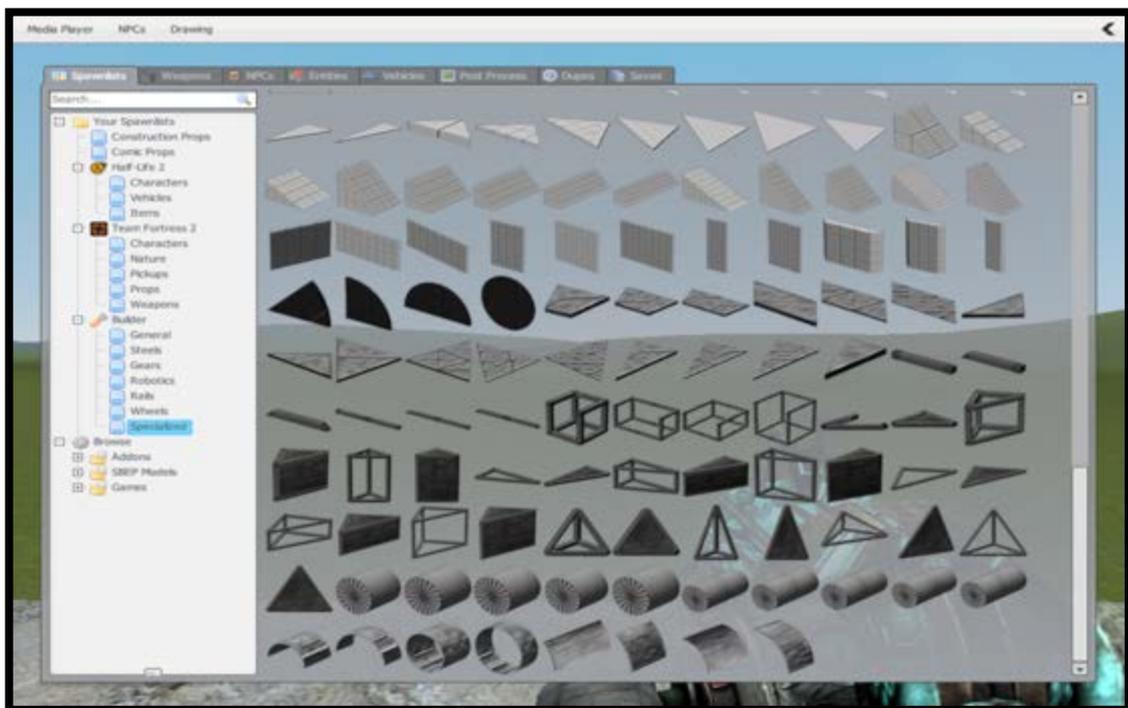


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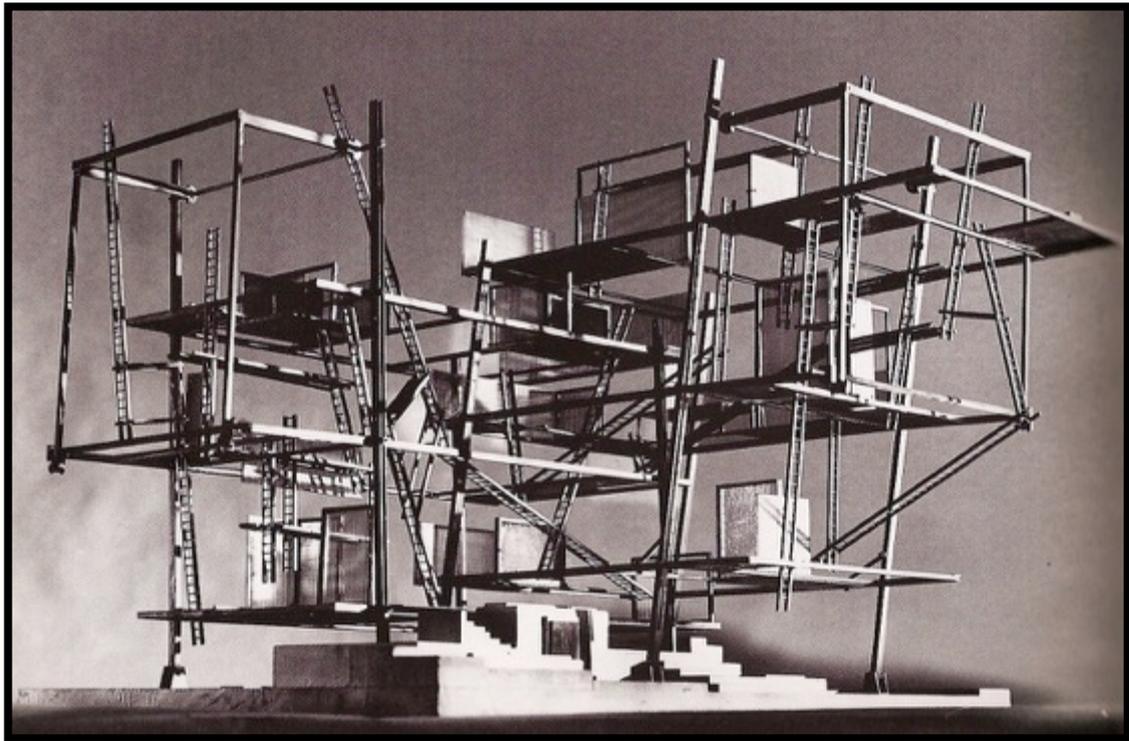


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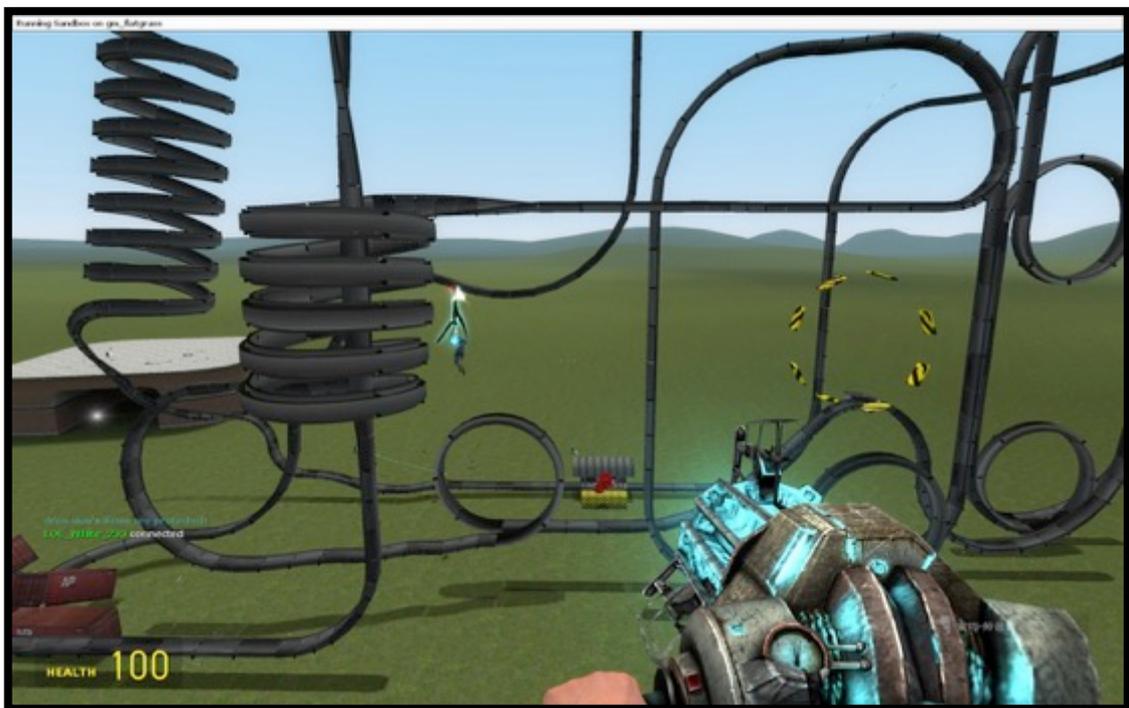


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CREATIVE WORKS MENTIONED

Adam Killer. 2011. Brody Condon.

America's Army. 2002-2013. United States Army. (PC).

Arena. Jodi. Computer game modification.

The Beginner's Guide. 2015. Davey Wreden and Everything Unlimited. (PC).

Castle Smurfenstein. 1983. Computer game modification. (Apple II, MS-DOS, Atari 8-bit, Commodore 64).

Castle Wolfenstein. 1981. Muse Software. (Apple II, MS-DOS, Atari 8-bit, Commodore 64).

Counter-Strike: Global Offensive. 2012. Valve Corporation. (PC).

Counter-Strike Series. 2000-2012. Valve Corporation, Turtle Rock Studios, Hidden Path Entertainment, Gearbox Software, Ritual Entertainment. Nexon, Namco. (PC)

Day of Defeat. 2003. Valve Corporation. (PC).

Doom. 1993. id Software. (PC).

The Elder Scrolls V: Skyrim. 2011. Bethesda Game Studios. (PC).

EverQuest. 1999. Sony Online Entertainment. (PC).

Furby. 1998. United States: Hasbro. Children's toy.

Garry's Mod. 2004-2013. Facepunch Studios. (PC).

The Graduate. 1967. Directed by Mike Nichols. Mike Nichols/Lawrence Turman Productions. (Film).

Half-Life. 1998. Valve Corporation. (PC).

Half-Life 2. 2004. Valve Corporation. (PC).

Jurassic Park. 1990. Michael Crichton. Published by Alfred A. Knopf. (Book).

Jurassic Park. 1993. Directed by Steven Spielberg. Amblin Entertainment. (Film).

Jurassic Park Island. 1999. Orlando: Universal Theme Park. (Amusement park ride).

Creative Works Mentioned

LittleBigPlanet. 2008. Media Molecule, SCE Cambridge Studio, Tarsier Studios, Double Eleven, XDev, United Front Games, Sumo Digital. (PlayStation)

The Lost World: Jurassic Park. 1997. DreamWorks Interactive, Appaloosa Interactive. (PlayStation).

Minecraft. 2011. Mojang. (PC).

Passage. 2007. Jason Rohrer. (PC).

Pokémon GO. 2016. Niantic. (Android).

Proteus. 2013. David Kanaga. (PC).

Quake. 1996. John Romero. (PC).

Risky Business. 1983. Directed by Paul Brickman. Geffen Pictures. (Film).

Second Life. 2003. Linden Lab. (PC).

Shrek. 2001. Directed by Andrew Adamson and Vicky Jensen. (Film)

Sid Meier's Civilization III. 2001. Firaxis Games. (PC)

Sid Meier's Railroads! 2006. Sid Meier. 2K Games, Feral Interactive. (PC).

The Silence of the Lambs. 1991. Directed by Jonathan Demme. Strong Heart/Demme Production. (Film).

Special Force. 2003. Hizbullah Central Internet Bureau. (PC).

Spellbound. 1945. Directed by Alfred Hitchcock. Selznick International Pictures, Vanguard Films. (Film).

Tabletop Simulator. 2015. Berserk Games. (PC).

The Terminator. 1984. Directed by James Cameron. Hemdale, Pacific Western Productions, Cinema '84. (Film).

Terminator 2: Judgement Day. 1991. Directed by James Cameron. Carolco Pictures, Pacific Western Productions, Lightstorm Entertainment, Le Studio Canal+S.A. (Film).

Toy Story. 1995. Directed by John Lasseter. (Film)

Topaz. 1969. Directed by Alfred Hitchcock. Universal Pictures. (Film)

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REFERENCES

- Aarseth, Espen. 1997. *Cybertext: Perspectives on Ergodic Literature*. Baltimore and London: The Johns Hopkins University Press.
- . 2000. "Allegories of Space: The Question of Spatiality in Computer Games." *Cybertext Yearbook 2000*, 152–171.
- . 2001. "Computer Game Studies, Year One." *Game Studies* 1 (1): 4–7.
- . 2003. "Playing Research: Methodological Approaches to Game Analysis." In *Level Up: Digital Games Research Conference Proceedings*. Utrecht: The University of Utrecht.
- . 2004. "Genre Trouble: Narrativism and the Art of Simulation." In *First Person: New Media as Story, Performance and Game*, edited by N. Wardrip Fruin and P. Harrington. Cambridge, Massachusetts: MIT Press.
- . 2007. "Doors and Perception: Fiction vs. Simulation in Games." *Intermédialités: Histoire et Théorie Des Arts, Des Lettres et Des Techniques*, October: 35.
- . 2008. "A Hollow World: World of Warcraft as Spatial Practice." In *Digital Culture, Play, and Identity: A World of Warcraft Reader*, edited by Hilde G. Corneliussen and Jill Walker Rettberg. Cambridge, Massachusetts, London, England: The MIT Press.
- Adams, Ernest W. 2003. "The Construction of Ludic Space." In *Level Up: Digital Games Research Conference Proceedings*. Utrecht: The University of Utrecht.
- Apperley, Thomas H, and Darshana Jayemane. 2012. "Game Studies' Material Turn." *Westminster Papers* 9 (1).
- Appleton, Jay. 1975. *The Experience Of Landscape. Landscape Planning*. London and New York: Wiley.
- Bale, John. 2003. *Sports Geography*. New York and London: Routledge.
- Barthes, Roland. 1967. "The Death of the Author." *Aspen*, no. 5–6.
- . 1972. *Mythologies*. New York: The Noonday Press.
- Bates, Bob. 2004. *Game Design: Second Edition*. Boston: Premier Press.
- Baudrillard, Jean. 1995 [1981]. *Simulacra and Simulation*. Translated by Sheila Glaser. Ann Arbor: The University of Michigan Press.

References

- Bayliss, Peter. 2010. "Videogames, Interfaces, and the Body: The Importance of Embodied Phenomena to the Experience of Videogame Play." Doctoral thesis, RMIT University.
- Bazin, Andre. 1967. "What Is Cinema." Translated by Hugh Gray. Berkeley, Los Angeles, London: University of California Press.
- Beale, Gareth & Reilly, Paul. 2017. "After Virtual Archaeology: Rethinking Approaches to the Adoption of Digital Technology." *Internet Archaeology*, no. 44.
- Berger, John. 1972. *Ways of Seeing: Based on the BBC Television Series with John Berger*. London, Harmondsworth: British Broadcasting Corporation, Penguin.
- Berger, John & Overton, Tom. 2016. *Landscapes: John Berger on Art*, London: Verso.
- Bogost, Ian. 2006. *Unit Operations: An Approach to Videogame Criticism. Unit Operations*. Cambridge, Massachusetts and London: The MIT Press.
- . 2007. *Persuasive Games: The Expressive Power of Video Games*. Vol. 53. Cambridge, Mass: The MIT Press.
- Bogost, Ian, & Poremba, Cindy. 2008. "Can Games Get Real? A Closer Look at "Documentary" Digital Games". In *Computer Games as a Sociological Phenomenon*, edited by Jahn-Sudmann, A & Stockmann, R. London: Palgrave Macmillan.
- Bokitch, Chris. 2018. "VERC · Half-Life's Code Basis." *VERC Collective*. http://collective.valve-erc.com/index.php?go=q1_or_q2.
- Bolter, Jay David, and Richard Grusin. 2000. *Remediation: Understanding New Media*. Cambridge, Massachusetts: MIT Press.
- Boluk, Stephanie & Patrick LeMieux. 2017. *Metagaming: Playing, Competing, Spectating, Cheating, Trading, Making, and Breaking Videogames*. Minneapolis: University of Minnesota Press.
- Bondi, Liz and Domosh, Mona. 1992. "Other figures in other landscapes: on feminism, postmodernism and geography." *Environment and Planning D: Society and Space*, 10. 199-213.
- Bruns, Axel. 2008. *Blogs, Wikipedia, Second Life, and Beyond: From Production to Produsage*. New York: Peter Lang.
- Brunstein, Joshua, and Eben Novy-Williams. 2016. "Virtual Weapons Are Turning Teen Gamers into Serious Gamblers." Accessed 16/03/2018. *Bloomberg*

References

- Business Week*. <https://www.bloomberg.com/features/2016-virtual-guns-counterstrike-gambling/>.
- Caillois, Roger. 2001 [1961]. *Man, Play and Games*. Translated by Mayer Barash. Urbana and Chicago: University of Illinois Press.
- Carter, Marcus, Martin Gibbs, and Michael Arnold. 2017. "The Demarcation Problem in Multiplayer Games : Boundary Work in EVE Online ' S eSport." *Game Studies*, 15 (1): 1–19.
- Casid, Jill H. 2008. "Landscape Trouble." In *Landscape Theory*, edited by Rachael Ziady DeLue and James Elkins. New York and London: Routledge.
- Casey, Edward S. 2002. *Representing Place: Landscape Painting & Maps*. Minneapolis: The University of Minnesota Press.
- Castree, Noel. 2011. "David Harvey." In *Key Thinkers on Space and Place*, edited by Phil Hubbard and Rob Kitchin. Los Angeles, London, New Delhi, Singapore, Washington D.C.: Sage.
- Chamayou, Grégoire. 2015. *A Theory of the Drone*. New York: The New Press.
- Chang, Yizhe. 2016. "Virtual Environment For Mechanical Assembly Situation And Its Application." Doctoral thesis, Stevens Institute of Technology.
- Cheong, Ian Miles. 2012. "Valve Litigated in Germany Over Steam License Agreement." *Gameranx*. September. <http://gameranx.com/updates/id/9542/article/valve-litigated-in-germany-over-steam-license-agreement/>.
- Clark, Kenneth. 1949. *Landscape into Art*. Boston: Beacon Press.
- Clarke, David B., & Marcus A. Doel. 2011. "Paul Virilio." In *Key Thinkers on Space and Place*, edited by Phil Hubbard and Rob Kitchin. Los Angeles, London, New Delhi, Singapore, Washington D.C.: Sage.
- Copley, Stephen. 1994. "William Gilpin and the Black-Lead Mine." In *The Politics of the Picturesque: Literature, Landscape and Aesthetics since 1770*, edited by Stephen Copley and Peter Garside. Cambridge: Cambridge University Press.
- Counterstrike Wiki. 2016. "Counterstrike Wikia Militia." *Counterstrike Wiki*. Accessed 15/02/2018. <http://counterstrike.wikia.com/wiki/Militia>.
- Cosgrove, Denis E. 1998. *Social Formation and Symbolic Landscape*. Second Ed. Madison: University of Wisconsin Press.

References

- Costikyan, Greg. 2002. "I Have No Words but I Must Design: Toward a Critical Vocabulary for Games." In *Computer Games and Digital Cultures*. Edited by Mäyrä, Frans. Tampere: Tampere University Press.
- Crawshaw, Carol & Urry, John. 1997. "Tourism and the Photographic Eye." In *Touring Cultures: Transformations of Travel and Theory*, edited by Chris Rojek and John Urry, 176–95. New York and London: Routledge.
- Cubitt, Sean. 2009. "A Critique of Play". *Refractory: A Journal of Entertainment Media*. November Issue.
- . 2016. "Film, Landscape and Political Aesthetics: *Deseret*." *Screen* 57 (1): 21–34.
- . 2017. *Finite Media: Environmental Implications of Digital Technologies*. Durham and London: Duke University Press.
- Culler, Jonathan. 1988. "The Semiotics of Tourism." In *Framing the Sign: Criticism and Its Institutions*. Oxford: Blackwell.
- Daniels, Stephen, & Charles Watkins. 1994. "Picturesque Landscaping and Estate Management: Uvedale Price and Nathaniel Kent at Foxley." In *The Politics of the Picturesque: Literature, Landscape and Aesthetics since 1770*, edited by Stephen Copley and Peter Garside. Cambridge: Cambridge University Press.
- Dawkins, Richard. 2006 [1967]. *The Selfish Gene, 30th-anniversary edition*. Oxford: Oxford University Press.
- Debord, Guy. 1995 [1967]. *The Society of the Spectacle*. Third Edit. New York: Zone Books.
- Deffenbaugh, Michael D, Johnson, Daryl, Yuan, Bo & Lutz, Peter. 2012. "A Physical Channel in a Digital World." In *Proceedings of the International Conference on Security and Management (SAM)*, Athens.
- DeLue, Rachel & Elkins, James. 2008. *Landscape Theory*. New York and London: Routledge.
- DeLue, Rachael Ziady. 2008. "Elusive Landscapes and Shifting Grounds." In *Landscape Theory*, edited by Rachel Ziady De Lue and James Elkins. New York and London: Routledge.
- Descola, Philippe. 2013. *Beyond Nature and Culture*. Chicago and London: The University of Chicago Press.
- Dovey, Jon & Kennedy, Helen. 2006. *Game Cultures: Computer Games as New Media*. Berkshire: Open University Press.
- Dreyfus, Hubert. 2001. *On The Internet*. New York and London: Routledge.

References

- Ducheneaut, Nicolas. 2010. "The Chorus of the Dead." In *Utopic Dreams and Apocalyptic Fantasies: Critical Approaches to Researching Video Game Play*, edited by Talmadge J. Wright, David G. Embrick, and Andras Lukacs. Lanham: Lexington Books.
- Dyer-Witheford, Nick, and Greg de Peuter. 2009. "Games of Empire: Global Capitalism and Video Games." *Contemporary Sociology: A Journal of Reviews*, 39.
- The Elder Scrolls Wiki, 'Alduin', Fandom, Accessed July 10th, 2018.
<http://elderscrolls.wikia.com/wiki/Alduin>
- El-Antably, Ahmed. 2010. "The Virtual (Re)Construction of History: Some Epistemological Questions." In *The Proceedings of Spaces of History/Histories of Space: Emerging Approaches to the Study of the Built Environment*. Berkeley: University of California Berkeley.
- ESCalation. 2015. "History of Counter-Strike - From Beta 1 to CSGO." YouTube Video. 12:31. Posted by ESCalation. May 6th, 2015.
<https://www.youtube.com/watch?v=WCrl1Bqqy4>.
- EscBoss. 2014. "Garry's Mod Beginners Tutorial (COMMENTARY) BETTER VERSION." YouTube Video. 23:27. Uploaded by EscBoss, April 23rd.
<https://www.youtube.com/watch?v=WoYHALkoUrE>
- Facepunch Studios, 2010. "Fretta Contest Winners". Archived from the original on July 10, 2011. Retrieved 15 January 2018.
- Fandom. 2018. "Competitive." *Counterstrike Wiki*.
<http://counterstrike.wikia.com/wiki/Competitive>.
- Fang, Lee. 2018. "Even As A Student Movement Rises, Gun Manufacturers Are Targetting Young People." *The Intercept*. February.
- Fisher, Mark. 2009. *Capitalist Realism: Is There No Alternative*. Winchester: Zero Books.
- Flynn, Bernadette. 2005. "Imaging Gameplay – The Design and Construction of Spatial Worlds." In *Imaginary Worlds - Image and Space International Symposium*. Sydney: University of Technology Sydney.
- Frasca, Gonzalo. 2001. "Simulation 101: Simulation versus Representation." *Ludology.org*, 16–17. Accessed 05/06/2016.
<http://www.ludology.org/articles/sim1/simulation101.html>.
- Friedländer, Max J. 1963. *Landscape Portrait Still Life*. New York: Shocken Books.

References

- Fuller, Mary, & Jenkins, Henry. 1995. "Nintendo® and New World Travel Writing: A Dialogue." In *Cybersociety: Computer-Mediated Communication and Community*, edited by Steven G. Jones, 57–72. Sage.
- Fussell, G E. 1984. *Landscape Painting and the Agricultural Revolution*. London: Pindar Press.
- Galloway, Alexander R. 2006a. "Warcraft and Utopia." *CTheory*, 1000 Days of Theory.
- . 2006b. *Gaming: Essays on Algorithmic Culture*. Minneapolis, London: University of Minnesota Press.
- . 2004. 'Social Realism in Gaming'. *Game Studies*, 4 (1).
- Gammage, Bill. 2011. *The Biggest Estate on Earth: How Aborigines Made Australia*. Sydney: Allen & Unwin.
- Gazzard, Alison. 2010. "Player as Parent, Character as Child: Exploring Avatariar Relationships in Gamespace." In *Proceedings of the 14th International Academic MindTrek Conference: Envisioning Future Media Environments*, 25–31. Tampere, Finland.
- Gestalt. 2000. "Minh Le of Counter-Strike Team: Half-Life Mod's Designer Interviewed." *EuroGamer.net*. March.
<http://www.eurogamer.net/articles/counterstrike>.
- Gilpin, William. 1794. *Three Essays: On Picturesque Beauty; On Picturesque Travel; and On Sketching; To Which Is Added A Poem on Landscape Painting*. London: Printed for R. Blamire.
- Gombrich, Ernst Hans. 1966. *Norm and Form*. Chicago and London: The University of Chicago Press.
- GrobeMan Guides & Gameplay. 2017. "Garry's Mod Tutorial for Beginners! (How to Play Garry's Mod Basics: What Is It, How Garry's Mod Works)." YouTube Video. 15:01. Uploaded July 21.
<https://www.youtube.com/watch?v=N9N63OhRPjU>
- Hall, Stuart. 1980 [1973]. "Encoding/decoding." In *Culture, Media, Language*. London: Hutchison. 128-138.
- Harvey, David. 1973. *Social Justice and the City*. London: Arnold.
- Hayot, Eric, & Wesp, Edward. 2009. "Towards a Critical Aesthetic of Virtual-World Geographies." *Game Studies - The International Journal of Computer Game Research* 9 (1): 1–23.

References

- Häyrynen, Mäunu. 2008. "Assessment of Landscape Theory Roundtable Seminar." In *Landscape Theory*, edited by Rachel Ziady De Lue and James Elkins. New York and London: Routledge.
- Hayot, Eric, and Edward Wesp. 2009. "Towards a Critical Aesthetic of Virtual-World Geographies Abstract : " *Game Studies - The International Journal of Computer Game Research* 9 (1): 1–23.
- Huizinga, Johan. 1964 [1955]. *Homo Ludens: A Study of the Play Element in Culture*. The Beacon Press. Boston.
- Herwig, Adrian & Paar, Philip. 2002. "Game Engines : Tools for Landscape Visualization and Planning ?" In *Trends in GIS and Virtualization in Environmental Planning and Design*, Wichmann Verlag, 1–10. Heidelberg: Wichmann Verlag.
- Huizinga, Johan. 1964 [1955]. *Homo Ludens: A Study of the Play Element in Culture*. The Beacon Press. Boston.
- Ingold, Tim. 1992. "Culture and the Perception of the Environment." In *Bush Base: Forest Farm*, edited by E. Croll and D. Parkin. London: Routledge.
- Iversen, Sara Mosberg. 2009. "Between Regulation and Improvisation : Playing and Analysing 'Games in the Middle.'" Doctoral dissertation. IT University of Copenhagen.
- Jameson, Fredric. 1991. *Postmodernism, or The Cultural Logic of Late Capitalism*. Durham: Duke University Press
- Johns, Ralph and Lowe, Russel. 2006 "Unreal Editor as a Virtual Design Instrument in Landscape Architecture Studio", *Journal of Design Research*, 5 (2).
- Juul, Jesper. 2002. "The Open and the Closed : Games of Emergence and Games of Progression." In *Computer Games and Digital Cultures Conference Proceedings*, 1–6.
- . 2003. "The Game, the Player, the World: Looking for a Heart of Gameness". In *Level Up: Digital Games Research Conference Proceedings*. Utrecht: The University of Utrecht.
- . 2005. *Half-Real: Video Games between Real Rules and Fictional Worlds*. Cambridge, Massachusetts, London, England: The MIT Press.
- . 2007. "Without a goal: on open and expressive games." In *Videogame, player, text*, edited by B. Atkins & T. Krzywinska. Manchester: Manchester University Press.

References

- Kirshenblatt-Gimblett, Barbara. 1988. *Destination Culture: Tourism, Museums, and Heritage*. Oakland: University of California Press.
- Konzack, Lars. 2002. "Computer Game Criticism: A Method for Computer Game Analysis." In *Proceedings of the Computer Games and Digital Culture Conference Tampere*, Tampere: Tampere University Press, 89–100.
- Karhulahti, Veli-Matti. 2014. "Do Computer Games Simulate, After All? Reconsidering Virtuality." *The 8th Philosophy of Computer Games Conference - Freedom in Play*.
- Kirby, Alan. 2009. *Digimodernism: How New Technologies Dismantle The Postmodern and Reconfigure Our Culture*. New York and London: Continuum.
- Kelsey, Robin. 2008. "Landscape as Not Belonging." In *Landscape Theory*, 203–13. New York and London: Routledge.
- Kierkegaard, Søren. 2001 *"The Present Age", A Literary Review*. Translated by A. Hannay. London and New York: Penguin.
- Klevjer, Rune. 2006a. "The Way of the Gun: The Aesthetic of the Single-Player First Person Shooter." In *Doom. Giocare in Prima Persona*, edited by M. Bittanti and S. Morris, 1–11. Milano: Coster & Nolan.
- . 2006b. "What Is the Avatar? Fiction and Embodiment in Avatar-Based Singleplayer Computer Games." University of Bergen.
- . 2012. "Enter the Avatar. The Phenomenology of Prosthetic Telepresence in Computer Games ." In *The Philosophy of Computer Games*, edited by Hallvard Fossheim, Tarjei Mandt Larsen, and John Richard Sageng, 17–38. London and New York: Springer.
- Konior, Bogna. 2018 [forthcoming]. "Apocalyptic Memes for the Anthropocene God: Mediating Crisis and the Memetic Body Politic". In *PostMemes*. Edited by Alfie Bown and Daniel Bristow. New York: Punctum Press.
- Konzack, Lars. 2002. "Computer Game Criticism: A Method for Computer Game Analysis." *Proceedings of the Computer Games and Digital Culture Conference Tampere, Finland*, 89–100.
- Küchlich, Julian. 2005. "Precarious Playbour : Modders and the Digital Games Industry The History of Modding The Economy of Modding." *The Fibreculture Journal*, no. 5.
- Kwong, Chi Man & Yiu Lin Tsoi. 2014. *Eastern Fortress: A Military History of Hong Kong, 1840-1970*. Hong Kong: Hong Kong University Press.

References

- Lahti, Evan. 2015. "How \$ 400 Virtual Knives Saved Counter-Strike." *PC Gamer*. September.
<http://www.pcgamer.com/how-400-virtual-knives-saved-counter-strike/>.
- Lai, Lawrence, Davies, Stephen N.G., Ching, Ken S.T. & Wong, Castor T.C. 2011. "Decoding the Enigma of the Fall of the Shing Mun Redoubt Using Line of Sight Analysis." In *Surveying & Built Environment: Special Issue to Commemorate the 70th Anniversary of the Battle of Hong Kong, 8 December to 25 December 1941*, no. December.
- Lammes, Sybille. 2007. "Approaching Game-Studies: Towards a Reflexive Methodology of Games as Situated Cultures." In *Situated Play: Proceedings of the Third International Conference of the Digital Games Research Association*, edited by Baba. Tokyo: University of Tokyo. 25–30.
- Lammes, Sybille. 2008. "Playing the World: Computer Games, Cartography and Spatial Stories." In *aether: the journal of media geography*. Volume 3, June Issue. 84–96.
- Lee, Shuen-Shing. 2003. "I Lose, Therefore I Think " A Search for Contemplation amid Wars of Push Button Glare." In *Game Studies*, 3 (2).
- Lefebvre, Henri. 1991 [1974]. *The Production of Space*. Edited by Donald Nicholson-Smith. *The Production of Space*. 1991sted. Oxford, Cambridge, Massachusetts: Blackwell.
- Leino, Olli Tapio. 2007. "Emotions about the Deniable/Undeniable: Sketch for a Classification of Game Content as Experienced." *Situated Play Proceedings of DiGRA 2007 Conference*, 113–20.
- . 2010. *Emotions In Play: On the constitution of emotion in solitary computer game play*. Doctoral dissertation. IT University of Copenhagen.
- . 2012. "Death Loop as a Feature." *Game Studies* 12 (2): 1–15.
- . 2013. "From Game Spaces to Playable Worlds." *Philosophy of Computer Games*, 1–12.
- . 2016. "STONE + LIFE = EGG – Little Alchemy as a Limit- Idea for Thinking about Knowledge and Discovery in Computer Games." In *The Proceedings of the Philosophy of Computer Games Conference*, Malta: The University of Malta.
- Liboriussen, Bjarke. 2009. "The Mechanics of Place : Landscape and Architecture in Virtual Worlds." Doctoral thesis, University of Southern Denmark.

References

- Lyotard, Jean-Francois. 1979. *The Postmodern Condition: A Report on Knowledge*. Minneapolis: University of Minnesota Press.
- Macarthur, John. 2007. *The Picturesque: Architecture, Disgust and Other Irregularities*. London: Routledge.
- Mangla, Ravi. 2015. 'True Blue'. *The Paris Review*. June 8th.
<https://www.theparisreview.org/blog/2015/06/08/true-blue/>
- Manovich, Lev. 2001. "The Language of New Media." *Screen* 27 (1): 354.
- Marshall, David. 2002. "The Problem of the Picturesque." *Eighteenth-Century Studies* 35 (3): 413-37.
- Martin, Paul. 2011. "The Pastoral and the Sublime in Elder Scrolls IV: Oblivion." *Game Studies* 11 (3): 1-19.
- Marx, Karl. 1844. *Economic & Philosophical Manuscripts*. Moscow: Progress Publishers.
- McVicker, Tyler. 2017. "New CSGO Operation & Map Info." YouTube video. 6:33. Posted by Valve News Network, April 7th, 2017.
<https://www.youtube.com/watch?v=gHFso3sKuvQ&feature=youtu.be&t=1m51s>
- Mitchell, Jason, McTaggart, Gary, & Green, Chris. 2006. "Shading in Valve's Source Engine." In *Proceedings of SIGGRAPH 2006*, 129-42.
- Mitchell, Timothy Frank. 1977. "Philipp Otto Runge and Caspar David Friedrich: A Comparison of Their Art and Theory." Doctoral thesis, Indiana University.
- Mitchell, W. J. T. 1994. "Imperial Landscape." In *Landscape and Power*, edited by W. J. T. Mitchell. Chicago and London: The University of Chicago Press.
- . 1995. "Gombrich and the Rise of Landscape." In *The Consumption of Culture: 1600-1800: Image, Object, Text*, edited by Ann Bermingham and John Brewer. London: Routledge.
- Modiano, Raimonda. 1994. "The Legacy of the Picturesque: Landscape, Property and the Ruin." In *The Politics of the Picturesque: Literature, Landscape and Aesthetics since 1770*, edited by Stephen Copley and Peter Garside. Cambridge: Cambridge University Press.
- Montfort, Nick and Bogost, Ian. 2009. *Racing the Beam: The Atari Video Computer System*. Cambridge, Massachusetts and London, England: The MIT Press.

References

- Moring, Sebastian, & Olli Leino. 2016. "Beyond Games as Political Education - Neo-Liberalism in the Contemporary Game Form." *Journal of Gaming & Virtual Worlds* 8 (2): 145–61.
- Möring, Sebastian. 2015. "What Is a Metaphoric Artgame ? A Critical Analysis of Metaphor in the Artgame Discourse and in Artgames." In *Embodied Metaphors in Film, Television, and Video Games Cognitive Approaches*, edited by Fahlenbrach, K. Oxfordshire: Taylor & Francis.
- MsBreezy. 2016a. "Running From Presidency." YouTube Video. 7:38. Uploaded by MsBreezy on October 25th.
<https://www.youtube.com/watch?v=Gdi6DY7CHNA>.
- . 2016b. "WEIRDEST SERVER EVER." YouTube video. 7:47. Uploaded by MsBreezy on November 3rd.
<https://www.youtube.com/watch?v=2Yrx2LF8B8w>.
- Myers, David. 2008. "Play and Punishment : The Sad and Curious Case of Twixt." In *The [Player] Conference*, 1–27. Copenhagen: The IT University of Copenhagen.
- Ndalianis, Angela. 2004. *Neo-Baroque Aesthetics and Contemporary Entertainment*. Cambridge Massachusetts and London: The MIT Press.
- Newman, Garry. 2015. "Paying for Mods There Are Still Free Mods." *Garry's Blag*. Accessed 25/03/2018
<https://garry.tv/2015/04/24/paying-for-mods/>.
- Newman, James. 2008. *Playing with Videogames*. New York and Abingdon: Routledge.
- Nguyen, C. Thi. 2013. "Games as Landscape." In *The Proceedings Philosophy of Computer Games Conference*, Bergen 1–16.
- Nieuwenhuys, Constant. 1974. *New Babylon - A Nomadic City*. Exhibition catalogue, Haags Gemeetenmuseum.
- Nitsche, Michael. 2008. *Video Game Spaces: Image, Play, and Structure in 3D Game Worlds*. Cambridge, Massachusetts and London, England: The MIT Press.
- Nitsche, Michael. 2008. *Video Game Spaces: Image, Play, and Structure in 3D Game Worlds*. Cambridge, Massachusetts, London, England: The MIT Press.
- Obeyeskere, Gananath. 2002. "Manufacturing the 'Cannibal' Body." In *Body Trade: Captivity, Cannibalism, and Colonialism in the Pacific*, edited by Barbara Creed and Jeanette Hoorn. New York: Routledge.
- Oudenampsen, Merijn. 2013. "Aldo van Eyck and the City as Playground." Accessed 18/03/2018.

References

- <https://merijnoudenampsen.org/2013/03/27/aldo-van-eyck-and-the-city-as-playground/>.
- Overwiki, Combine “Half-Life (Multiplayer).” *Combine Overwiki*. Accessed 15/08/2017
[http://combineoverwiki.net/wiki/Half-Life_\(multiplayer\)](http://combineoverwiki.net/wiki/Half-Life_(multiplayer))
- Parkin, Simon. 2013. “Shooters : How Video Games Fund Arms Manufacturers.” *EuroGamer.net*. January.
<http://www.eurogamer.net/articles/2013-02-01-shooters-how-video-games-fund-arms-manufacturers>.
- Pearson, Craig. 2012. “A Brief History of Garry’s Mod: Count to Ten.” *Rock Paper Shotgun*. August.
<https://www.rockpapershotgun.com/2012/08/29/a-brief-history-of-garrys-mod-count-to-ten/>.
- PlayStation. 2018. “Dreams –Gameplay Demo|Playstation Live from E3 2018”. YouTube video. Uploaded by Playstation, January 12, 2018.
<https://www.youtube.com/watch?v=i7SIdSzdVBg>
- PlayStation, 2017. “Dreams – TGA 2017 Trailer |PS4”. Trailer |PS4”. YouTube video uploaded by PlayStation, December 7th, 2017.
<https://www.youtube.com/watch?v=odfYSiTpXpo>
- Postigo, Hector. 2003. “From Pong to Planet Quake: Post-Industrial Transitions from Leisure to Work.” *Information, Communication & Society* 6 (4): 593–607.
- Puddy. 2013. “Agency.” Official page and update log. *Counter-Strike Global Offensive Workshop*.
<https://steamcommunity.com/sharedfiles/filedetails/?id=174668691>.
- Punter, David. 1994. “The Picturesque and the Sublime: Two Worldscapes.” In *The Politics of the Picturesque: Literature, Landscape and Aesthetics since 1770*, edited by Stephen Copley and Peter Garside. Cambridge: Cambridge University Press.
- Remagen, Bridget. 2004. “PC Games : Counter-Strike.” *PC World2*. July.
https://www.pcworld.idg.com.au/article/76094/pc_games_counter-strike_condition_zero/.
- Rettberg, Scott. 2008. “Corporate Ideology in World of Warcraft.” In *Digital Culture, Play, and Identity: A World of Warcraft Reader*, edited by Hilde G Corneliusen and Scott Rettberg. Cambridge, Massachusetts and London, England: The MIT Press.
- Richardson, Emily. 2015. “How Counter-Strike : Global Offensive’s Economy Works.” *Rock Paper Shotgun*. August.

References

- <https://www.rockpapershotgun.com/2015/08/14/CSGO-skin-economy-explained/>.
- Rewald, Sabine. 2001. *Caspar David Friedrich: Moonwatchers*. New York: Metropolitan Museum of Art.
- Rose, Gillian. 1993. *Feminism and Geography: The Limits of Geographical Knowledge*. Cambridge, United Kingdom: Polity Press
- Roskill, Mark. 1997. *The Languages of Landscape*. Pennsylvania: Pennsylvania State University Press.
- Rosenblum, Robert. 1975. *Modern Painting and the Northern Romantic Tradition: Friedrich to Rothko*. London: Thames and Hudson.
- Rubinstein, Daniel & Sluis, Katrina. 2013. "The Digital Image in Photographic Culture: Algorithmic Photography and the Crisis of Representation." In *The Photographic Image in Digital Culture*, edited by Martin Lister. New York, Abingdon: Routledge.
- Salen, Katie, and Eric Zimmerman. 2004. *Rules of Play: Game Design Fundamentals*. Cambridge, Massachusetts and London, England: The MIT Press.
- Schama, Simon. 1995. *Landscape and Memory*. London: Fontana Press.
- Sicart, Miguel. 2011. "Against Procedurality." *Game Studies* 11 (3).
- Smith, Ryan. 2012. "Partners In Arms." *The Gameological Society*. August. <http://gameological.com/2012/08/partners-in-arms/>.
- Solnit, Rebecca. 1994. *Savage Dreams: A Journey into the Hidden Wars of the American West*. Oakland: University of California Press.
- Sonten, Beate. 2005. "Behind the Figure's Back: The Afterlife of Romanticism in Contemporary Art." In *Ideal Worlds: New Romanticism in Contemporary Art*. Frankfurt: Schirn Kunsthalle Frankfurt.
- Sokolowski, Robert. 2000. *Introduction to Phenomenology*. Cambridge, United Kingdom: Cambridge University Press.
- Srnicek, Nick. 2017. *Platform Capitalism*. New York: Polity Press.
- Steam Charts 2018 <https://steamcharts.com/app/4000> Accessed July 10th 2018
- Steam Workshop, 2018 Accessed July 10th 2018
<https://steamcommunity.com/app/4000/workshop/>

References

- Suits, Bernard. 1978. *The Grasshopper: Games, Life and Utopia*. Toronto, Buffalo, London: University of Toronto Press.
- Taylor, T. L. 2012. *Raising The Stakes: E-Sports and the Professionalization of Computer Gaming*. Cambridge, Massachusetts and London: The MIT Press.
- . 2008. “Does of World Warcraft Change Everything? How a PvP Server, Multinational Playerbase, and Surveillance Mod Scene Caused Me Pause.” In *Digital Culture, Play, and Identity: A World of Warcraft Reader*, edited by Hilde G. Corneliusen and Jill Walker Rettberg. Cambridge, Massachusetts, London: The MIT Press.
- Te, Zorine. 2014. “Dust to Dust : The History of Counter-Strike.” *Gamespot*. May. <https://www.gamespot.com/articles/dust-to-dust-the-history-of-counter-strike/1100-6419676/>.
- Terranova, Tiziana. 2000. “Free Labor : Producing Culture for the Digital Economy.” *Social Text* 18 (2): 33–58.
- Tilley, Christopher. 1994. *Place, Paths and Monuments, a Phenomenology of Landscape*. Oxford: Berg Publishers.
- Tuan, Yi-Fu. 1974. *Topophilia: A Study of Environmental Perception, Attitudes, and Values*. New York: Columbia University Press.
- . 1977. *Space and Place: The Perspective of Experience*. Minneapolis, London: The University of Minnesota Press.
- Usher, William. 2012. “Valve Slammed By Consumer Protection, Issued Cease And Desist On Anti-Consumerist EULA.” *CINEMABLEND*. Accessed 17/03/2018. <https://www.cinemablend.com/games/Valve-Slammed-By-Consumer-Protection-Issued-Cease-Desist-Anti-Consumerist-EULA-47038.html>.
- Valve Corporation. 2004. *Half-Life 2 Raising The Bar*. Roseville: Prima Games.
- Valve Developer Community. 2011. “Physics and Ragdolls Creating Physboxes Making a Ragdoll.” *Valve Developer Community*. https://developer.valvesoftware.com/wiki/Physics_and_Ragdolls.
- Vella, Daniel. 2013. “The Wanderer in the Wilderness: Being in the Virtual Landscape in Minecraft and Proteus.” In *The Proceedings Philosophy of Computer Games Conference*, Bergen 1–16.
- Virilio, Paul. 1989. *War and Cinema: The Logistics of Vision*. London and New York: Verso.
- . 1994. *Bunker Archeology*. New York: Princeton Architectural Press.

References

- Walz, Steffen P. 2010. *Toward a Ludic Architecture: The Space of Play and Games*. Halifax: ETC Press.
- Wark, McKenzie. 2007. *Gamer Theory*. Cambridge, Massachusetts: Harvard University Press.
- Wark, McKenzie. 2011. *The Beach Beneath the Street*. London and New York: Verso.
- Winner, Langdon. 1977. *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought*. Cambridge, Massachusetts and London: The MIT Press.
- Wirman, Hanna. 2009. "On Productivity and Game Fandom." *Transformative Works and Cultures* 3: 1-40.
- Witkowski, Emma. 2012. "On the Digital Playing Field : How We " Do Sport " With Networked Computer Games." *Games and Culture*, 7 (5), 349-374.
- Yar, Majid. 2014. *The Cultural Imaginary of the Internet: Virtual Utopias and Dystopias*. New York: Palgrave MacMillan.
- Yee, Nick. 2006. "The Labor of Fun How Video Games Blur the Boundaries of Work and Play." *Games and Culture* 1 (1): 68-71.
- Youtubers.me. 2017. "Vanoss Gaming." *Youtubers.me*. Accessed October 31. <https://us.youtubers.me/vanoss gaming/youtube-estimated-earnings>.
- Zerbst, Stefan & Düvel, Oliver. 2004. *3D Game Engine Programming*. Portland: Premier Press.

Appendix 1

APPENDIX 1							
Map Name	Counter-Strike Wikia Description	Industrial	Workplace	Rustic	Warzone	Tourist Site	Domestic
Cache	Surgical precision and tactical prowess are crucial to securing a hidden weapons cache beneath Chernobyl.	Yes	Yes	No	No	No	No
Nuke	Prevent Terrorists from bombing the nuclear reactor. In Global Offensive, the original version of the map takes place a German nuclear power plant, while the revamped version takes place in an American one.	Yes	Yes	No	No	No	No
Train	Prevent Terrorists from bombing the nuclear payloads on two trains. Team members must defuse any bombs that threaten the payloads. The original map featured plain textures derived from Half-Life and the conflict was taking place in an industrial setting with a train station. In CSGO the theme was also changed from an American train station to a Russian one.	Yes	Yes	No	No	No	No

Appendix 1

Canals	The map is set in a historic Italian city built alongside canals. The Terrorists' targets are two important tourist attractions. Canals are based on real-world environments and the idea for the map Canals originally came to Iikka Keränen after visiting Venice.	No	No	Yes	No	Yes	No
Inferno	The map is set in a small town with European architecture. In the Global Offensive version, the presence of the Separatist faction suggests that the map is set in the Basque Country, where the real ETA separatist group operates, though signs written in Italian seen around the map suggest otherwise.	No	No	Yes	No	Yes	No
Cobblestone	Counter-Terrorists: Prevent terrorists from bombing Lord William's country farmhouse. He has been the target of assassination in light of recent government proposals.	No	No	Yes	No	Yes	No
Italy	[The map] Italy is filled with narrow passageways and includes an iconic	No	No	Yes	No	Yes	No

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	<p>marketplace. It's possible that the map takes place somewhere in the north of Italy since there are mountains visible. It is suggested that it takes place in the South Tyrol province since there have been real separatist-terrorist attacks in the 20th century, the street sign "Bixio" suggests the real town of "Brixen".</p>						
Agency	<p>Over the years, the offices of Underhill and Murphy have been home to rich clients, modern art and hostage situations.</p>	No	Yes	No	No	No	No
Office	<p>Enter the office building and rescue the hostages. Take out the Terrorists without jeopardizing the hostages. The offices are owned by various different companies, including Prodigy Inc. and Bizzy Blaster Labour Union. It features many paintings and huge computers and magazines.</p>	No	Yes	No	No	No	No
Dust II	<p>The map appears to be set in the Middle East, similar to its</p>	No	No	Yes	Yes	Yes	No

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	<p>predecessor Dust. The original Global Offensive version featured Islamic architecture and presence of military and conflict activity such as Humvees and bombed walls, reflecting a contemporary view of the Middle East. In the revamped version, the map is set in Morocco, which is not in the geographic region of Middle East, but featured similar architectural styles.</p>						
Mirage	<p>The map is themed like a Middle Eastern town, but because of its close resemblance to Moroccan style architecture, it is likely set somewhere in Morocco.</p>	No	No	Yes	Yes	Yes	No
Insertion	<p>A large, open rural area next to a shore, with a complex of cottages located near the centre of the map, where the hostages are located. The map's location is likely Sweden as evidenced by the Swedish text on boxes and signs throughout the map. (e.g. labels on</p>	No	No	Yes	No	No	Yes

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	the helicopters in the rescue zone).						
Lake	A small estate bordering a lake	No	No	Yes	No	No	Yes
Shipped	The pirates are determined to sink this ship before it can reach safe harbour.	Yes	Yes	No	No	No	No
Overpass	The map's setting is a canal overpass and the park built above it in Berlin, Germany. The GSG-9 must protect a stalled military shipment on a canal overpass while the Phoenix Connexion can either attack the shipment head-on or attempt to destroy the overpass itself by bombing the pillar below.	Yes	No	Yes	No	No	No
Austria	The peace and quiet of a new snowfall are trampled when the terrorists invade a mountain village.	Yes	Yes	Yes	Yes	Yes	Yes

Table 2: All the maps shipped with CS:GO as of February 2018, coded for their representational features.

Appendix 1