The Mechanics of Place:
Landscape and Architecture in Virtual Worlds

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Contents

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This text was written with the word processor *Mellel*. If you are a Mac user engaged in academic writing, and are not yet using this wonderful program, start doing so immediately.

1. Introduction

Virtual worlds are *places*.

- Richard Bartle[1]

Hasn't architecture [...] always been the art of place?

- Christian Norberg-Schulz[2]

(1) An architectural perspective

Virtual worlds, such as *Second Life* and *World of Warcraft*, are communities and they are often economies, games and works of fiction too. Various theoretical and methodological resources are at hand to enrich our understanding of the many aspects of the virtual world. A scholarly interest in communities can be sustained by social science and ethnography. An interest in economy will naturally lead to economic theory. Game studies (or "ludology") is the field of choice if one is interested in virtual worlds as games. As for how fiction fares under interactive conditions, work is being done within a narratological framework. In recent years, the sociological, economic, ludological and narratological perspectives on virtual worlds have been established through the publication of influential books and articles.[3] An architectural perspective has yet to be established.

The virtual world is a navigable space. Having said that, the perspective can be broadened and the virtual worlds consider as one of several media forms, historical and present-day, which facilitate experiences of a spatial nature. Lev Manovich has shown that this strategy allows for rich historical and theoretical contextualisation of new media artefacts.[4] But what if the perspective was to be

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1. Bartle, 2007: 158. Emphasis in the original.

2. Norberg-Schulz, 2000a: 12.

3. Examples of sociological aspects: Taylor, 2006; economic aspects: Castronova, 2005; ludological aspects: Juul, 2005 aims at being of relevance to the study of all games, from *Pac-Man* to the virtual world *EverQuest*. Bartle, 2004 is aimed at the design industry but incorporates academic work, including some of Bartle's own work; narratological aspects: Ryan, 2001, Ryan, 2002.

4. Manovich, 2001. Manovich provides overview of scholarship focusing on the differences between real and virtual space, whilst expanding this scholarship with his own thoughts on the spatiality of new media. Modern architecture is mentioned in passing as potential inspiration for designers of virtual spaces (ibid., pp. 264f). Manovich has hopes for contemporary architectural thought being of relevance for virtual space

narrowed, rather than broadening? The present-day virtual world is a reasonably stable form which can be examined on its own terms. It is not an early media form allowing its user to navigate an odd, abstract space but a rather mature media form allowing navigation of buildings and landscapes. Obviously, navigation does not take place as in the real world. Virtual world buildings can not be mistaken for off-line buildings, nor virtual world landscapes for off-line landscapes. But even so: How can it enrich our understanding of virtual worlds to focus on their experiential and theoretical affinity with off-line architecture and landscapes?

Answering that question entails engagement with architectural theory and landscape aesthetics, and interdisciplinarity takes work. Architectural theory and landscape aesthetics must *be made* relevant to the study of virtual worlds rather than simply applied. Ad-hoc application of architectural theory has been done successfully on a limited scale within game studies[5] but without the broader grounding in architectural discourse I am aiming for here. Architectural discourse is, however, a slippery one. Architectural theory blurs into philosophy and sociology (and even into physics and mathematics), landscape aesthetics blurs into the history and theory of art, and both fields have relations to geography and cartography. Furthermore, architecture has not been integrated into the academy the way cinema has become the subject of film studies and games the subject of game studies. Often written by architects who aim at changing the shape of the actual, built environment, and not only at publication in prestigious journals, architectural theory can be highly polemical as well as poetic. To ensure that interdisciplinarity leads the scholar to the production of new knowledge, he or she must decide on certain foci, or special areas of interest, before engaging with architectural discourse.

I have chosen five foci, or keywords, and assigned individual chapters to them. An initial presentation of the five keywords are given in the section following immediately below (*Vocabulary*, pp. 6-10). Then follows two sections dealing with meta-keywords. Since these meta-keywords do not have individual chapters assigned to them, they are presented here for further

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design, cf. the mention of "liquid architecture" (ibid., p. 284). The references to architectural theory are necessarily eclectic in this context of far-ranging overview.

5. Babeux, 2005 and Fuller and Jenkins, 1994 both apply Michel de Certeau's thoughts on space and place to computer games. Ljungström, 2005 applies Christopher Alexander's architecture classic, "A Pattern Language" (Alexander et al., 1977), to *World of Warcraft*.

reference and in some detail, hence the sections contain healthy doses of theoretical background information. The meta-keywords are the two conceptual dichotomies of *Space and image* (pp. 10-17) and *Place and space* (pp. 17-25). Then follows three sections which deal with methodological issues and position the current work in relation to previous work on virtual worlds. *Researching place* (pp. 25-29) focuses on humanistic geography, ethnography and previous work on virtual worlds employing ethnographic methods. *Researching games and players* (pp. 29-31) focuses on the present work in relation to the field of game studies. *What is called "a virtual world"?* (pp. 31-34) evolves around the difference between an ontological perspective on virtual worlds and the more phenomenologically inclined perspective employed here. The section *Absent keywords* (pp. 34-36) offers reflections on some of the issues I do not cover. Finally, a *Chapter overview* (pp. 36-38) charts the road ahead.

(2) Vocabulary

The following five foci have been chosen in order to engage with architectural discourse in a grounded as well as focused manner:

Body

Map

Landscape

Building

Worldview

Taken together, the five words offer an architectural perspective on virtual worlds. Not a perspective in the shape of a *model* but in the shape of a *vocabulary* (more on this difference later, see *Researching games and players*, pp. 29-31). My use of the term vocabulary is inspired by Raymond Williams and his aptly titled classic, "Keywords: A Vocabulary of Culture and Society".[6] There is, however, a number of ways in which I am not Raymond Williams and this is not "Keywords". Williams's book has as its subject "our central experiences" in the area of culture and society. What interests him is how such central experiences enter "our most general

6. Williams, 1983. Adrian Forty has written an inspiring vocabulary of modern architecture inspired by Williams (Forty, 2000).

discussions" as part of a vocabulary, i.e., as a "shared body" or "cluster" of words and meanings.[7] Examples of Williams-keywords are: mechanical, media, popular and tradition. In comparison, my vocabulary is phenomenologically biased. *Body*, *map*, *landscape*, *building* and *worldview* lend themselves somewhat easier to description in terms of direct experience, compared to Williams-keywords such as media and tradition. I share, however, in all modesty, Williams's sense that

> [e]very word which I have included [in the vocabulary] has at some time, in the course of some argument, virtually forced itself on my attention because the problems of its meaning seemed to me inextricably bound up with the problems it was being used to discuss.[8]

In a virtual world context, the word *body* is thus "inextricably bound up with the problems of" interactivity and embodied agency, or the nature of *user-hood* if you will (a word which has not quite made it into neither the general vocabulary, nor any specialised vocabulary). *Building* ties in with issues of authenticity and community. *Worldview* forced itself on my attention as I was trying to come to terms with the virtual world as as an unwieldily large artefact, or *work* (a word whose status in the aesthetic vocabulary is undermined by digital media). As for the words *map* and *landscape*, I am introducing words into the academic vocabulary which have scarcely been used in connection with virtual worlds. The five keywords have been selected pragmatically *from within* media studies in the sense of allowing me to align myself with existing, media studies positions and to address lacks in media studies discourse. Since embodied agency is something of a cornerstone of current game studies, the concept of *body* is the strongest example of a keyword chosen because it allows me to build on to existing positions. The focus on *map* and *landscape*, on the other hand, addresses an evident lack.

The five keywords form a cluster of concepts resonating with a certain understanding of architecture, namely, *architecture as orientation*.[9] The notion that architecture is a way of orienting humankind in the world runs through architectural theory. I label this strand of thought *orientationalist*. Key Le Corbusier texts fit under this label, as does writings of his self-perceived,

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7. Williams, 1983: 15 and 22.

8. Williams, 1983: 15.

9. Other understandings of architecture will generate different vocabularies. Architecture can, e.g., be understood as a system opening itself to formalist description. A formalist understanding of architecture unlocks theoretical resources such as Alexander et al., 1977 and might generate insights of direct relevance to game design. I thank Espen Aarseth for pointing this out to me.

intellectual heirs. Engaging in any discussion about "architecture" is to claim that the built environment is too important to be merely engineered in the most cost-effective way.[10] But what *is* architecture? Here is an orientationalist answer from architect and theorist Juhani Pallasmaa: "Towns, buildings, and objects are also metaphysical instruments. [...] the world we build makes us understand and remember who we ourselves are".[11] And here is the architect and critic Kenneth Frampton, summing up and endorsing his colleague Vittorio Gregotti's belief that the fundamental aim of architecture is "to establish a man-made cosmos in the face of the chaos of nature".[12] As a third example, architect and theorist Christian Norberg-Schulz holds that "the house constitutes a 'microcosm' visualizing the fact that human life takes place between earth and sky" and that architecture should answer "man's need for orientation and identification [in the world]".[13] Orientationalism, then, is the belief that architecture is capable of orientating humankind in the world in a fundamental or existential sense. This is a thought that can be articulated in various ways. In recent, architectural discourse, orientationalism is grounded in a reading of modern architecture focusing on the concept of place and opposed to post-modernism; a modern backlash, if you will. I will deal with this thoroughly in the next two sections but broadly speaking, recent orientationalism holds that modern architecture is an attempt to provide humankind with a sense of home under adverse, machine-age conditions. A present-day, orientationalist reading of key modern texts including, importantly, the thoughts of Le Corbusier, entails a conceptual replacement where *space* is superseded by *place*. Philosophically, this operation is partly influenced by Martin Heidegger (more on this below and in the chapter on *Building*). Architectural orientationalism is, in other words, an attempt to be modern whilst holding that architecture is the art of place, a position legitimately grounded in a certain interpretation of Le

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10. Architecture is generally understood (by architects) to be "something more" than *engineering*. This is a central theme of, e.g., LaVine, 2001 and Gänshirt, 2007. Even though Le Corbusier begins his landmark "Toward an Architecture" with the words "Aesthetics of the Engineer, Architecture: two things firmly allied, sequential, the one in full flower, the other in painful regression" (Corbusier, 2008: 93), thus acknowledging how engineering has been the first of the two to become truly modern, there is no doubt that to Le Corbusier, architecture is the most noble of the two: "With inert materials, based on a more or less utilitarian program that you *go beyond*, you have established relationships that moved me. It is architecture" (ibid., p. 195. Emphasis in the original).

11. Pallasmaa, 2005j: 76.

12. Frampton, 2007: 346.

13. Norberg-Schulz, 2000b: 49 and 6.

Corbusier.

Orientation is often achieved as a prerequisite for action in the world, e.g., as a prerequisite for movement in the world ("he oriented himself and took of"). But orientation also has to do with understanding the surrounding world, perhaps even dwelling in it ("he felt oriented, at home"). The cluster of keywords is characterised by this dual nature of orientation.

- The *body* provides orientation in the most basic sense. By way of body, directions are known and potentially followed (up, down, forwards, backwards etc.).[14] But the world is unwieldily big. In order to move about in the world and understand it, supportive representations are called upon. This is were maps come in.

- *Maps* are supportive representations of the world. They can be internal (so-called cognitive, or mental, maps) or external (cartographic maps, textual descriptions etc.). Maps are important tools both when it comes to navigating the world and structuring the world in a more general or holistic sense. A map is, e.g., helpful both in getting from A to B (activity) and in clarifying that A is colder and more hostile than B (understanding).

- *Landscapes* are environments, i.e., as spatial configurations of potentials for movement and other activities. Landscapes are also images, i.e., visual representations encapsulating features of the world. Either way, the landscape aids orientation in a world too big to be handled by way of direct perception alone.

- A *building* is an orientational tool in both a strong and a weak sense. In the weak sense, a building orients by suggesting through its design how it should be used, i.e., how the immediate part of the world made up by that building should be navigated (e.g., stairways allowing non-horizontal movement). Buildings are orientational in a stronger sense when they mediate the relationship between human and world by representing and furthering a certain *worldview*.

- Following Clifford Geertz, a *worldview* is a set of overarching principles for 1) how the world is (the *worldview* proper) and 2) how someone should go about his or her business in the world

14. This is a subject for phenomenological analysis as performed by Casey, 1993.

(the *ethos* corresponding to that worldview).[15] Again, orientation has an element of understanding the world and of acting in the world.

Whereas Williams's vocabulary is governed by the meta-keywords of *culture* and *society*, my architectural vocabulary for virtual worlds is governed by two sets of meta-keywords, *space/image* and *space/place*, explained for further reference in the next two sections.

(3) Space and image

Like architecture, virtual worlds are deeply committed to the body. This is one of the fist things we notice when we compare digital, interactive media with other media products such as books and films: that there is a ongoing feedback loop between the dynamic, audio-visual flow constituting the user's experience and the bodily activity of that user. A sense of moving through space in a virtual world is based on that immediate feedback loop, i.e., on the connection between bodily input and a perceived change of position in the world (this is a central theme of the next chapter). Yet the virtual world is conveyed primarily through a "flat" screen and it might sometimes seem more reasonable to think of the world in terms of image (a theme explored in the chapter on *Landscape*). The exact same conceptual tension between space and image is to be found in architectural discourse. Surely, buildings are meant to be engaged with through bodily encounters, e.g., by way of dwelling in them or passing through them, yet architecture is also something to be looked at. Architecture is not only buildings in the sense of designed *spaces* but also the *images* generated when buildings are looked towards and away from.

An efficient way of outlining the conceptual dichotomy of space and image in architectural discourse is to trace its historical roots. Conveniently, this allows me to point out some useful historical landmarks in architectural theory. These landmarks are chosen and presented in a specific and limited way, namely, with the purpose of clarifying concepts useful for understanding virtual worlds. The story outlined in this section is one of modern architects focusing on space, rebellious postmodern architects focusing on image and a modern backlash (still ongoing today)

15. Geertz, 1957. More on Geertz's definition of worldview and how it relates to competing definitions in the chapter on *Worldview.*

criticising postmodern architects for being overly reliant on image.

To be considered truly modern, art forms of the early twentieth century had to state their ability to create experiences unique to them. Take cinema, for instance, where Sergei Eisenstein made a strong argument for editing being the art form's quintessential attribute.[16] As for modern architecture, space was singled out as the essence of (all) architecture, as aptly summed up by Adrian Forty:

> [S]pace offered a non-metaphorical, non-referential category for talking about architecture, and one which at the same time allowed architects to rub shoulders with the socially superior discourses of physics and philosophy.[17]

The 1920s saw many efforts to establish architecture as an art of space, not least the 1923 publication of Le Corbusier's "Vers une architecture". In that book, Le Corbusier makes a statement which have been a reference point in architectural discourse since: "Architecture is the masterful, correct, and magnificent play of volumes brought together in light".[18] Le Corbusier continues in a way illustrating commitment to the body as well as hinting at the universalism arising from that commitment (if all human bodies are essentially the same, all human beings ought to experience architecture in more or less the same way):

> Our eyes were made for seeing forms in light; shadow and light reveal forms; cubes, cones, spheres, cylinders, and pyramids are the great primary forms that light reveals well; the image is clear and tangible for us, without ambiguity. This is why these are *beautiful forms, the most beautiful forms*. Everyone is in agreement about this: children, savages, and metaphysicians. It is the very condition of the plastic arts.[19]

According to Le Corbusier, universal beauty stems from its physiological grounding in the human experiencer, regardless of the influence of culture (upbringing and education). Everything is subordinate to the human experiencer, thus the function of light is to "reveal forms" and the function of "image" to make forms "clear and tangible for us". These statements about are

16. Eisenstein, 1994.

17. Forty, 2000: 265.

18. Corbusier, 2008: 102. In 1927, the book was translated into English as "Towards a New Architecture": "It did its work well, making Le Corbusier a crucial reference point in the battle for modernism in the anglophone world", as John Goodman writes in his introduction to his own translation, "Toward an Architecture", first published in 2007 (Le Corbusier, 2008: xi). I will be referring to the latter translation.

19. Le Corbusier, 2008: 102. Emphasis in the original.

important as an indication of Le Corbusier's commitment to the human body. The visual has an important yet ultimately secondary, supportive function in the experience of architecture. 32 years later (in 1955), Le Corbusier's tone of voice has mellowed somewhat but he holds on to the materiality of space and warns against elevating that which is seen to symbolism:

> I am artist enough to feel that there are extensions to all material things, but I halt at the threshold of metaphysics and symbolism, not because I disdain them but because the nature of my mind does not incite me to cross the threshold.[20]

Younger architects would soon storm across the threshold Le Corbusier viewed with suspicion. By the 1950s and 1960s, the notion of space as the stuff architecture is made of had come to dominate architectural discourse due to "Giedion's influence, and the authority carried by the first generation of modernist architects", as Forty puts it.[21] There was a firmly established modernist position to rebel against, and from the late 1960s, countercurrents started to make themselves felt. These countercurrents were later labelled *postmodern* and Robert Venturi and his partner, Denise Scott Brown, labelled the "godparents" of postmodern architecture (by Hal Foster).[22]

Whereas modern architects regarded space as the essence of architecture, postmodern architects focused on image, or symbolism. Venturi's rebellion started politely enough with his influential 1966 book, the rather scholarly "Complexity and Contradiction in Architecture". Here, Venturi criticises modern architecture for being overly focused on individual buildings and overlooking the importance of "[r]esidual spaces" and "in-between places" (this will become important in the chapter on *Landscape*, particularly in the section *Introduction*, pp. 100-101).[23] But architectural theory is not an entirely academic pursuit. Architects want to influence the built environment, not only through building but also through writing. This polemical side of architectural discourse was demonstrated six years later, in 1972, when "Learning from Las Vegas" was published, co-authored by Venturi, Scott Brown and Steven Izenour (the second, revised edition came in 1977).

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20. Le Corbusier, 2000b: 83.

21. Forty, 2000: 266. Giedion was an influential architectural critic sympathetic to the Modern movement who in 1928 became the first secretary-general of Congrès international d'architecture moderne (CIAM), an organisation aimed at promoting modern architecture.

22. Foster, 2008: 176, n. 3.

23. Venturi, 2002: 80ff. Throughout "Complexity and Contradiction in Architecture", Venturi expresses deep respect if not gratitude towards modern heroes such as Louis Kahn, Alvar Aalto, and last but not least Le Corbusier who died one year prior to the book's 1966 publication.

In a section tellingly titled "SPACE AS GOD", Venturi et al. attack the conceptual supremacy of space very directly: "Perhaps the most tyrannical element in our architecture now is space. Space has been contrived by architects and deified by critics".[24] Venturi et. al. carefully aim their attack on "our architecture *now*", in principle excluding the first generation modernists from criticism. But in implicit opposition to Le Corbusier ("Architecture is the masterful, correct, and magnificent play of volumes brought together in light") they hold that new architecture should be "space *and* light - light as an element for distorting space for further dramatization".[25] Light is, in other words, not secondary to space and the architect should think of them as equals. Venturi et al. goes further than this. Thinking primarily in terms of light and space might have been legitimate for the first generation of modern architects, but due to technological progress in artificial lighting and air conditioning, contemporary architects do not have to concern themselves with the window as the provider of air and light. Under these new conditions, the architect can take the possibility of seeing (light) for granted and instead focus on what is seen (symbols): "our aesthetic impact should come from sources other than light, more symbolic and less spatial sources".[26]

To illustrate their idea, and to the dismay of many of their colleagues,[27] Venturi et al. pointed first to the typical American Main Street[28] and later to the Strip of Las Vegas[29] as examples of inspiring built environments where symbolism played a properly important part. In an essay, Venturi tightened his description of the Strip to the following statement: "when you see no buildings at all, at night when virtually only the illuminated signs are visible, you see the Strip in its pure

24. Venturi et al., 1977: 148.

25. Venturi et al., 1977: 148. Emphasis in the original.

26. Venturi et al., 1977: 148.

27. The words and buildings of Venturi are unique in their effectiveness when it comes to triggering disdain. As an example, Juhani Pallasmaa talks of "[t]he American cowboy classicism of Robert Venturi [as] an example of [...] kitsch" (Pallasmaa, 2005c: 287). When it comes to the Venturi books, "Learning from Las Vegas" seems to be the more provocative one whilst "Complexity and Contradiction in Architecture" is generally respected as an important contribution to architectural theory. Some critics, however, such as Manfredo Tafuri, are relentless in their criticism of all of Venturi's work, buildings and books (including "Complexity and Contradiction in Architecture") alike (Tafuri, 1980: 213).

28. Venturi, 2002: 102ff.

29. Venturi et al., 1977: 3-83.

state".[30] David Kolb thus sums up Venturi's position as a plea for the entirely "dematerialized cityscape"[31]

After a couple of decades of fame and a further development into deconstructivist architecture (more on this in *Worldview/ethos in architecture*, pp. 164-172), postmodernism ran out of steam. Or rather: around the year 2000, architectural discourse lost its sense of, and perhaps the need for, a unifying undercurrent, an "-ism" such as modernism or postmodernism. Tellingly, the first 2009 issue of prestigious architectural journal *Architectural Design* bears the title *Theoretical Meltdown* that "architecture has lost its borders as a discipline and theory seems to have lost its pertinence for architecture" (Helen Castle's editorial) yet also, more positively, that

> there is a new pragmatism in the making in design, which through its emphasis on performance, strategical thinking and problem solving is better equipped to tackle some of the most pressing and significant issues that the world is currently throwing up.[32]

Generally speaking, our time is one for pragmatism rather than manifestos. Therefore all grand, guiding concepts (both space and image) are criticised, something I will illustrate with a few examples. In an interview, Rem Koolhaas (whose concept of *Junkspace* plays an important role in the chapter on *Worldview*) has this to say about space: "I have always thought the notion of space is irrelevant because it is not possible to conceive of a notion of 'space' without first understanding the components or devices that make such a conception possible". One could say that Koolhaas expresses a postmodern sentiment here, with any given conception of "space" determined by the concrete circumstances ("components and devices"). Yet Koolhaas continues in a way which does not exactly celebrate images (and neither do his buildings): "I could never bring myself to do what you [the interviewer, BL] call *gaze* architecture".[33] Many present-day commentators are deeply critical of "gaze architecture", or "iconic" architecture.[34] Hal Foster has this to say about Frank Gehry's well-known Guggenheim Museum (which opened in Bilbao in 1997) and his Experience Music Project (which opened in Seattle in 2000):

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30. Venturi and Brown, 1984: 63 quoted in Kolb, 1990: 198, n. 4.
31. Kolb, 1990: 198, n. 4.
32. Castle, 2009: 4.
33. Koolhaas and Lee, 2007: 344. Emphasis in the original.
34. Saunders, 2008: 4.

> In Bilbao Gehry moved to make the Guggenheim legible through an allusion to a splintered ship; in Seatle he compensated with an allusion to a smashed guitar (a broken fret lies over two of the blobs): But neither image works [...] for one cannot read them at ground level; in fact one has to see them in media reproduction, which might be the primary site of neo-Pop architecture in the Internet age.[35]

Now we are getting back to virtual worlds: today's iconic architecture is criticised not only for being overly reliant on images but that criticism is strengthened and broadened by connecting "images" with the media in general and the Internet in particular. Iconic architecture is, in other words, criticised as a symptom of a deeper cultural malaise. Foster provided one example above and another example comes from Juhani Pallasmaa who is worried about the contemporary conditions for dwelling. Whilst acknowledging the TV screen's function as a focus for domestic sociality, Pallasmaa is concerned about the "flattening" of life furthered by the TV screen as it presents "images [that are] striking and fashionable perhaps [but do not] incorporate the personal identity, memories, and dreams of the inhabitants".[36] Pallasmaa goes on to contrast these "flat" images with deeper, "architectural" images of domesticity (more on this in the chapter on *Building*).

To counter today's image culture in general and image-based architecture in particular, Pallasmaa urges architects to remember the ideals of early, modern architecture. Norberg-Schulz sums these ideals up as follows: "Modern architecture came into existence to help man feel at home in a new world".[37] To some, this might have a conservative ring clashing with the notion of modern architecture as a progressive force,[38] yet it is highly congruent with the teachings of Le Corbusier. Le Corbusier's architecture is a rather subtle one. The "play of volumes brought together in light" is "magnificent" not because it is loud but because of its sophisticated elegance. "Vulgar man," writes Le Corbusier, "forgets to see [the infinitely fine nuances of the world] because he imagines a wealth that is spectacular, noisy, torrential".[39] More importantly for the congruence between Le

35. Foster, 2008: 175

36. Pallasmaa, 2005i.

37. Norberg-Schulz, 2000b: 6.

38. The journalist Jonathan Bell certainly senses a clash: "The ascendance and brief dominance of post-Modern architecture in the 1980s and 1990s [...] attracted strong criticism from die-hard progressives, who soon found themselves in the oxymoronic position of being seen as 'traditional' Modernists [Pallasmaa and Norberg-Schulz would be examples, BL]" (Bell, 2006: 132).

39. Le Corbusier, 2000b: 153.

Corbusier and Norberg-Schulz, the former described modern times as an "age of every conceivable ferocity: tumult, disorder, revolutionary inventions", and although he certainly sees great opportunities in such an age of change, Le Corbusier acknowledges that something has been lost in the tumult: "In these modern times, man is no longer in friendly contact with his environment".[40] Modern architecture is to rectify this by providing "[homes]" that can "take [us] in" and "welcome [us]",[41] despite the challenge posed by modernity. This can be achieved by broadening our sense of what a home is. "The dwelling of the machine-age civilization" can also be a hotel "for the nomad", and Le Corbusier mentions in passing that "we have all become, or will become, 'nomads' or lodging-house dwellers".[42] But even if modern conditions for dwelling are challenging, and radically new responses thus has to be considered for the future, it remains part of Le Corbusier's thinking that architecture should fulfil a basic, human need for a sense of home. Norberg-Schulz (who died in 2000) saw himself very much as a keeper of that strand of Le Corbusier's thought,[43] and Pallasmaa continues to do so today. From a virtual worlds perspective, Pallasmaa is of special interest because he adds the current media environment to the dwelling-unfriendly, modern conditions. I will go into detail with Pallasmaa in the chapter on *Building* (in the section *Against images*, pp. 142-148) which hinges on an ethnography of collective building projects in *Second Life* aimed explicitly at providing a sense of home. Virtual world-simulated dwelling can be seen as a way of coming to terms with a contemporary, built reality opposed to dwelling.

This partial, historical overview started with modern architects focusing on space. It continued with postmodern architects focusing on image and ended in a complex present where we find some architects trying to overcome an overly image-reliant postmodernism by digital means, whereas others insist that the interrupted, modern project should be continued.[44] The underlying, conceptual tension between space and image functions as a meta-concept, or meta-conceptual

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40. Le Corbusier, 2000b: 304 and 50f.

41. Le Corbusier, 2008: 296.

42. Le Corbusier, 2000a: 110 and Le Corbusier, 2000b: 282.

43. Cf. Norberg-Schulz, 2000a.

44. On the idea of "interrupted modernism", Norberg-Schulz refers to Jürgen Habermas who in 1980 launched a counterattack on modernism's postmodern critics with a lecture titled *Die Moderne: Ein unvollendetes Projekt*. The title was later used for a series of lectures, as well as for a collection of essays (Norberg-Schulz, 2000a: 27).

dichotomy if you will, throughout the following chapters. But to makes matters a bit more complicated, orientationalist thought centers on the notion of *place* rather than space.

(4) Place and space

In the late 1960s and early 1970s, Pallasmaa, Norberg-Schulz, Aldo van Eyck and others reassessed the modern movement's commitment to space. They found inspiration in the philosophy of Martin Heidegger (who had not had any significant influence on architectural discourse until then). As a result of Heidegger's influence, "'place' superseded 'space' as the buzzword [or keyword, if you like, BL] in certain circles", as Adrian Forty puts it.[45] So when Norberg-Schulz asks: "Hasn't architecture [...] always been the art of place?",[46] he is asking a highly polemical question. Norberg-Schulz wants to highlight a certain strand of early, modernist thought, namely, the notion of dwelling. But the concept of dwelling seems to resonate better with place than with space, thus the latter must be superseded by the former. A part (space) of the modernist machinery of thought has to be replaced with another (place), if you will.

The tension between space and place is highly relevant for understanding virtual worlds. As just mentioned, some users of virtual worlds are deeply concerned with obtaining a sense of dwelling, and place is a strong concept for understanding their practices. Virtual worlds have, however, been associated with "cyber-*space*" in a number of early, influential essays. When trying to understand cyberspace, early commentators focused on spatiality, but found that concept insufficient and then pointed to other concepts such as the urban,[47] time and simultaneity[48] or power and the social.[49] Along the way, Le Corbusier was occasionally presented in a rather reductionist way: as a rational, space-loving "Le Corbusier" very different from the space-loving *yet dwelling-concerned* "Le Corbusier" held in high esteem by Norberg-Schulz and others. When choosing its key concepts, early cyberspace scholarship's engagement with architectural theorists was, in other words, quite eclectic if not superficial. I will return to this point as I present the very useful place/space

45. Forty, 2000: 271.
46. Norberg-Schulz, 2000a: 12.
47. McQuire, 2007.
48. Virilio, 2007
49. Bukatman, 2007.

dichotomy.

As with the space/image dichotomy, an efficient way of explaining the place/space dichotomy is by way of historical overview. Philosopher Edward S. Casey has been exploring the relationship between place and space for some time now, resulting in several publications. Casey begins his examination in early myth and then goes on to show how Aristotle and Plato's thoughts on place and space were infused with these myths.[50] At this ancient Greek starting point, the concept of place is an "indispensable [philosophical] topic", and it remains so throughout "medieval, and even early modern philosophy".[51] But "a preoccupation with place gradually gives way to a stress on space - where 'space' connotes something undelimited and open-ended".[52] The peak of this complex transition is often said to be Newtonian *absolute space* or Cartesian *res extensa*.

At this point Casey's scholarship gets a normative ring to it which can also be heard in architectural discourse. Cartesian *res extensa* comes with a Cartesian subject, the embryonically modern subject based on the idea that "[t]he only effective unity of self is the unity of consciousness, the 'I think' that accompanies cognition".[53] In a similar manner, Sigfried Giedion talks of the Cartesian "fracture between thought and feeling" and modern architecture as a force aimed at healing that fracture;[54] incidentally, Casey argues convincingly that is is not Descartes but Kant who is philosophy's true champion of "the modern subject as a placeless subject".[55] Whatever thinker is the most emblematic of this intellectual trend, neither Casey or architects inclined towards orientationalism find the modern, placeless subject a healthy subject to be. Le Corbusier's self-appointed heirs (e.g., Norberg-Schulz, Pallasmaa) hope architecture can help humankind feel at home in a new world, and Casey takes it upon himself to help us all "getting

50. Casey, 1997a: 75.

51. Casey, 1997b: 288.

52. Casey, 1997a: 77.

53. Casey, 1997b: 292.

54. Quoted in Norberg-Schulz, 2000a: 7. Original source not stated. Le Corbusier's Modulor design system can be interpreted as an ambitious attempt at healing the Cartesian fracture (see note 67, p. 21).

55. Casey, 1997b: 292. Casey is "even prepared to argue that Descartes, that arch-demon of early modernity, takes several steps *back* compared with Philoponus and his numerous medieval and Renaissance progeny" (ibid., p. 280).

back into place" (the title of one of his books).[56]

The 20th century offered many glimmers of hope, seen from Casey's perspective. The phenomenological movement and especially the work of Maurice Merleau-Ponty was one of the brighter sparks for those worried about the status of place (Merleau-Ponty will inform some of the chapter on the *Body*). And as noted at the beginning of this section, Heidegger's focus on place was a source of inspiration for orientationalist architectural theory (Heidegger and Heidegger-inspired architectural writing will play a part in the chapter on *Building*). After Heidegger came a number of "rediscoverers of place" who in Casey's account all had to react to Heidegger's work in some way, positively or negatively:

> [I]n France, Bachelard, Braudel, Foucault, Deleuze and Guatteri, Derrida, Lefebvre, Irigiray, and Nancy; in Germany, Benjamin and Arendt and M.A.C. Otto; and in North America, Relph, Tuan, Entrekin, Soja, Berry, Snyder, Stegne, Eisenman, Tschumi and Walter.[57]

Some of these thinkers have been labelled postmodern (Foucault, Deleuze and Guatteri, Derrida) and/or deconstructivist (Tschumi, Eisenman; more on deconstruction in the chapter on *Worldview*) and Casey has indeed suggested that

> the entire debate between modernism and postmodernism can be expressed in terms of this still unresolved relationship - the modernist insisting on the priority of space (whether in the form of well-ordered physical space or highly structured institutional space) and the postmodernist conversely maintaining the primacy of place and, in particular, lived places.[58]

The problem with Casey's suggestion is that if modernism is paired with space and postmodernism with place, it becomes impossible to account for orientationalist attempts at being modern whilst holding that architecture is the art of place. Therefore I will stick to the more conventional pairing of modernism with space, postmodernism with image, as presented in the preceding section.

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56. Casey, 1993.

57. Casey, 1997a: 286.

58. Casey, 2001: 404, referring to Harvey, 1989. Casey implies that only places can be "lived" whilst spaces can not, yet it would seem possible to talk of "lived spaces" in contemporary, architectural discourse, cf. architectural theorist Lance LaVine: "The difference between [the architectural] view and that of engineering [...] is that the spaces organized by architects are seen as being populated by human beings rather than forces" (LaVine, 2001: 30).

Let me return to the problems I have with some of the early writings on cyberspace. These writings originated in the wake of the 1984 publication of William Gibson's science fiction novel "Neuromancer" in which Gibson popularised his concept of Cyberspace (first presented in a short story the preceding year).[59] Academics and other commentators soon became fond of using cyberspace as their starting point for discussing cultural trends in the age of digital technology, with architect and architectural theorist Michael Benedikt providing the, in my view, most interesting example of the genre in 1992. Looking back on that piece in 2003, Benedikt expresses deep disappointment with how the Internet has developed but mentions that "advanced intranet gamers have a foretaste of Gibsonian cyberspace: a real-time, shared, virtual space seamlessly mixing useful data, personal presence, and real-world, real-time connection".[60] The virtual (game) world is thus conceptually related to (and the closest we come to fulfilling) the early, heady cyberspace dreams, a sentiment echoed by economist Edward Castronova who describes virtual worlds as "practical Virtual Reality".[61]

In his original 1992 essay, Benedikt regarded the cyberspace to come as an opportunity for "poetically- and scientifically-minded architects" to follow "the impetus towards the Heavenly City".[62] The "Heavenly City", according to Benedikt, is a universally held ideal of city-like structure featuring "weightlessness, radiance, numerological complexity [...] peace and harmony through rule of the good and wise [etc.]". Benedikt finds examples of "buildings actually built and projects begun in serious pursuit of [the Heavenly City] [from] the Hollywood Hills to Tibet".[63] To the list of unbuilt projects he adds Le Corbusier's La Ville Radieuse; a provocative new master plan for Paris. It was proposed by Le Corbusier in 1924 to promote rational city planning.[64]

Benedikt enlists Le Corbusier for specific purposes very different from Norberg-Schulz's. To fit a

59. Gibson, 2004.

60. Szeto, 2003.

61. Castronova, 2005: 3.

62. Benedikt, 2007: 29.

63. Benedikt, 2007: 27.

64. A few years later, Scott Bukatman treated Le Corbusier in a similar manner, i.e., highlighting but one idea of Le Corbusier's. Whereas Benedikt highlighted La Ville Radieuse, Bukatman highlighted "the sidewalk in the sky" (Bukatman, 2007: 84).

continuous, universal dream of the Heavenly City, Benedikt's "Le Corbusier" has to be a champion for rational, unlimited space rather than someone concerned with contemporary housing and how people feel at home (Norberg-Schulz's "Le Corbusier"). Benedikt's description of the Ville Radieuse project is legitimate, interesting and it could have been backed up by reading Le Corbusier the author in a certain way. But Norberg-Schulz's assessment of modern architecture, i.e., that it "came into existence to help man feel at home in a new world",[65] is legitimate too and can be grounded far more solidly in Le Corbusier's writings. Le Corbusier is consistently concerned with dwelling, stating early on that *"{i}t is a primal instinct of every living being to ensure shelter*",[66] and using his residential high-rise, the Unité d'Habitation in Marseille, as a kind of crowning example of his two-volume work on the *Modulor* system.[67] The Unité d'Habitation is pridefully described as a "an architecture, not of kings, not of princes, but of human beings: men, women, and children".[68] The Modulor that helped Le Corbusier design the Unité d'Habitation is presented as an answer to that provocative question asked as early as 1920: how does one build a house as a "machine for living in?"[69] In 1949, looking back on the hostile public reaction to that statement especially in the USA, Le Corbusier clarified what he meant when he compared houses with machines: "Mass production, machine, efficiency, cost price, speed, all these concepts called for the presence and the discipline of a system of measuring",[70] hence the Modulor. Le Corbusier did not, in other words, set out to destroy anyone's sense of

65. Norberg-Schulz, 2000b: 9, originally quoted on page 15.

66. Le Corbusier, 2008: 292. Emphasis in the original.

67. The Modulor is a design method aimed at applying the golden ratio whilst observing the human body as the alpha and omega of design. The Modulor thus embodies Le Corbusier's lifelong attempt at fusing commitment to architecture's embodied nature with commitment to the intellectual or spiritual side of human life as it surfaces in appreciation of proportion. Le Corbusier reported how he arrived at the Modulor and how it was received in two volumes, published in 1948 and 1955, respectively (Le Corbusier, 2000a and Le Corbusier, 2000b).

68. Le Corbusier uses his residential high-rise, Unité d'Habitation in Marseille, as a kind of crowning example of his two-volume work on the Modulor, pridefully describing it as a "an architecture, not of kings, not of princes, but of human beings: men, women, and children" (Le Corbusier, 2000b: 304). In "Toward an Architecture" he criticises the "these young nations [e.g., USA, BL] that's just appeared on the map and where [...] *Progress* reigns suppreme" for "forsaking the traditional house" (ibid., p. 167. Emphasis in the original). The traditional house, he implies a few pages later, is confortable and sustains "the spirit of the family [...] the hearth" (ibid., p. 171).

69. The notion of the house as a machine for living in was popularised in Le Corbusier, 2008: 151, 297f; NB Jean-Louis Cohen's note on the wording of that phrase, in the same volume Cohen, 2008: 14). For the Modular as an answer to that provocative statement, see Le Corbusier, 2000b: 127f.

70. Le Corbusier, 2000a: 28.

dwelling, feeling at home or in place but called for a rational response to how dwelling can be achieved in a new, modern age. Or as Norberg-Schulz might have put it: how can architecture help one feel at home in a world infused with modern technology?

Some *Second Life* users do indeed treat the virtual world as a technology for dwelling (see the chapter on *Building*). Here, I would like to conclude this section on the place/space dichotomy by looking at some recent trends in architectural discourse, updating the theme on how to be at home with technology to the digital present (this will become particularly useful in *Structured use*, pp. 89-93 of the chapter on the *Map*).

Kenneth Frampton, architect and critic, has recently suggested that the *topographic* and the *morphological* can be used as labels for two significant aspects of contemporary architectural culture.[71] Topographic architecture is, in Frampton's account, a kind of architecture focused on the notion of place, cf. the root of the word "topographic" (from Greek *topos*, place). Morphological architecture, on the other hand, is based in digital computing and is opposed to the notion of place. Frampton's distinction between the topographical and the morphological thus enacts the place/space relationship as an antagonistic dichotomy, with digital technology cast in a space-supporting role.

Frampton's fascination with topographic architecture "which pertains to the contours of the earth's surface"[72] has deep roots. Already in the early 1980s, he wrote about "the bounded urban fragment against which the inundation of the place-less, consumerist environment will find itself momentarily checked".[73] *Place* is, then, a place of resistance, and it is therefore with delight Frampton notes a topographic tendency in current architecture, aimed at making such places possible and ultimately to (re-) connect us with Earth. Whereas topography is a practice of resisting the environment's commodification, the morphological is merely an expressive trope "which seemingly emulates the structure of biological and botanical form".[74] Frampton points to Gregg Lynn as the strongest proponent of this trend in current architecture, and describes Lynn's

71. Frampton, 2007: 346.
72. Frampton, 2007: 356.
73. Frampton, 1982: 82, quoted in Kolb, 1990: 181.
74. Frampton, 2007: 356.

work as forms resulting from the "continual warping of variously curved surfaces over time".[75] This emulation of organic processes is clearly dependent on digital technology, and even though Frampton aims his criticism at how an "arbitrary selection of a particular shape is justified solely on the grounds that at a given instant it may be found somewhere in nature",[76] there seems to be an underlying repudiation of the digital. The apparent ease of Lynn's method, the malleability and transferability of digitalised data, or, the fluidity of "the digital" itself, seems to make digital culture inherently disconnecting. Frampton thus points to the "implicit repudiation of building culture as it has emerged over time as a pragmatic response to the constraints of climate, topography and available material".[77]

The theme I am getting at is one of perceived tension between place and the digital. Frampton and Pallasmaa (as mentioned in the previous section) argue that digital media experienced has a colourful, fast paced and fluid aspect countering the experience of place and therefore the experience of architecture. Others choose a more optimistic approach, e.g., Neil Leach according to whom "the computer is not simply [...] a sophisticated drafting tool [...] but also [...] a device that might become part of the design process itself". Reaching the exact opposite conclusion of Frampton and Pallasmaa, Leach holds that this "new digital paradigm" will help us "overcome the scenography of Postmodernism".[78] Digital technology should, in other words, be thought of as a weapon in repelling the over-reliance on images, rather as a force partly responsible for it. Branko Kolarevich has suggested *digital morphogenesis* as the label for this new paradigm, signifying that the actual building is to be thought of as a reflection of ongoing, form-generating processes upheld by computers.[79] This trend in contemporary architecture is sometimes associated with the concept of topology,[80] hence *topological* architecture is in use, especially as a label for Lynn's

75. Frampton, 2007: 359.

76. Frampton, 2007: 359.

77. Frampton, 2007: 358. Here, Frampton is not aiming at the digital but at Lynn's "analogical reasoning", letting architectural form grow from nature.

78. Leach, 2009: 35.

79. Kolarevic, 2003b. Six years later, Leach suggest exactly the same label (without mentioning Kolarevich) (Leach, 2009).

80. Borradori, 2000, Kolarevic, 2003b: 13f. Borradori's account differs from Leach's when it comes to strategic purposes. Whereas Leach casts the new computer-aided, process-oriented architecture as a response to postmodernism, Borradori places it in architectural history by seeing it in contrast "to the formalistic orientation promoted by the evolution of modernism into the International Style" (ibid.).

work.[81] These recent, digital trends in architecture will become relevant in the chapter on the *Map* (see Walking and looking, pp. 62-68, and *Structured use*, pp. 89-93).

To sum up, the history of philosophy shows how the concepts of place and space have existed in a state of tension at least since Plato and Aristotle. Place was gradually superseded by space as the dominant concept, with Kant and Descartes as some of the more prominent thinkers embodying this intellectual trend. In the 20th century, philosophers such as Heidegger and Merleau-Ponty as well as a host of more recent philosophers have once again turned philosophy's attention towards the concept of place. But even if this historical account is sound, the place/space dichotomy is always used for specific purposes. This is particularly pertinent when it comes to the antagonism between the concepts. Casey's project clearly thrives on that antagonism: place is the hero, space is the villain. Frampton's criticism mirrors this somewhat: place is the hero, the digital is the villain. For some purposes, however, and the case of virtual worlds is one of them, we do not so much need place and space as downright antagonistic concepts as we need them to form a dichotomy of a more productive kind. Early modern architects did indeed point to space as the essence of architecture but this strategic way of using space did not mean that place was employed as an antagonistic concept. It is thus legitimate to align oneself with early modernism whilst finding the concept of place important and useful. This is what the architectural theory I label orientationalist do and what early, influential essays on cyberspace do not. The latter references architectural theory in a superficial manner and without considering its underlying concepts. Our understanding of virtual worlds will gain from rectifying these lacks.[82]

Here I conclude the presentation of the two sets of meta-keywords (space/image and place/space)

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81. Frampton, 2007: 347. To get a comprehensive overview of the architecture and architectural theorisation associated with the concept topology in the beginning of the 21st century, see Di Cristina, 2001.

82. With his notion of the Heavenly City, Benedikt is obviously interested in cyberspace as an instance of the utopic. But as Elisabeth Grosz notes in a discussion of cyberspace and virtuality: "The utopic is definitionally conceived in the topological mode, as a place with definitive contours and features [...] [it] is self-regulating, autonomous form, though it may function alongside and in exchange with, other states and regions" (Grosz, 2001: 133f). Grosz uses Thomas More's Utopia as an example. Utopia is an island which is also a city-state. "Its geography complements, and perhaps enables, its political organization" e.g., by its natural harbour being "perilous and rocky [...] guaranteeing the island against the dangers of uninvited entry" (ibid., p. 133). The differences between Benedikt's and Grosz's description of the utopic illustrate the dangers of being too hasty when choosing the concepts guiding one's thought. In short, Grosz' inclusion of place makes for a more thorough understanding of both the utopic and cyberspace.

but hold on to the place/space dichotomy in the following section.

(5) Researching place

The ways some *Second Life* users handle their virtual world immediately struck me as odd, especially when compared to early cyberspace writing. Hence the ambition of a more focused, structured and prolonged attention towards these online practices. In other words: the ambition of doing an ethnography. The ethnography is reported in the chapter on *Building*. The details of its method is also reported there but since it is informed by the place/space dichotomy just outlined, it seems reasonable to follow that dichotomy a little longer here. This will lead me to humanistic geography, to questions of method and to preceding, ethnographic work on virtual worlds.

Geographer Yi-Fu Tuan was one of the prominent "rediscoverers of place" listed by Casey in the preceding section. 1974 saw the publication of Tuan's book "Topophilia", literally, "the love of place". That book was followed in 1977 by "Space and Place: The Perspective of Experience", consolidating Tuan's association with the place/space dichotomy. Tuan's interest in place has not much to do with established philosophy and he is not in the slightest influenced by Heidegger. Tuan finds the experience of place absolutely fundamental for human life yet it "have no place in social-science discourse".[83] This lack is so serious, in Tuan's eyes, that he campaigs for a specific *humanistic* branch of geography dedicated to the experience of place. In mainstream human geography since the 1970s, "place" is often used to mean "social space" or "socially produced space";[84] theorisation over socially produced space reached a climax with Henri Lefebvre's aptly titled "The Production of Space" (more on Lefebvre in *Absent keywords*, pp. 34-36).[85] The humanist geographer insists, however, on place having certain qualities in itself. The humanist geographer can thus be said to walk a fine line between the notion of place as social construct and essential feature of the world. Consequently, humanistic geography accommodates methodological and theoretical reflection relevant for virtual world ethnography (more on Tuan's take on the place/

83. Tuan, 1974: xii.

84. Cresswell, 2004: 10.

85. Lefebvre, 1991. Originally published in French in 1974 but not translated into English before 1991, it did not have much impact on humanistic geography which was a primarily Anglo-Saxon endeavour.

space dichotomy in *Space/place, landscape/building*, pp. 128-130).

Tuan's main sources to understanding the inherently intimate experiences of place are anecdotes, letters, poetry etc. In Tuan's own account, this was a controversial choice of data for a 1970s geographer.[86] Both Tuan's object of study and his methods seem less controversial to a present-day ethnographer. Strengthening ethnography's attention to place, some ethnographers have, since the 1990s, found inspiration in the large project on collective memory lead by historian Pierre Nora. With the final, three-volume publication titled "Les lieux de mémoire", the places of memory, the project signifies a return to place. Nora et al. turn the spotlight back on the importance of concrete places such as Verdun and Versailles when it comes to the negotiating of national identity and memory.[87] As for virtual worlds, there has been growing interest in the methods employed by ethnographers. Again, most of what I have to say about ethnography will come in the chapter on *Building* but here follows an outline of academic interest in virtual worlds allowing me to position my own ethnography.

Academic interest into online communication dates back to the mid-1980s, notes both Christine Hine and Matthew Williams; the following is based on their overviews.[88] Research was motivated by business concerns, especially by team management problems and their potential solution by means of computer-mediated conferencing. Broadly speaking, academic study of online communications in the 1980s was theoretically based in psychology, methodologically inclined towards experiments and resulted in a view of Internet-based communication as impoverished, when compared to face-to-face communication. The 1990s saw a change towards ethnography. The change took place on three levels. Firstly, psychology was superseded by ethnography as the main, theoretical resource ("ethnography" understood as a research paradigm). Secondly, experiments were replaced with participant observation and other ethnographic tools ("ethnography" understood as a set of research tools). Thirdly, the Internet was conceptualised as

86. Tuan tackles charges of anecdotalism head-on by opening "Topophilia" with a quote from geographer John Kirtland Wright: "All science should be scholarly, but not all scholarship can be rigorously scientific" (John Kirtland Wright, exact source unknown, quoted in Tuan, 1974: iii). Since Tuan finds that "words [such as] "attachment" and "love" [to and of place] have no place in social-science discourse" he is prepared to operate outside of that discourse (ibid., p. xii).

87. English version: Nora, 1996.

88. Williams, 2007: 6ff and Hine, 2005: 7ff.

cultural context, rather than as (impoverished) means of communication. Some anthropologists would call the shift in conceptualisations of online communication from tool to cultural context a change in *etics*, following Kenneth Pike.[89] The *etic* perspective is the outsider's perspective, e.g., the researcher's. The etic stands in opposition to the *emic*, i.e., the insider's perspective. Negotiating between these two perspective is the basic, methodological discussion concerning ethnography. The ethnographic ambition is to get close to the culture under scrutiny, yet retain scientific distance, in other words to almost adopt an emic perspective yet retains an etic perspective.

Annette M. Markham's late 1990s work aims implicitly at the emic. Based on her work on (and in) text-based, online communities, Markham proposes three broad categories for how users conceptualised their online communities:

- Tool
- Place
- Way of being.[90]

Markham stresses that users do not conceptualise their online community exclusively as one of the three but shift between the three conceptual modes. On a day when it seems to blend seamlessly into everyday life, a user might think of the online community as a way of being but then, on the following day, think of it more as a place to be visited.

There is a certain resonance between changes in etics and the the emic categories proposed by Markham. In the initial, mid-1980s etic perspective on online communities, they were communications tools. In the 1990s, that conceptualisation was supplemented with a sense of online communities as part of their user's way of being. That covers two of Markham's three categories (tool and way of being). The third category, online community as place, is represented by more recent work, as suggested by Chriss Mann and Fiona Stewart. Mann and Stewart distinguish between work falling into the "way of being" category and work in which the

89. Pike, 1967.
90. Markham, 1998: 114.

researcher takes an interest in a given "online culture" as "an environment in itself';[91] as a *place*, in other words. Rather than understanding the place as a more or less neutral *stage* for social action, place is understood as a *setting* that plays an integral role in social life. This sentiment is expressed perfectly by a virtual world user interviewed by Williams: "a community cannot be separated from its environment".[92]

Let me give a few examples of how notable, recent work on virtual world communities fit into the continuum of etic conceptualisations.

- *Tool*. Also researchers who are not strictly ethnographers practice the ethnographic ideal and take some pride in knowing the culture they study from the inside. Psychologist Nick Yee, for example, is an avid player of the online games he studies. The main thrust of his work exemplifies a recent, tool-oriented interest in online communities; Yee have documented how the use of an avatar influence not only how one is perceived by other users but also self-perception.[93]

- *Place*. The notion of place is constantly present in Howard Rheingold's early book on the WELL (the WELL is a text-based world preceding the World Wide Web with almost a decade).[94] Place also makes itself present in Lisbeth Klastrup's work on *EverQuest* in which she brings examples of how changes to online places radically alter social practices; a more recent article by Eric Hayot and Edward Wesp goes into detail with the social construction of place in *EverQuest*.[95] The architectural perspective I am establishing here explores virtual worlds by framing them primarily as places.

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91. Mann and Stewart, 2000: 270 and 205-07.

92. Williams, 2007: 17.

93. Yee, 2007. Yee's work convincingly repudiates early descriptions of cyberspace as a social ground zero, e.g., the following, unqualified claim by Peter Anders: "Body zones - a foundation for social interaction - are moot in cyberspace. After all, how does one relate to a lobster avatar? How close does one stand in casual conversation with it? Here our physical absence in simulated social environments forces us to reconsider social conventions" (Anders, 2001: 411). As for "physical absence", the following chapter will show that this too is an overstatement. Generally speaking, writers of early, influential essays on cyberspace tend to express disappointment that reality is not keeping up with their theorisation, e.g., Michael Benedikt (see p. 20). and Lev Manovich (see n. 114, p. 35).

94. Rheingold, 1993.

95. Klastrup, 2003, Hayot and Wesp, 2009.

- *Way of being*. Mário J. L. Guimarães, Jr. has done an ethnographic study of *The Palace* (a 2D precursor to contemporary virtual worlds), focusing on the blurred boundaries between offline and online, as does T. L. Taylor's more recent, ethnographic work on *EverQuest*.[96] Following Mark Nunes, this kind of work can be said to focus on online communities as "extensions of daily life".[97]

Again, the roughness of the three categories must be stressed. They are, however, useful for obtaining an overview of etics and a rough sense of the emic modes of conceptualisation virtual world users constantly oscillate between. Here I leave ethnography and other community-focused research for now, and turn to the budding field of game studies.

(6) Researching games and players

Much of what I have to say about virtual worlds applies equally well to contemporary computer games sharing their typical features, such as the avatar, 3D graphics and freedom of movement. Since I will be contributing to as well as drawing on game studies, this section will be used to position my work in that field.

Scholars tend to study either the activity of playing or the object of the game. Recently, however, there has been an ambition to bridge the gap between attention to the game and a more sociological or ethnographic kind of attention towards the player or user,[98] an ambition I share. My attention towards the subjects experiencing virtual worlds is most obvious when it comes to the *Second Life* ethnography. As for my attention to virtual worlds as objects, it differs from the formalism that has characterised game studies so far. Broadly speaking, the formalist aims at a complete model of the phenomena he or she is examining. I do not aim at providing a complete model of virtual worlds but at providing a handful of interrelated keywords, i.e., a vocabulary, that can be used in description and understanding of virtual worlds. However, the formalism of some, influential strands of game scholarship has its reasons, and it is useful to be aware of those reasons. Roughly since the beginning of the 21st century, there has been calls for the

96. Taylor, 2006. Guimarães, 2005 is another ethnographic study
97. Nunes' use of "extension of daily life" is grounded in Lefebvre Nunes, 2006.
98. E.g., Smith, 2006, Frasca, 2007, and Thorhauge, 2007.

establishment of the study of computer games as an independent, academic field, referred to by some as *ludology*.[99] Early ludologists were driven by a sense of deep inside knowledge and love of games, and by a large sense of ownership of the subject matter.[100] Consequently, their writings would often have a defensive ring to it. Other fields of academia, such as film studies and literary studies, were seen to be "colonising" computer games.[101] The "colonisation" has sometimes been characterised by a perceived tendency to rely overly on the concept of narrative in analyses of games.[102] The notion of a split between ludology and narratology is difficult to sustain since no one seems do disagree that narrative can have some function in a computer game, and no one seems to disagree that computer games belong to a wider group of cultural objects called games.

Not unlike the modern architect pointing to space as architecture's defining and unique essence, it is a key concern of the ludologist to pinpoint the unique essence of computer games, i.e., that which makes them special compared to other media products. Hence the subtitle of ludologist Jesper Juul's 2003 keynote address at DiGRA (the Digital Games Research Association)'s first international conference: "Looking for a Heart of Gameness".[103] The self-imposed need to highlight game-specific features has lead to a formalist understanding of computer games. Within media studies, formalism is the identification of distinct, formal components of a cultural artefact, and the explication of the artefact's effect in a viewer or user as a synthesis of these formal components during the experience of the artefact. When describing a narrative film experience, the formalist might focus on components such as editing and *mis-en-scene*, and present a model that explains how these elements work together in the course of narration.[104] When it comes to a computer game, the formalist might present models describing how rules and fictional setting

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99. E.g. Espen Aarseth, Jesper Juul, and Franz Mäyrä. For one of the first uses of the term "ludology", see Aarseth, 2001.

100. The relationship between ludologist and games is reminiscent of the relationship between a young David Morley and TV. When Morley and his contemporaries came to media studies, they felt especially attuned to TV. From a calm, societal consideration, radio should have been at least as important an object of study, but TV seemed a more "glamorous" medium (Morley, 2007: 55), one the researchers had a certain sense of ownership over.

101. Aarseth, 2001.

102. See Gonzalo Frasca's tellingly titled paper, *Ludologists Love Stories too: Notes from a Debate that Never Took Place* (Frasca, 2003).

103. Juul, 2003.

104. Bordwell, 1985.

interact in the playing of the game.[105] Or as Aki Järvinen puts it with a formulation typical of the formalist tendency: "[G]ames are made out of parts that interact. This structure can be conceptualised as a system".[106]

My set of keywords makes it possible to let architectural discourse enrich our understanding of virtual worlds, but the keywords do not constitute a formal model or system. I believe I have singled out five very productive and highly interrelated keywords, but there is, in principle, no limit to the number of keywords which could be added to the cluster (some of the keywords absent from the present work are mentioned in *Absent keywords*, pp. 34-36). The following section expands on the difference between a formalist focus on structure or system, and the more experience-centred approach favoured here.

(7) What is called "a virtual world"?

At the very beginning of this chapter, I gave two canonical examples of virtual worlds: *Second Life* and *World of Warcraft*. In pragmatic terms, that should be enough to execute the project of providing an architectural perspective on virtual worlds. I have yet to come across anybody who found it difficult to relate to my subject matter, even if I did not take the step from canonical examples to unambiguous definition. Dodging the ontological question "What is a virtual world?", I find it more interesting to ask the epistemological question: "What artefact can reasonably and productively be labelled a virtual world?" That question is much more in the spirit of a vocabulary project, aimed exactly at productive labelling, i.e., at naming aspects of a phenomenon in a way which trigger not only recognition but also reflection.

It makes intuitive sense that some artefacts should be labelled "world" and some should not. This has simply to do with size. A virtual "world" is big. Firstly, it is big in the sense of the number of other agents one encounters in it. Some of these agents are controlled by humans, some are computer-controlled (so-called "mobs"). A virtual world is commonly understood to accommodate a high number of agents at any given time. But how many? How many more agents apart from

105. Eskelinen, 2001, Juul, 2005, Järvinen, 2009 and Salen and Zimmerman, 2004 provide strong examples of a formalist understanding of games. For a lucid and critical discussion of early ludology and its reductionist, formalist tendency, see Bogost, 2006.

106. Järvinen, 2008: 368.

oneself must be present, or at least potentially present, before the virtual world feels like a world? 2, 5, 25 or 300? Hard to say, but a critical mass of agents is required. But what percentage of these agents should be human agents, rather than mobs, before the "virtual world" label is used? 2, 5, 25 or a 100% of them? Games such as *Fallout 3* and *Fable II* are similar to virtual worlds proper in allowing their player to explore a world, but they only allow a single human agent to do so. Yet the *Fallout 3* or *Fable 2* player does not feel entirely alone. These worlds swarm with mobs which can be interacted with in a number of ways, e.g., (*Fable 2*) steal from, marry, have children with, offend, sacrifice, flirt with, (*Fallout 3*) steal from, enslave, emancipate, kill, eat, talk to, flatter etc. When the mere possibility of meeting another human agent is added to the game world, an important, ontological shift has taken place. Yet users do not agree on how much attention should be paid to that shift from single-player to multi-player conditions. Some players of virtual game worlds embrace the possibility of human interaction, others regard their fellow human agents as an inconvenience.[107] The virtual world proper, then, is one with other human agents in it, but the contemporary, single-player game world is the not too distant cousin of the virtual world.

Secondly, virtual worlds can be considered "big" in a time-sense. They are sometimes referred to as "persistent" worlds.[108] From an ontological perspective, persistence of the virtual world means that its existence is not dependent on the actions of the user. The user can not shut off the virtual world in the same way he or she can shut off a single-player game world. From the viewpoint of user experience, the persistence of a virtual world is significant because it allows humanly lived time to be accumulated as history. 2005, for instance, saw the robbing of the Ironforge bank by the avatar Daddar, a historic event on the *World of Warcraft* server Mal'Ganis.[109] The single-player game world can generate related experiences, e.g., when *Fallout 3* allows me to look back on my early past as a low-life thief and scavenger from the vantage point of physical security and a sense of higher purpose later on in the game. That is, however, a personal past tied to my individual projects, not a shared history tied to the virtual world.

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107. See Ducheneaut et al., 2006a.
108. E.g. Klastrup, 2003: 100 and Castronova, 2005: 80.
109. Lowood, 2006: 370.

Thirdly, virtual worlds are big in a spatial sense. Here, I should explicate the difference between an ontological and a phenomenologically informed perspective on virtual worlds which have started to surface; I use the word phenomenological to mean experience-centred and not in any philosophical sense. Game scholar Espen Aarseth has recently provided a clear example of the ontological perspective. In order to problematise the notion of "world", Aarseth sets out to calculate the size of *World of Warcraft's* Eastern Kingdoms continent (which took up roughly half of the land mass of *World of Warcraft* at launch). His result: the entire continent of Eastern Kingdoms is a mere eight miles from north to south, hence it's area is not much bigger than Manhattan, i.e, a small island and not a proper "world".[110] In comparison, the planet Earth is almost 8000 miles from pole to pole, and it's surface area is roughly 8.5 million times that of Manhattan.

This is a very ontological approach to "size". From a phenomenological perspective, however, the size of *World of Warcraft* can not be measured in square miles alone. When considering whether or not *World of Warcraft* is big enough to be called a world, phenomenological factors have to be taken into account, such as the degree of felt freedom and the nature of travels. Sense of freedom is a slippery thing, not letting itself easily to measurement. And as for the experience of travel, it can not simply be reduced to minutes and seconds. Some journeys are undertaken out of necessity and feel tediously long whilst others are pure pleasure rides. The necessary, critical mass of space becomes difficult to pinpoint in a phenomenological perspective, i.e., when space becomes tied up with movement and freedom. We could change strategy and focus on the number of places necessary for the world to feel like a world, but is that number 2, 5, 25 or 300 places?

If it is so ambiguous, why bother with the concept of "world" at all? Because the virtual world challenges our notion of what an cultural artefact can be. Compared to a film, a song, a toy, a novel, a symphony etc., the virtual world is so big and typically demands attention for such incredible amounts of time,[111] that an addition to our vocabulary seems called for. But if we want to answer the question "What artefact can reasonably and productively be labelled a virtual

110. Aarseth, 2008: 116.

111. According to early findings, game worlds such as *EverQuest* and *Star Wars Galaxies* are used 22.71 hours per week on average (Yee, 2006c: 316).

world?" we should, ultimately, turn our attention to the subject rather then the object. In order to engage with cultural artefacts in a meaningful and rewarding manner, the subject has to adopt a certain attitude. The full impact of a Beethoven symphony takes emotional openness but also attention to structure. It is difficult for a moviegoer to get into a romantic comedy, if her or she is not in the mood for romantic comedy. A player who does not care for the outcome of a competitive game, will not receive the full outcome of that competitive game. Also attunement to virtual worlds has a special character. It entails the understanding and embracing of certain virtual world principles, hence *virtual worldview* can be used to denote the attitude of the engaged user. A parallel case can be found in architecture, often held to embody and reinforce a worldview. I will return to matters of attunement in the chapter on the *Map* and, especially, in the chapter on *Worldview*.

(8) Absent keywords

Choosing keywords means privileging some words over others. Here follows comments on some of the more obvious omissions from my vocabulary:

- *Virtuality*. To designers, users and journalists, "virtual world" is a label used rather unproblematically to identify phenomena such as *World of Warcraft* and *Second Life*. To philosophers, "virtuality" is a very rich and complex concept used in contrasting and highly personal ways by, e.g., Jacques Derrida and Gilles Deleuze. Virtuality is thus a theoretical resource standing ready to be tapped into. Engaging with that philosophical concept is, however, not a necessary condition for understanding virtual worlds. Using "virtual" in a broader manner, some scholarly discussions of virtual worlds hinge on the difference between the real and the virtual.[112] Here "the virtual" is simply understood as the "not real", a common sense of the word I will be using from time to time. In my architectural perspective, this broader real/not-real dichotomy is restated as the space/image dichotomy, where the image (especially the digital image) has connotations of the fluidly unreal (see *Space and image*, pp. 10-17). The meta-keywords of space and image run through the entire text but see, in particular,

112. E.g., Manovich, 2001 and Castronova, 2007.

Walking and looking (pp. 62-68) and *Against images* (pp. 142-148).

- *Cyberspace* and *Virtual Reality (VR).* In his book on virtual worlds, economist Edward Castronova holds that "[t]he literature on cyberspace in general is in fact very large and it would be distracting to get into it too deeply".[113] That is quite a statement, bordering on disdain for the academics working in the 1990s, but Castronova does have a point. Cyberspace is the 1984 brainchild of science fiction writer William Gibson, whereas VR has a more realistic flavour to it, regarded in the early 1990s as technological development's inevitable and not too distant endpoint.[114] The concepts prompted academics and journalists alike to conceptualise the present state of media affairs as a station along the way to a more or less clearly envisaged future. If cyberspace and VR is used in this way, they are in a sense "distracting" from contemporary reality. In that spirit, Castronova describes contemporary virtual worlds as "practical virtual reality", i.e., the closest we have actually come to the kind of VR speculated on in the 1990s.[115] My focus will be on the virtual world as it stands today. If anything, my architectural outlook is "backwards" (to non-digital place) rather than "forwards" (to cyberspace and VR).

- *Immersion*. The concept of immersion has been central in thoughtful and far-ranging writings on interactive and non-interactive media alike. The concept is, however, at odds with the architectural theory employed here. This is explored in more detail in *A note on immersion* (pp. 51-59).

- *Lefebvre*. When it comes to understanding experiences of place and space, the humanities often draw on a French mini-tradition to be found at the crossroads of anthropology and philosophy. This mini-tradition exposes and criticises certain aspects of modern-day capitalism by focusing on issues of place and space. Important names in this rather heterogeneous tradition are Guy Debord, Henri Lefebvre, Michel de Certeau and Marc Augé (who draws on de Certeau). Lefebvre

113. Castronova, 2005: 51. For a recent and up-to-date overview of the tangled roots of cyberspace and Virtual Reality, as well as the current status of the terms, see Lister et al., 2009.

114. Cf. my discussion of Benedikt in *Place and space*, pp. 17-25. On a related note, Lev Manovich writes: "Compared to the richness of modern concepts of space developed by artists, architects, filmmakers, art historians, and anthropologists, our computer spaces have a long way to go" (Manovich, 2001: 281). Slow-moving reality is expected to catch up with fast-paced theory.

115. Castronova, 2005: 3.

is perhaps the most respected and quoted author of the group[116] but in a new media/game studies context de Certeau is also quite well-known due to the influence of Henry Jenkins and Lev Manovich.[117] From a more focused virtual worlds perspective, however, I find Debord and Augé to be of higher relevance. In *Worlds of Junkspace* (pp. 184-190), I explore how the virtual world fits with core concepts put forward by Debord and Augé.

- *Style*. Virtual world designers of both the professional and the user varieties tap into the history of architecture as a stylistic resource, copy-pasting surface textures and spatial layouts into their designs. It is easy enough to "do architecture" in this way, for instance by adding traces of Art Nouveau to a space station in *EVE Online* or replicating the layout of Beijing's Forbidden City in *Second Life*. Architecture becomes more tricky to talk about when it is thought to be more than spatial layout and a particular way of decorating surfaces. To make that "architecture is something more" assumption is fundamental for how an architect understands his or her role (see n. 10, p. 8). As Le Corbusier puts it: "Architecture has nothing to do with the 'styles'. Louis XV, XVI, XIV and Gothic are to architecture what feathers are to a woman's head; they are pretty sometimes but not always, and nothing more".[118] Architects are aware that architecture is something one looks at, that it has facades and views etc., yet they constantly struggle to go beyond the purely visual. This essential problem was outlined in terms of the meta-keyword dichotomy of *Space and image* (see pp. 10-17) and I will be returning to it throughout the following chapters.

(9) Chapter overview

The vocabulary approach might give associations to an encyclopaedia, to be approached by the reader as he or she pleases. The following text is, however, very much intended as a whole to be read from beginning to end. The five keywords form a continuum. At one extreme, bodily orientation is the most dependent on direct perception and the least dependent on culture. At the other extreme, worldview is the least dependent on perception and the most dependent on

116. In a new media/cyberspace context, e.g. Bukatman, 2007, Nunes, 2006 and Stockburger, 2006.

117. E.g. Jenkins, 1992., Manovich, 2001. For an example of Jenkins' use of de Certeau, see note 201, p. 72).

118. Le Corbusier, 2008: 101. Apart from being "something more" than *style*,

culture. Map, landscape, and building take up middle positions between the two poles. This is, in fact, a good way of summing up the orientationalist attitude in architectural theory: insisting that architecture should be built with concrete, human bodies in mind, yet equally committed to architecture as an embodiment of a particular worldview. There is, then, a progression throughout the text, from a grounding in embodied agency, through the orientation-supportive functions carried by map, landscape and building, to the final reflection on how users are attuned to virtual worlds by way of virtual worldviews.

The chapter on the *Body* explores how felt agency in virtual worlds is focused in a graphical representation, i.e., an avatar. The avatar has a crucial role in obtaining a sense of dwelling in virtual worlds, a theme explored in more detail in the following chapters.

The chapter on the *Map* holds on to the commitment to bodily grounded experience, shared by architecture and virtual worlds, and explores the tension between such commitment and the use of imagery. The concept of cognitive mapping is introduced, and player cartography is explained as an explication of "structure" in a specific, architectural sense of the word.

The *Landscape* chapter hinges on the difference between "landscape" understood as image and environment. It offers a first consideration of the variety of ways users can engage with virtual worlds, i.e., with a focus on the landscape-image (the position of the landscape connoisseur) and the landscape-environment (the position of the goal-oriented gamer).

The chapter on *Building* centres on an ethnography of collective building projects in *Second Life*. The ethnography informs the more theoretical parts of this text. The chapter explores the devices employed by users in order to obtain a sense of dwelling: avatar, boundary and "image" (in a specific, architectural meaning of the word).

The *Worldview* chapter opens with a summary of the preceding chapters (*Encounters and attunement*, pp. 155-159), highlighting how the landscapes and buildings of virtual worlds are encountered with bodies and maps. Those encounters do not, however, take place in the same manner for all virtual worlds. The user is attuned to the virtual worlds in a specific way, and the concept of virtual worldview is presented as an analytical tool of use for both virtual worlds and architecture.

A critical interpretation of *World of Warcraft* forms the core of the chapter.

The *Conclusion* sums up my findings by tracing each of the five keywords through the entire text, thus highlighting the interrelatedness of the keywords. Additionally, the conclusion offers reflection on possible directions for future research.

2. Body

(1) The universal body

A virtual world user's body is active in a way that the film viewing body or the reading body is not. This puts the user directly in place, compared to the more indirect ways of getting in place offered by films and books. The user is, however, in place in a peculiar way: with and through an avatar, i.e., a graphic representation that functions as a focus for a sense of agency in the virtual world. A sense of bodily founded agency is crucial for architectural experience as well. Architecture and landscapes might be designed with a specific movement in mind, e.g., an imposing system of arches and staircases designed to impress the visitor on arrival, but architecture thrives on the relative freedom to take it in, literally on one's own pace.

It must be stressed that "the body" described in this chapter is a distinct conceptualisation of the body. It is a conceptualisation which emerges from my focusing on the differences between engagement with virtual worlds and forms of non-interactive media, and from my focusing on the similarities between engagement with the virtual world and architecture. *Agency* is thus singled out as the essential attribute of the body. This is congruent with all the architectural sources I am using. In contrast to a good deal of humanistic scholarship, my architectural sources simply ignore as irrelevant bodily attributes such as race and gender.[119] Le Corbusier addresses the issue directly in connection with his Modulor. The Modulor is a scale of proportions intended as an aid in all design processes, from the design of handheld tools to architecture on the largest scale. It is a "a measuring tool based on the human body and on mathematics".[120] Broadly speaking, the "mathematics" is the golden ratio and the Fibonacci series, and "the human body" is a universal body. The body has to be a universal one because Le Corbusier is working in a 20th century of increased international trade and standardisation; today, we would speak of this in terms of "globalisation".[121] This is the modern challenge to architecture: to embrace global standardisation

119. Humanities scholars often highlight race and gender when dealing with the body. For an introduction to such issues as they have been explored in connection with digital media in general and computer games in particular, see Dovey and Kennedy, 2006: 104-22.

120. Le Corbusier, 2000a: 55.

121. In 1948, Le Corbusier wrote the following which is reminiscent of contemporary, positive

and effectiveness of production whilst making architecture of aesthetic value. At this point, it must be remembered that Le Corbusier was concerned with living conditions in general, not only the living conditions of the elite. One of his lifelong goals was to "lend dignity to the houses of men [...] make a temple out of an ordinary dwelling: the 'family temple'".[122] Standardisation and effectiveness has, then, a moral dimension in so far they move architecture towards this humane goal of increased dignity:

> [I]t is right, and indeed imperative, to adopt the height of the tallest man (six feet) [as basis for the second version of the Modulor, BL], so that the manufactured articles should be capable of being employed by him. This involves the largest architectural dimension; but it is better that a measure should be too large than too small, so that the article made on the basis of that measure should be suitable for use by all.[123]

In this context of architecture answering not only the aesthetic challenge of globalisation but also the social and indeed moral challenge of poor living conditions, Le Corbusier can not be bothered with issues of cultural diversity, race or gender. He intends his designs and his design guidelines for "all races and all heights",[124] not in the sense of attention to diversity but in the sense that one size fits all. That size is a universal, 6 feet tall man. In many of the sketches illustrating the Modulor, Le Corbusier adds a human figure to stress that the Modulor is a tool for the design of spaces and objects fitting real, physical, human bodies. This figure is a man, complete with male genitals and broad shoulders, and it is simply outside the scope of Le Corbusier's thinking that this should be in any way problematic. Buildings should, quite literally, be designed for *men* because it is better that a building is a little bit too spacious than a little bit too small. In a different context, Le Corbusier writes: "Perhaps banality is just the thing that needs to be rediscovered; the happy partnership of man-and-his-environment; not 'interplanetary man' or 'speculative man'".[125] The "banality" of bodies-in-environments has to be pursued so that

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assessments of the economic and technological conditions of globalisation: "At the very heart of our civilization of the telegraph, the radio and the flying machine, where everything is exchanged, linked and interlinked, *above nationalities*, are the three Establishments of Man: to feed, to equip, to distribute. Those three are the driving forces and the links; continuity is created, driving away hostility" (Le Corbusier, 2000a: 125f. Emphasis in the original).

122. Le Corbusier, 2000b: 156.

123. Le Corbusier, 2000a: 63. Cf. criticism of the "splendid, glittering" American car being "twice as long as it need to be" (ibid., p. 53).

124. Le Corbusier, 2000a: 63.

125. Le Corbusier, 2000b: 146. For more on Le Corbusier's criticism of architectural intellectualism, see *Inhabitation of the plan* (pp. 78-83).

architecture does not become a purely intellectual exercise creating spaces that look good on paper but do not work in reality. The "banal" or universal body conceptualised by architects has proportions. It does not, however, in any significant way have gender or race. It is that universal body I write about in the following. As will become clear, it is a conceptualisation of the body fitting the game studies sources I am using (sources grounded in phenomenology and cognitivism).[126]

The user's sense of agency in a virtual world is inseparable from the crucial device of the avatar. For the sake of clarity, however, sense of agency and avatar will be separated at the outset. When sense of agency has been properly explained in the next section (*Sense of agency*, pp. 41-46), I use two sections to reintroduce the avatar (*Sense of place*, pp. 46-48, and *Avatar: Extension and model*, pp. 48-51). Then *A note on immersion* (pp. 51-59) is added, focusing on the difference between conceptualising the experience of space as something that can be scaled (a conceptualisation to be found underlying many accounts of immersion) and on the other hand the experience of space as something that can be modulated (the more architectural approach favoured here). The chapter is concluded with a *Summary* (pp. 59).

(2) Sense of agency

The concept of representation is inescapable when it comes to the avatar. The OED, for instance, defines the avatar as "a movable icon representing a person in cyberspace or virtual reality graphics". It is odd to find an overdetermined term such as "avatar" defined with recourse to another overdetermined term, "icon", but let us accept that the avatar is indeed a kind of "representation" of the user. Representation is a strong and useful concept. However, sense of agency is not necessarily tied to a graphic representation. Hence representation is a problematic starting point for understanding what an avatar is, and for understanding how having an avatar makes the experience of a virtual world different from watching a film or reading a book. It is productive, therefore, to start with the user's sense of agency in the virtual world, i.e., that the user is allowed to move around inside and perform actions in the virtual world.[127] After stressing

126. Again, Dovey and Kennedy, 2006: 104-22 offers a good introduction to game studies writings which do indeed highlight issues of race and gender.

127. In research focusing on the social aspects of virtual environments, the more socially suggestive

and explaining sense of agency in general terms, the avatar is reintroduced.

Torben Grodal accounts for the user of computer games in a way which stresses the question of agency and brackets the avatar. Grodal describes all kinds of media experiences in terms of the PECMA flow, PECMA standing for the sequence of *Perception, Emotion, Cognition, Motor Action*. The outside world is *perceived*, *cognition* takes place informed by *emotional* labelling of the perceived, and on the basis of this, a conclusion about how to *(motor-) act* is reached. According to Grodal, this fundamental, experiential flow structure is not changed because of the brain's labelling the experience "fictional", i.e., "not real", but takes place more or less like it does in real life.[128]

Media forms offer various, distinctive opportunities when it comes to simulating the PECMA flow. Film is great for producing the canonical, narrative flow. Literature has potential for complicated and interesting deviations from the canonical flow. A computer game allows its user to perform motor action (the MA in the PECMA flow). In a computer game, the player's actions affect the state of the game world. This change in state is communicated back to the player immediately. He or she can then act upon the world in its changed state. And so on, and so forth. The PECMA flow is, in other words, to be understood as a sensorimotor loop or link between the user and the virtual world. Or in the words of Ulf Wilhelmsson: "the player's own sensory motor system [is extended] via a tactile motor/kinesthetic link".[129] When it comes to establishing this link, Wilhelmsson argues against the importance of visibility and points to *Tetris* as an example of

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term "behaviours" is preferred to "actions" since "behaviours" include verbal as well as non-verbal communicative actions. The "Berkshire Encyclopedia of Human-Computer Interaction" thus defines the avatar as "a perceptible digital representation whose behaviors reflect those executed, typically in real time, by a specific human being" (quoted in Yee, 2007: 3).

128. The PECMA flow features prominently in Grodal, 2003 and in Grodal's book-long study of the film viewing experience, Grodal, 1999. For a shorter article focusing on the PECMA flow, see Grodal, 2006. Grodal's approach differs radically from traditional humanist scholarship where the difference between represented (or mediated) sensory stimuli and real-life (or unmediated) sensory stimuli is traditionally taken to be of great importance. The approach exemplified by Grodal is sometimes labelled *cognitivist*. Cogntivism can be described as a inter-disciplinary perspective dealing with embodied, human cognition by way of experimental psychology, evolutionary theory, neuro-psychology and other related disciplines. Understanding culture through a cognitivist lens has gained some following in media studies, particular in film studies where the central, cognitivist idea of embodied cognition has been contrasted with the strangely disembodied minds of, e.g., psychoanalytical theory. Likewise, the cognitivist figure of the active film viewer has been contrasted with the figure of the passive victim of harmful media influences. See Bordwell, 1989 for an overview of cognitivist film scholarship. (Riis, 1998 for a more recent overview in Danish).

129. Wilhelmsson, 2001: 67.

a gripping game with a strong sensorimotor link, but without that graphic representation we traditionally label "avatar": "There is an agency in the game which is not visible but still the result of the actions taken are definitely visible. There is a definite and clear presence of an agent in the game".[130] One could counter this by labelling whatever *Tetris* block one has control over at any given moment "avatar" but that would not seem proper. To fit the conventional sense of what an avatar is, the representation has to be relatively stable. A stable avatar could, in fact, easily be added to *Tetris*, e.g., by adding a monkey that moves over the screen and manipulates the *Tetris* blocks on behalf of the user. The avatar-monkey could even be added without changing the physical input performed by the player whilst playing the game. The only change would be that the player would have a graphical focus for his or her sense of agency. A more recent example of sense of agency without (or almost without) avatar is the game *Flower*. Here the player is in control of a small, flying petal. As the player steers the unassuming petal through the virtual world of *Flower*, more petals are collected and float along in the tailwind of the avatar-petal. The collected petals can reach a very high number, thus obscuring line of sight to the avatar-petal, but this does not break the sensorimotor link. Although the graphical focus for agency becomes blurry from time to time, the player still sense that he or she is in control of a force flying through the virtual world (see the screenshots below).

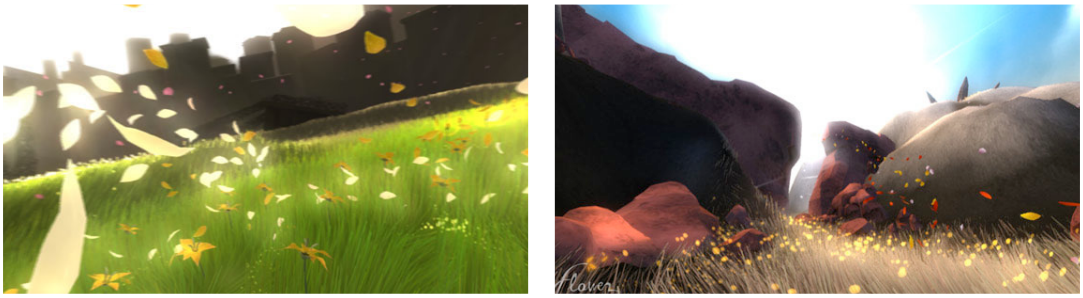

Figure 1: *Flower*. Blurry focus for sense of agency. (Screenshots: ThatGameCompany)

The benefit of this conceptual dissection of avatar and sense of agency becomes clear when we look at contemporary, virtual worlds. The virtual world user is in two kinds of control: control of avatar movements and control of "camera" movements. Of course no camera is actually involved but the camera metaphor is an easy shortcut for understanding the kind of control held by the

130. Wilhelmsson, 2001: 150.

user. It is as if the computer screen shows what is in view from a moveable camera controlled with one hand, whilst the other hand is in charge of the avatar's movements. At the time of writing, camera control is typically performed with a mouse (right hand), and the movements of the avatar are mapped onto the left hand in control of the keys WASD (W = move forward, A = turn left, D = turn right, S = move backwards). A console game facilitates the same kind of dual avatar/ camera control, mapped onto the buttons and analogue sticks of a gamepad. In the case of the Nintendo Wii system, control is mapped onto a nunchuk (left hand, typically used for avatar movement) and a remote (right hand).[131]

Logically, four ideal perspectives can be deduced from the dual avatar/camera control set-up.

1. Avatar control with simultaneous camera control [AVA + CAM]

2. Avatar control without camera control [AVA ÷ CAM]

3. Avatar and camera control conflated [AVA = CAM]

4. Camera control without avatar control [CAM ÷ AVA]

With option 3 and to some extent with option 4, the user's sense of agency does not have an avatar as its focus. This does not mean, however, that the sensorimotor link between user and virtual world is disconnected or disturbed. The sense of agency is intact but it is modulated. Constant oscillation of agency (having agency in the sense of camera-control, avatar-control or both) is a staple of the virtual world experience. When the ideal types of control are "fleshed out", i.e., consider from the experiential perspective of the user, three ideal types are arrived at, as shown in the table below.

131. Note that Asian virtual worlds as well as, e.g., *Myst Online: URU Live*, map the dual camera/avatar movement controls in a different way, using the mouse and its buttons for movement as well as for camera controls.

<table>
<tr><th></th><th colspan="3">Properties of basic perspectives</th></tr>
<tr><th>Basic perspectives</th><td>Camera control</td><td>Avatar control</td><td>Visibility of avatar</td></tr>
<tr><td>Subjective perspective
[AVA = CAM]</td><td colspan="2">Conflated</td><td>Invisible</td></tr>
<tr><td>Objective perspective
[CAM ÷ AVA]</td><td>Camera controlled</td><td>Avatar not controlled</td><td>Mostly invisible (and not focused on)</td></tr>
<tr><td rowspan="2">Self-perspective
[AVA + CAM]

Follow cam-variation
[AVA ÷ CAM]</td><td colspan="2">Simultaneous and independent</td><td rowspan="2">Visible</td></tr>
<tr><td>Camera not controlled</td><td>Avatar controlled</td></tr>
</table>

Table 1: Basic perspectives and their properties

- *Subjective perspective* is "subjective" in the sense film theorists talk of "subjective point-of-view" when the camera lens and the eyes of the film character are conflated,[132] and is emblematic for the computer game genres of first-person shooter and horror. Subjective perspective can be employed in many virtual worlds, such as *World of Warcraft* where the camera is allowed to zoom all the way in and end up exactly where the avatar's eyes are. Incidentally, this is called "camera view" in *Second Life*.

- *Objective perspective* depends on the immobility of the avatar. The avatar is left behind and all attention is focused on operating the camera. As in *Tetris*, agency is felt but does not have a graphical focus. This is how animators inspect a 3D environment as they work on it (although they do not have a left-behind avatar lying around somewhere). Objective perspective is available in *Second Life* where it is often used by users engaged in building projects.

- *Self-perspective* allows me to look at myself from the outside. This can be done either with the camera automatically following the avatar (so-called *follow cam*), or by controlling the avatar and camera simultaneously. The latter is probably the most widely used option in *World of Warcraft* since it allows the best overview in typical situations such as combat and resource gathering. No

132. E.g. Bordwell, 1985: 60.

matter whether or not avatar control is supplemented with camera control, the distinctive trait of self-perspective remains the same: the user's sense of agency has the avatar as a graphical focus.

Agency is frequently modulated, when virtual world are engaged with.. The user takes control of the camera, then the avatar, then both etc. But objective perspective is not entirely avatar-free, even though the avatar is not depicted on the screen. The avatar sticks, in a sense, because perception and understanding of the virtual world is filtered through the avatar's capabilities. This phenomenon can be better understood by a short expedition into the history of place as a philosophical concept; this will take up the following section (*Sense of place*, pp. 46-48). I then return to recent avatar scholarship (*Avatar: Extension and model*, pp. 48-51).

(3) Sense of place

At first glance, objective perspective seems like an illustration of the disembodied, Cartesian subject. According to the history of place and space laid our by Casey earlier, Aristotle and Plato understood the connection between human and world in terms of body and place (see *Place and space*, pp. 17-25). Gradually, thinking about the world in terms of places gave way to a focus on space, and it became possible to think of the subject apart from its body. In Casey's perspective, place's darkest hour was the Enlightenment with Kant's modern "placeless subject". Place and body were, however, not entirely forgotten at this point in the history of philosophy. There is a a bodily undercurrent in philosophy, even in Kant, as Casey points out using a six page, 1768 Kant essay as his evidence. According to Casey, Kant states in this essay that

> [t]hings are nor oriented in and by themselves; they require our intervention to *become* oriented. Nor are they oriented by a purely mental operation: the a priori of orientation belongs to the body, not to the mind.[133]

Things are oriented in the world because the body orients them? A far cry indeed from the effect a placeless or disembodied Enlightenment subject is expected to have on the world. Merleau-Ponty later credits Kant "with being the first to acknowledge explicitly that locating objects in space calls for the motility of the body",[134] and goes on to describe the relationship between place and

133. Casey, 1997a: 205. Emphasis in the original.

134. Casey, 1997a: 230. Casey is not explicit when it comes to exactly where Merleau-Ponty cites Kant,

lived body.[135] Here things starts being very relevant for virtual worlds. The concept of place becomes contingent on a body, or rather, on a sense of agency. As Casey points out, Merleau-Ponty gives place

> a *virtual* dimension overlooked in previous accounts. A place I inhabit by my body [...] [and place is] an ambiguous scene of things-to-be-done rather than of items-already-established. A place is somewhere I might come to; and when I come to it, it is not just a matter of fitting into it. I come to a place as providing an indefinite horizon of my *possible* actions.[136]

This "virtual dimension" of "possible actions" means that when a *Second Life* building is explored in objective perspective, with an avatar-disembodied camera, the avatar still plays a role. Its presence is felt as a "virtual avatar", meaning that the user's sense of proportion is informed by the out of sight avatar. The building is tall or low, big or small, as measured against the avatar. A slope is walk-constraining or walk-affording, depending on how the avatar is imagined to move up it.[137] An important nuance is, however, introduced with the concept of "inhabitation"; in the Casey quote above: "A place I inhabit".[138] Inhabitation highlights that a sense of agency is not only a sense of being able to perform a set of certain, well defined actions. Casey continues his summary of Merleau-Ponty's position a few pages later, and we can choose to read this quote as a description of the avatar's role in virtual world experience (note the mention of "my virtual body"):

> In noninstrumental settings as well, the body remains a constitutive force. A snowbound glade could not constitute a full-fledge *place* unless I could at least tacitly, by imputation, feel myself to be there bodily [...] Similarly, the lonely lighthouse is a place insofar as I can, by proxy, as it were, imagine *someone's* body (not necessarily my own) inhabiting it. In order to effect such imputations, I need to call on my virtual body, which is capable of inhabiting even the most remote and seemingly vacuous place. So long as something is a "possible habitat" for a possible body, it can count as

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but it seems to be Merleau-Ponty, 1945: 443. One can also deduce Merleau-Ponty's agreeing with Kant from passages such as the following: "Dans l'espace *lui-même* et sans la présence d'un sujet psychophysique, in n'y a aucune direction, aucun dedans, aucun dehors" (Merleau-Ponty, 1945: 236. Emphasis in the original).

135. In Merleau-Ponty, 1945.

136. Casey, 1997a: 230. Emphasis in the original. Cf. Merelau-Ponty on "des horizons indétermine´s" (Merleau-Ponty, 1945: 164).

137. For an explanation of the words *constraint* and *affordance* in the Gibsonian sense, see p. 107.

138. In Merleau-Ponty's work, the words habit, inhabit, and inhabitation take on a special meaning. Merleau-Ponty objects to the notion of bodies simply being in space, or time for that matter, and insists on acting, directed bodies inhabiting space and time (Merleau-Ponty, 1945: 162).

a place.[139]

In a kind of projection, Merleau-Ponty calls upon his "virtual body" to "inhabit" the snowbound glade and the lonely lighthouse. In an essay on *The Place of Man*, architect and architectural theorist Juhani Pallasmaa expresses a sentiment close to Merleau-Ponty's: "In an environmental experience, there is an unconscious bodily identification with the object, a projection of the body pattern onto what is experienced, or a physical mimesis, an unconscious mimicry".[140] Such projections are important not only in the experience of place in general but also more specifically in the architectural profession, when architects work with models, drawings and other representations of unrealised projects (see *Walking and looking*, pp. 62-68). With an avatar, projections gain a graphical focus and a more immediate bodily foundation. The avatar stands in for the otherwise purely imagined virtual body, it is *a device which aids in the inhabitation of a place by proxy.* In other words, the avatar stands in for the user. It is the user's substitute, not merely his or her representative; as I said earlier, the concept of representation can easily lead astray when virtual worlds are examined.

I will return to the theme of inhabitation by proxy (see *Inhabitation of the plan*, pp. 78-83, and *Dwelling with avatars*, pp. 137-138). Here I turn from philosophy of place and to recent avatar scholarship.

(4) Avatar: Extension and model

Inspired by Merleau-Ponty's notion of inhabitation, Rune Klevjer has aptly summed up the avatar as "an extension that is also a model".[141] The extension aspect is the aspect described as a general sense of agency above, or following Grodal and Wilhelmsson: a sensorimotor link between user and virtual world. A link that might or might not be focused in a graphical representation (i.e., in

139. Casey, 1997a: 235. Emphasis in the original.

140. Pallasmaa, 2005j.

141. Klevjer, 2006: 95. Turning to the philosophy of mind, Gregersen and Grodal "follow Shaun Gallagher in making a basic distinction between *body image* and *body schema*" in order to explain the user's sense of agency in virtual worlds (Gregersen and Grodal, 2008: 66). This corresponds very roughly to the distinction between extension (body image) and model (body schema) but adds the dimension of ownership. The user experiences ownership of his or her body image but not of a body schema. This leads Gregersen and Grodal to sum up sense of agency in virtual worlds as "*an embodied awareness in the moment of action*, a kind of *body image in action*" (ibid. p. 67. Emphasis in the original).

an avatar). The avatar as extension has some kinship with a tool, e.g., a hammer the user extends his or her agency with, but as Klevjer points out, there are important differences between the avatar and the tool proper:

> The avatar is not just acting upon, but also being acted upon and affected by; it is submitted to and exposed to its environment. In contrast, tools do not belong to the environment; what we are interested in is their capacity to alter the environment, not their capacity to become altered by it. [...] Unless the hammer is taking part in some kind of make-believe, there is no reason for it to be willingly affected by the nail.[142]

The avatar is a tool, albeit in a way transcending both everyday and philosophical meanings of the word; *supratool* would be a fitting term. But an account of avatars as such supratools is not enough to satisfy Klevjer, the avatar's model-aspect must be accounted for as well:

> Because the avatar is an extension that is also a model, it is submitted to its environment in a way that the phenomenological concepts of extension and tool-use do not account for. In computer games, the concept of the tool may capture the functions of a mouse cursor, but not the "functions" of Mario in *Super Mario 64* (Nintendo 1996), who definitely belongs to his environment in all sorts of possible ways. Most importantly – and representing the ultimate symbol of "avatarhood": Mario can "die", thereby erasing or ejecting the player's fictional presence from the environment.[143]

The avatar "is also a model" because it "has objective properties and capacities that we explore, challenge and learn from when we engage with it",[144] e.g., when Mario's jumping and running capabilities are explored, challenged and learned from. Focusing on the avatar-as-model thus entails a shift in the user's engagement with the avatar: from tool-yielding action towards a more reflective stance. The avatar-as-tool is used to move around, then the avatar-as-model is ordered to jump over a chasm, and the user watches (and learns) as the model is implemented, i.e., as a simulation takes place. James Newman aptly uses *Off-Line engagement* to refer to this kind of situation, where the user is very engaged in the avatar and the action potentials it offers but do not have the opportunity to perform any actual input.[145] If the avatar does not make it over the

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142. Klevjer, 2006: 95. Wilhelmsson has also noted how the user's possibility of exerting force on the virtual world opens up for the virtual world exerting its force on the user (Wilhelmsson, 2001: 150). This reciprocal effect is not unique to the virtual worlds of the modern-day, 3D kind. Designers of MUDs (i.e., text-based precursors of contemporary virtual worlds) state the reciprocal effect as a design goal. As one designer puts it when interviewed by T.L. Taylor: "I do think an environment needs physics, some kind of laws, something to effect and something to be effected, before you can 'feel' a body" (Taylor, 2003: 29).

143. Klevjer, 2006: 95.

144. Klevjer, 2006: 83.

145. Newman, 2002. Newman's point is clearly demonstrated with the case of so-called *Quick Time*

chasm it was prompted to leap over, the user is left to watch and wonder whether the avatar survives the fall. This will provide the valuable information about how the model works (i.e., information as to how falling affects the avatar), thus clarifying the user's sense of agency. Incidentally, *World of Warcraft's* high-level *Wrath of the Lich King* expansion (character levels 71-80) plays around with the avatar's model aspect in interesting ways. After playing through levels 1-70, the player is quite familiar with the capabilities of his or her avatar. Certain patterns of movement and fighting have been memorised and can be performed almost automatically by the player. Depending on taste, it is then frustrating or refreshing to have one's agency transferred from the avatar proper with its well-known set of capabilities to new entities with unknown capabilities, such as siege engines or large creatures. A prominent example of the latter is the Etymidian, a giant, Golem-like construct that the user's avatar literally rides (see the figure below).

Figure 2: *World of Warcraft*. The Etymidian. Sense of agency transferred from avatar to giant (avatar mounted on giant's left shoulder)

To complete certain quests, it is necessary to play the Etymidian. This entails learning to use some of its attack powers. Meanwhile, the avatar proper is mounted passively on the giant's left shoulder. The avatar is still there as a graphical focus of sorts, but sense of agency is focused somewhere else, namely, in the giant ridden by the avatar. The player is offered a curious kind of self-perspective without self-control.

Models are in fact implemented continuously when avatars are dealt with, as Andreas Gregersen

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Events, i.e., longer, fixed sequences of animation in which the user is only prompted to act occasionally.

points out in slighly more technical language than Klevjer's:

> [T]he player is not offered the actual action opportunity of triggering avatar actions. Rather, s/he controls small sequences of animation which represents a character who performs P-actions [i.e, so-called primitive actions; very basic actions, BL].[146]

Returning to the attempt to jump over a chasm, the user do not actually control the avatar's legs. He or she merely control at which points in time small, animated sequences of the primitive actions running and jumping are rendered. But as long as the user gets ample opportunity to influence the simulation, i.e., which animations are played, the sensorimotor loop between user and virtual world remains intact and anchored in the avatar. As Ulf Wilhelmsson puts it, the user only watches the avatar's motion, he or she experiences *locomotion*, self-movement.[147]

Klevjer concludes with a rather tight formulation: "the whole point of engaging with an avatarial extension is that it is subjected to and resides in its environment on behalf of the player".[148] The architectural connotations of the words "resides in" are not intended by Klevjer, but let me follow their lead anyway. The avatar can "[belong] to his environment in all sorts of possible ways", as Klevjer had it in the quote above. These "possible ways" include, I would like to add, "residing" in the architectural sense of *dwelling*, a possibility I return to in the chapter on *Building* (*Dwelling with avatars*, pp. 137-138). Here I conclude this chapter by taking a look at the concept of immersion.

(5) A note on immersion

The sense of agency in a virtual world triggers strong engagement that is sometimes described in terms of *immersion*.[149] In literary as well as in media studies, the concept of immersion has spurred much thoughtful reflection on engagement with media. Marie-Laure Ryan's book "Narrative as Virtual Reality" is a strong example of this, using "immersion" to further the narratologist's aim

146. Gregersen, 2008: 130f.

147. Wilhelmsson, 2001: 67.

148. Klevjer, 2006: 96.

149. E.g. Grodal: "The closer a game experience gets the player's optimal mental and motor capacity the less capacity is available for being conscious about the game being just a game: the game provides total immersion" (Grodal, 2000: 204). This is reminiscent of psychologist Mihaly Csikszentmihalyi's *flow* concept (Csikszentmihalyi, 2008), widely used by game scholars to explain the engagement with computer games (a possibility pointed out by Csikszentmihalyi himself).

of cross-media studies.[150] But in more specialised and design-oriented writings, immersion is infused with a false assumption of scaleable space. This comes to the surface when roadmaps to immersion are suggested, with various, distinct stages leading from un-immersed to fully-immersed.[151] The same notion of scaleability is found in literature on *Virtual Reality (VR)*, with VR forming one end of an experiential continuum stretching from VR to the real environment,[152] and immersion sometimes introduced as an experience fully obtainable with Virtual Reality and obtainable to some lesser degree through other, less advanced media.[153] Much of this literature takes space to be something that can be quantitatively scaled and experienced to a higher or lower degree with the aid of various technologies ("now you experience 10% space, now you experience 65% space and now you're at 100%, you're fully immersed!")

In contrast, and with the benefit of hindsight, Edward Castronova points to Jack Thorpe who worked on tank simulations for the US army in the 1980s. Rather than aiming for a simulation offering total replacement of reality (the basic premise of VR), Thorpe was guided by the notion of "selective fidelity" to reality, focusing on the parts of the simulation necessary for the concrete exercise to work.[154] Ryan makes a similar argument against defining immersion through VR, also with a focus on "selective fidelity" or "highlighted features" as she puts it. Ryan thus distinguishes the immersive qualities of literature from VR immersion, the latter being non-representational because it replaces reality with a complete an convincing "virtual" reality: "In contrast to virtual realities of the electronic kind, the immersive qualities of the representation of space depends not on the pure intensity of the information [...] but rather on the salience of highlighted features".[155] The "intensity of information"-logic opposed by Ryan is a logic of scaleability. Scaleable space does not go well with the architectural sources employed here because architects tend to understand place and space in terms of qualities rather than in terms of scale.

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150. Ryan, 2001.

151. E.g. Brown and Cairns, 2004.

152. E.g. Milgram, 1994.

153. Grodal, 2000: 197, Lister et al., 2003: 387.

154. Castronova, 2005: 88. Castronova provides a short review of early VR tying immersion together with VR (ibid., pp. 285-294).

155. Ryan, 2001: 124. After "the salience of highlighted features" Ryan continues: "and on the ability of descriptive passages to project a map of the landscape". The latter feature is suggestive of *Cognitive mapping*, pp. 68-78.

Broadly speaking, the architect's understanding of place and space is characterised by modularity rather then scaleability.[156] As discussed in the previous chapter (see *Place and space*, pp. 17-25), Le Corbusier is sometimes cast as the ultimate, modern master planner with a cold interest in how to make people fit into scientifically calculated, Euclidian space. But this is a caricature. Far from understanding space as straightforwardly scaleable (the notion underlying certain accounts of immersion), Le Corbusier understands "space" to have distinct qualities, and he engages with qualitative space both mentally and with his body:

> [M]y entire intellectual activity has been directed towards the manifestation of space. I am a man of space, not only mentally but physically: I love airplanes and ships. I love the sea, the flat coast and the plains more than the mountains. The foothill of the Alps, the Alps themselves crush me. Higher up, near the summits, on the last pasture meadows and on the peaks, space is born again, but the materials employed there bear witness to the savagery of unleashed elements, the catastrophe of geological upheavals. How much deeper is my feeling for the admirable clock that is the sea[.][157]

Le Corbusier's qualitative and bodily founded understanding of space is a good model for understanding the virtual world user's sense of spatiality. It is also an understanding of space that has some affinity with the way perceptual psychology describes spatial experience, hence I would like to conclude this chapter with a short field trip into perceptual psychology. The goal is to expel any remaining sense of spatial (and "placial") experience being scaleable, and to set the user's sense of agency at the centre of his or her experience of space and place. Sense of agency depends on the user's actions triggering immediate and perceivable changes in the state of the virtual world. When these user-induced changes of state have to do with movement, a special sense of space is triggered because their is a felt similarity between movements of the actual body and screen-movements; this effect is known as *motor-isomorphism*. The effect is especially pertinent in the case of special interfaces such as gamepads (Playstation 3) or remotes (Wii) with motion-detection. As for the standard keyboard-mouse set-up of virtual worlds, motor-isomorphism is much more subtle: moving the mouse will make the cursor move over the screen analogously, pressing *w* will make the avatar move forward, pressing *s* will make it move backwards (w [forwards] is in front of s [backwards]). Hence the virtual world does not provide very impressive examples of motor-isomorphism. Examples a), the swinging of a Wii remote corresponding to the

156. Ermi and Mäyrä, 2005 provide a model of immersion in terms of modularity rather than scaleability.

157. Le Corbusier, 2000b: 27.

swinging of the sword of the on-screen avatar,[158] and b), the movements of the Playstation 3 gamepad being analogous to those of flying petals (*Flower*, see figure 1), is much more impressive than example c), the placement of the w- and s-keys corresponding to the direction of the avatar's movements. Yet the subtle motor-isomorphism involved in current virtual world navigation is fundamental for establishing the felt spatiality of the virtual world, and the differences between the keyboard and the Wii remote are, essentially, differences of flavour, of interface aesthetics.[159] The crucial question remains whether or not there is some correspondence, however modest, between movements of the actual body and movements on screen. In all cases of felt motor-isomorphism, similarity between movements of the actual body and movements on screen is suggestive of a space which is not the actual body's space. How could the body's movements be similar to other movements, if there was no space for these other movements to occur in? Due to felt motor-isomorphism, even the simplest of interactive, digital games, such as classics *Pong* and *Pac-Man*, trigger some vague sense of space. By employing a number of the visual depth cues outlined immediately below, that most basic sense of space can be enhanced.

According to perceptual psychology, a sense of space is triggered by various depth cues, none of which have privacy over the others.[160] Textbooks on perceptual psychology typically organise depth cues in categories, e.g., in the three categories of *physiological*, *pictorial*, and *dynamic* cues in the standard textbook of Vicki Bruce and Patrick Green I will be using below.[161] I will go

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158. The swinging of swords features prominently in a number of games for the Wii console but with varying degrees of analogy between the movements of the remote and the on-screen sword. In *The Legend of Zelda: Twilight Princess*, swinging the remote trigger various attacks. The swinging of the remote simply replaced the pressing a few buttons. The same can be found in *No More Heroes* where the player can swing the remote upwards or downwards, triggering upwards or downwards attacks with the avatar's mock ligthsaber. But although the attack options are very limited (upwards or downwards), the angle at which the remote is held is analogous to the angle at which the avatar of *No More Heroes* holds his sword. This has no effect on the game in terms of how the player is allowed to hurt his enemies but it adds to his sense of bodily founded engagement in the virtual world.

159. For a neuro-scientifically based discussion of the differing interface aesthetics of *Wii Tennis* and *ICO* (a PC game employing the standard input devices of keyboard and mouse), see Gregersen and Grodal, 2008.

160. Marr.

161. The following is based on Bruce and Green, 1990: 140-71. Other textbooks organise the cues differently, e.g., by way of cues being mono- or binocular (e.g., Matlin and Foley, 1996), but these differences are not important for the present purposes. Mark J. P. Wolf employs the concept of depth cue in his historically oriented survey of *Space in the Video Game* without, however, explicating his theoretical foundation (Wolf, 2001: 70-75).

through the list of depth cues and provide comments on the possibility of employing them, as well as on a few relevant, technical details concerning the experience of virtual worlds. The purpose is, as already stated, to counter the notion of scaleable space. From an experiential perspective, space comes in many flavours, as it were.

Physiological cues.

1. *Convergence*. When the eyes follow a moving object closing in on the viewer, or when focus is shifted from an object relatively far away to a closer one, the eyes converge on the object focused upon (see the below figure). The difference in angle of inclination of the eyes is felt as muscle strain in the muscles around the eyes. This physiological depth cue can not be triggered as long as the user's eyes are constantly focused on an unmoving object, namely, the screen.

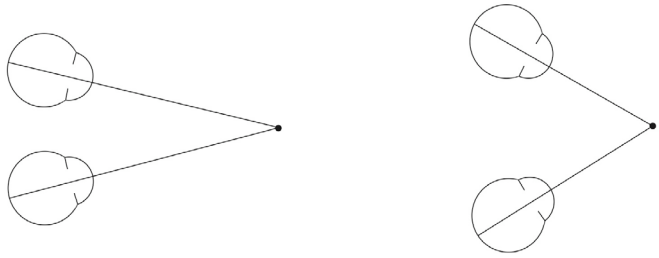

Figure 3: Convergence (after Bruce and Green, 1990)

2. *Accommodation*. As the eyes focus on a near object, the lens accommodates by becoming thicker (see the figure below). As with convergence, this process results in felt muscle strain. This cue can not be triggered in a situation where the user's eyes are constantly fixed on the unmoving screen.

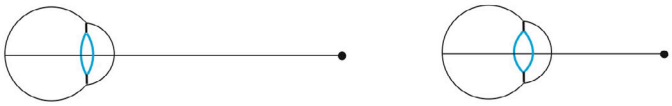

Figure 4: Accomodation (after Bruce and Green, 1990)

3. *Stereopsis* results from the disparity between the images produced in the left and right eyes.

This cue does not work at far distances (i.e., over 100-120 metres[162]). Stereopsis can be triggered with a stereoscope or with 3D cinema. In the latter case, separation of input to the two eyes was traditionally ensured by projecting two overlapping, differently coloured images on the screen, so-called anaglyphs, then filtering these images by having the viewer wear coloured glasses (e.g., with a green glass filtering out the green image on screen, a red glass filtering out the red image on screen). Technological improvements will soon make it possible to employ this technique in virtual worlds with non-coloured glassed or entirely without the use of glasses.

Pictorial cues are

> so-called because artists since the Renaissance have employed them to convey an impression of depth in their work. If certain features can give depth information on a canvas then perhaps those same features may be used by the brain in its interpretation of the "flat" retinal picture.[163]

The very pragmatic tone of this quote from a psychologist stands in marked contrast to how pictorial cues, first and foremost perspective, is often commentated on critically from within the humanities.[164]

1. *Perspective* is employed in almost all contemporary virtual worlds. *EverQuest* (1999) was the first widely popular world to use the technique. A few years before that, worlds such as *Nexus: The Kingdom of the Wind* (1996), *Lineage* (1997), and *Ultima Online* (1997) employed so-called isometric perspective.[165] Whereas in perspective, two parallel railway tracks famously converge in a single point, the same tracks keep their even distance indefinitely when seen in isometric perspective. In game studies literature, isometric perspective has been associated

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162. Aumont, 1994: 28.

163. Bruce and Green, 1990: 155.

164. In 1924, with an essay aptly titled *Perspective as Symbolic Form*, Erwin Panofsky set the stage for critical writing on perspective as a drawing technique. Since then, a number of writings has been dealing with the same issue, more or less inspired by Panofsky. Jacques Aumont provides an overview, concluding that all of "these authors [agree that *perspectiva artificialis*] is less a breakthrough in geometric perfection that the endowment of that perfection with symbolic value" (Aumont, 1994: 164). Aumont takes a close look at cinema from this perspective. More recently, also Virtual Reality has been considered from a Panofskyan perspective, e.g. Manovich, 2001: 254ff and Lister et al., 2003: 129-33. Panofsky is also referred to as an authority on perspective in architectural writings, e.g., Kerckhove and Tursi, 2009.

165. Bartle, 2007: 160.

with a detached attitude towards the game world, whereas perspective has been associated with a more engaged attitude toward the game world, and sometimes described as a key factor in obtaining immersion.[166]

2. *Height*. "The further away an object is from the observer the higher in the visual field its image will be cast".[167] This cue is easy to trigger on a canvas or screen and employed in all contemporary virtual worlds.

3. *Shadow*. Shadows are important for conveying a sense of the solidity of an object and, by implication, of depth. Lighting and shadow effects in virtual worlds become more and more sophisticated but are not on a par with the effects seen in offline games, at least when it comes to close objects. As for objects perceived at a distance, such objects "appear less clear, less bright and have slightly different spectral properties",[168] as suggested by the *World of Warcraft* screenshot below. Not only is the diminishing level of clarity productive as a depth cue, it also saves computational resources.

Figure 5: *World of Warcraft*. (3) diminishing level of clarity and (4) interposition cueing depth

4. *Interposition,* or overlay, is a depth cues easily triggered on a screen, e.g., with the branches overlaying each other in the above screenshot. The depth cue stems from the brain interpreting overlaying shapes as overlaying, rather than as shapes in exactly the same plane

166. Ryan, 2001: 3, King and Krzywinska, 2006: 97-106.
167. Bruce and Green, 1990: 156.
168. Bruce and Green, 1990: 157.

(like pieces of a jigsaw puzzle).

Dynamic cues.

1. *Motion parallax*. Whether it is the observer or the object of his or her observation that moves, the visual result can signal depth, e.g., when a close tree seems to move faster than a faraway tree, when observed from a moving train. That effect can certainly be found in virtual worlds.

Many of my comments could also have been made about a non-interactive, audio-visual medium such as cinema. In fact, the very first theorist of cinema, psychologist Hugo Münsterberg, wrote the following in 1916, stressing the inherently spatial nature of the cinematic screen experience:

> [The screen] is flat like a picture and never plastic like a work of sculpture or architecture or like a stage. Yet this is knowledge and not immediate impression. We have no right whatsoever to say that the scenes which we see on the screen appear to us as flat pictures.[169]

This is as true of virtual worlds as it is of cinema. Perceptual depth cues make an "immediate impression" on the user, cueing a sense of space despite the background knowledge that the cues are taken from a screen and not the real world. To the purely visual depth cues of the screen, we can add the bodily effect of motor-isomorphism experienced when engaging with the virtual world through an interface. Surely, neither cinematic space or virtual world space feels anything like the space of the real world: As just shown, only one out of three physiological depth cues can be simulated as long as a screen is involved, indicating a fundamental difference in experience. And although the human field of vision is almost 180 degrees, the screen limits the relevant part of that field to a fragment.[170] But this can not be used to argue that the space of the virtual world is a pure illusion and that we need to subscribe to advanced theories of virtuality to explain the user's having a spatial experience. There is nothing illusory about the depth cues that do work, or about motor-isomorphism. Architectural theory dealing with place and space is thus directly relevant for understanding virtual worlds, and not only relevant as a provider of metaphors and

169. Münsterberg, 2002: 65.

170. Not only does the reliance on the screen entail a quantitative narrowing of the field of vision. As peripheral vision becomes irrelevant, screen-vision also entails an important qualitative shift in experience. For physiological background information, as well as some reflection on aesthetic consequences, see Aumont, 1994.

buzzwords.[171]

(6) Summary

A sense of agency, including locomotion, is essential in the experience of both architecture and virtual worlds. In the virtual world, sense of agency stems from the user's bodily input having immediate influence on the state of the virtual world. If nothing else, the state of the virtual world is changed in so far that the user's position in it is changed. The continuous possibility of having an effect on the world, and the continuous and immediate sensory feedback of these effects, create a sensorimotor loop or link between user and virtual world. The sensorimotor link typically has a graphical representation as its focus. This focus in called an avatar. Motor-isomorphism between the user's inputs and state changes in the virtual world, e.g., the movements of an avatar, strengthen the user's sense of agency. Sense of agency in a virtual world comes in three different modulations or perspectives which are frequently interchanged as the virtual world is used: Objective perspective (control of camera but not of avatar), subjective perspective (in which control of camera and avatar are conflated) and self-perspective (in which the user typically has control of both camera and avatar simultaneously but the camera might also be an automated follow cam).

The avatar is, however, more than a focus for sense of agency. As Rune Klevjer puts it, "the avatar is an extension that is also a model" (originally quoted on p. 49). The avatar is acted through and with (extension) but also treated as a model: The avatar is looked at, played with and explored. Rather than being a mere representative, the avatar is the user's substitute in the virtual world. It give the otherwise purely mental projection of oneself into place a focus and a more bodily foundation. It is therefore a device that can aid in inhabiting a place by proxy; more on inhabitation (or "dwelling") in the chapter on *Building*.

171. An example of the latter would be the mentioning of "liquid architecture", see n. 4, p. 5.

3. Map

(1) The curving and the circle

Let me start with an example: a map of the Undercity, home of *World of Warcraft's* Forsaken (or "Undead"):

Figure 6: *World of Warcraft*. Map of the Undercity

Undercity is confusing to the newcomer. It takes numerous attempts at navigation, before it sinks in that Undercity is symmetrical, that the city centre is circled by a couple of roads and a canal (the green ring on the map) and that certain important locations are added on in the north-western, north-eastern, south-eastern and south-western corners. All this information is readily available from a map like the one above. But one glance at the map is not enough to give a rooted and confident sense of how Undercity is laid out, in other words to give an "internal map" of the place. Building up an internal map takes frequent, one might even say habitual, physical navigation of the Undercity. Take the canal, for example. The map above shows that the canal to *looks like* a circle when seen from above, but this is not the same as having a sense of the canal *curving*. To get a sense of the regular curving of the canal, the player must control his or her avatar's movements along the canal over and over again, gradually building up an internal map to support orientation in the Undercity.

The difference between sensing the curve and seeing the circle has much in common with the space/image dichotomy found underlying architectural theory (see pp. 10-17). To be exact, the

architect calls the horizontal, map-like image a *plan*, whereas an image representing some vertical aspect of a building is called an *elevation*. Orientationalist architecture treat the plan with some ambivalence, stressing its importance whilst insisting that architecture is fundamentally committed to the bodily grounded experience. The notion of the internal map is useful here as a conceptual mediator. Since the internal map of the Undercity is built up through habitual bodily engagement it could be called an internalised plan, capturing the importance of the relatively abstract map/plan/image whilst insisting that such an image is grounded in locomotion.

This chapter will explore the points of intersection between virtual worlds, architecture and maps in more detail, drawing on architectural theory and theories of so-called internal or cognitive mapping. In the section following immediately below, the difference between the curving and the circle is examined with special attention to the experience of the user. Hence the section is titled *Walking and looking* (pp. 62-68). Then the concept of internal, or cognitive, mapping is presented, including a review of the literature on cognitive mapping and how that literature has been treated in media studies until now (*Cognitive mapping*, pp. 68-78). I then take a closer look at a special practice in virtual worlds, namely, attempts at obtaining a sense of dwelling. Dwelling is dealt with thoroughly in the chapter on *Building*, but the special situation in which the plan is employed as a dwelling aiding device is dealt with here (*Inhabitation of the plan*, pp. 78-83). The sections just outlined deal with what a cartographer would categorise as *general-purpose* maps. The general-purpose map stands in contrast to the *special-purpose* map. The special-purpose map has a relatively narrow focus, e.g., to support navigation or resource gathering.[172] With the sections *Player cartography* and *Structured use* (pp. 83-93), focus is turned to special-purpose maps produced by players of game worlds. Such maps are produced in order to make the player's exploitation of the virtual world as efficient as possible, e.g., by explicating structures of resources and transportation. This kind of cartography is ultimately explained as the player's attempts at fitting into, or attuning him- or herself to, the structures of the virtual world. In *A note on world building* (pp. 93-97), the scope is broadened with reflection on the role of cartography in the building of

172. From a strict, cartographic viewpoint, special-purpose maps dealing with navigation are labelled *charts*. "Chart" is most frequently found in "nautical chart" and "aeronautical chart" aimed at navigation by sea and through air respectively (Hodgkiss, 1981: 15-19); some of the oldest maps found depict routes (Akerman, 2007: 21).

non-digital, imaginary worlds. The chapter is concluded with a *Summary* (pp. 97-99).

(2) Walking and looking

The virtual world user's attention oscillates between the virtual world proper and its map. I will give a few examples of this oscillation and then examine it from an architectural perspective, employing the related dichotomy of space and image.

At the press of a button (the m-key), the *World of Warcraft* player can fill his or her screen with a map akin to the one shown at very beginning of this chapter (figure 6), but with avatar location clearly marked. Additionally, the player has access to a general-purpose "mini-map", as seen in the upper right corner of figure 5. The mini-map is useful as a compass. Since the avatar is represented by a little arrow on the mini-map, the mini-map can always tell the player which direction he or she is facing. Other virtual worlds offer similar, dual support, i.e., an optional, fullscreen map supplemented by a much smaller map which can be kept constantly present without being much of a distraction. In the isometric world *Conquer Online,* the upper right corner mini-map can be "folded out" to overlay almost the entire screen, as seen below. This allows the player to literally navigate the map and the world at the same time.

Figure 7: *Conquer Online*. The upper right corner mini-map (left) can be "folded out" to overlay almost the entire screen (right)

Navigation is supported in similar ways in many game worlds, such as *EverQuest II* (see below). The user is allowed wide-ranging and easy customisation of the two maps. Size, position and opacity can be adjusted to allow simultaneous navigation of the world proper and the map. Using

an *add-on* such as *Cartographer*, users of *World of Warcraft* can customise the m-key map in the same manner; an add-on is a small piece of software added to the main software. It is typically produced by an innovative user for non-commercial purposes. The add-on can be thought of in a number of ways, e.g., as an enhancement of the original software, as a device facilitating a certain style of play or as a way of subverting the intentions of the virtual world's original designers (for more on the various ways of conceptualising add-ons, see *Maximal efficiency*, pp. 181-184). Whereas Sony opposed the use of add-ons in its first *EverQuest* game, Blizzard has been supportive of the use of add-ons in its *World of Warcraft*.[173]

Figure 8: *EverQuest II*. Size, position, and opacity of the two maps can be adjusted to allow simultaneous navigation of the world proper and the maps (lower right image a detail of lower left image)

173. In early 2009, Blizzard changed its "add-on development policy" for *World of Warcraft* [http://www.worldofwarcraft.com/policy/ui.html. Accessed 28 July 2009]. Some interpreted this change as a reversal of earlier openness towards grassroots co-production, others disagreed with this interpretation, but the move certainly triggered insightful online discussions on the complex nature between players and producers, e.g., [http://timhowgego.com/de-analysing-blizzards-add-on-policy.html. Accessed 28 July 2009]. For a critical introduction to the changing relationship between players and publishers of *EverQuest*, see Taylor, 2006. Jenkins, 2006 offers a general introduction to the relationship between users and producers, using virtual world *StarWars Galaxies* as one of its case studies. Stalzer, 2007 offers insight in the relationship between groups of *World of Warcraft* players and Blizzard, as chronicled by the leader of a particularly influential group.

It should be pointed out that none of the virtual world maps mentioned so far are "maps" in the traditional sense, i.e., in the sense of representations of the world. They are renderings of the world, carrying the same ontological weight as the "world proper". From an ontological perspective, I "am" just as much the little, red v-shapes which I can navigate through the *EverQuest II* maps above, as I "am" the dark-skinned monk behind the maps, whom I can run (and run with) through the forest. The visible monk-I and the visible v-shape-I are both renderings of my location in the world, as stored in the memory of some remote server. The monk-I does not precede the v-shape-I in the manner of a thing preceding its representation, hence their equal, ontological weight. From an experiential perspective, however, no confusing of world and map is possible. I "am" where my highest potential for action and perception is, therefore I am with my avatar, not the v-shape on the map. The map *is* experienced as a representation in the sense of something secondary to the world, but the secondariness stems from a relatively limited sense of agency, not from the description being secondary to a primary world to which it corresponds.

Even if the user is not thrown into ontological confusion as to which one of the on-screen shapes he or she "is", the map can rise to unique prominence in the handling and experience of a virtual world. Attention oscillate between the world proper and its representation. There is something truly architectural about such oscillation. In Kesster Rattenbury's apt summary:

> Architecture's relationship with its representation is peculiar, powerful and absolutely critical. Architecture is driven by belief in the nature of the real and the physical: the specific qualities of one thing - its material form, arrangement, substance, detail - over another. It is absolutely rooted in the idea of "the thing itself". Yet it is discussed, illustrated, explained - even defined - almost entirely through its representations.[174]

Virtual worlds, and computer games in general, are also committed to "the physical". They are characterised by, and promoted on the basis of, their potential for the more bodily grounded, more active experience, as opposed to the experiences to be had with media such as literature or cinema; this is what the preceding chapter was all about. However, in a paradox parallel to that of architecture's, virtual worlds are also crucially dependent on imagination, a theme I explore in this section and return to throughout the remainders of this chapter.

Le Corbusier personifies the architect's balancing act between imagination and body (as discussed

174. Rattenbury, 2002a: xxi.

earlier, in *Space and image*, pp. 10-17). In "Toward an Architecture", Le Corbusier's applauds a number of good plans he finds in private dwellings, as well as in public buildings such as mosques and temples. One of the public spaces he admires is the Forum of Pompeii. The analyses is accompanied with a drawing of the Forum's plan:

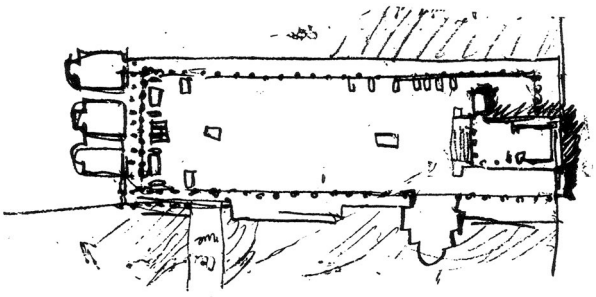

Figure 9: Drawing of the Forum in Pompeii (Le Corbusier)[175]

The written part of the analysis is concluded with the words: "It brings joy to the mind to look at such a plan, to walk through the forum".[176] That ambiguous sentence is the product of powerful, architectural intuition. It is not quite clear where "looking" ends and "walking" begins, or where the "plan" ends and the "forum" begins, and that is the point exactly. Architectural experience is characterised by its truly embodied nature. Architecture has to be physically navigated to be experienced. At the same time, paradoxically, architecture is inherently abstract. Unless the "plan" is sensed, according to Le Corbusier, there is no architectural experience, and the plan is a mental construct; Le Corbusier, importantly, writes "it brings joy *to the mind*". But although he stresses the mental-internal character of true architecture, Le Corbusier illustrates his analysis with an *external* representation, namely, the above sketch. All of "Toward an Architecture"'s examples of good plan are illustrated (by Le Corbusier himself) in this way. Le Corbusier's exploring, describing and even his experiencing these architectural masterpieces is heavily influenced by his drawing the architecture, in other words by mediation.

Le Corbusier does not limit himself to mediation by drawing, but relies on photography as well. Roughly 14 out of the 20 pages which makes up the chapter *Pure Creation of the Mind* in "Toward

175. Le Corbusier, 2008: 222. The map was originally printed in Le Corbusier's 1911 "Voyage d'Orient".

176. Le Corbusier, 2008: 223.

an Architecture", are photography, and Le Corbusier unabashedly praises how quality photography are "genuinely accurate documents" that "[reveal]" architecture.[177] The reliance on representation has only increased since Le Corbusier and is now accelerated by the ways in which architecture is taught and then practised. As "imaginary projects are discussed in the studio as though they were real buildings", writes Rattenbury who herself teaches architecture, the student architect gradually comes to understand design as an inherently imaginary occupation evolving around non-existing projects. After graduating, the "promotion of the as-yet fictional or always-to-be-fictional project is both the architect's tool and often, initially, their stock-in-trade".[178] Rattenbury also points to the numerous influential projects featuring prominently in the architectural canon in spite of their being unbuilt or destroyed; examples of the unbuilt include projects by Piranesi and Archigram, as well as Vladimir Tatlin's unbuilt tower (Monument for the Third International).

As the means of representation changes, so does architecture. There is a widespread sense in the architectural debate that mediation play a bigger part in architecture than ever before. Is this tendency adversary to the embodied nature of the architectural experience? Juhani Pallasmaa believes so, dismissing architecture of the 1980s and 1990s as a "purely retinal art form".[179] Le Corbusier can be credited (or blamed, if you will) with spurring on the development leading to this state of affairs. Soon after the 1923 publication of "Vers une architecture" (the first English translation, titled "Towards a New Architecture", came in 1927), publishers "discovered that for non-architects to consume books about architecture, buildings are best distilled into a series of definitive, striking images", as architectural journalist Jonathan Bell notes.[180] 20th century

177. Le Corbusier, 2008: 249.

178. Rattenbury, 2002a: xxi and xxii. Also Edward Winters finds architectural discourse to have have become ever more inclusive of projects which are never built and even of projects which are never intended to be built and perhaps never can be built. Like Rattenbury, Winters explains the trend partly by pointing to institutional influences, and places the proliferation of "paper architecture" (unbuilt projects) in the latter half of the twentieth century (Winters, 2007: 98). For an earlier, very prominent example of an architect relying on paper architecture, Beatriz Colomina argues that Mies van der Rohe's "place in architectural history, his role as one of the so-called fathers of the modern movement, was established through a series of five projects, none of them actually built" (Colomina, 2008: 65). The five projects all date from the first half of the 1920s.

179. Pallasmaa, 2005i: 125.

180. Bell, 2006: 11.

technical progress in photography thus became partly responsible for architecture's shift towards a "retinal art form" (for more on this shift, see *Against images*, pp. 142-148).

Not only photography, but also the means of reproducing photographic images took giant steps in the 20th century. Within architectural publishing and debate, the monograph lost its privileged status to the magazine. Again, Le Corbusier can be seen as a frontrunner, with the bulk of "Toward an Architecture" originally published in the magazine *l'Esprit Nouveau*. Le Corbusier embraced the speed and novelty characteristic of the periodic publication, even whilst drawing on the authority of the monograph. His 1955 "Modulor 2" is a strong example of this. It bears the telling subtitle "Let the User Speak Next", and its arguments are interwoven with private correspondence and journal articles responding to the first, 1948 "Modulor".[181] Today, writes Bell, "even professionally focused magazines {devote} page after page to the sharpest-looking - and newest - examples".[182] At least when it comes to certain trends, Bell is dismissive of the architecture made under these conditions:

> It is almost as if New Contemporary has evolved into the manufactured boy-band of the architecture world, an immaculately conceived glossy image that no one, at heart, takes terribly seriously. These houses are not the real world.[183]

As some of today's built architecture are ridiculed for being "not the real world", certain representations are hailed as more "real" than the actual buildings. Rattenbury again:

> Sometimes a photo or drawing [...] frames a specific architectural interpretation so successfully that it becomes the quintessential image: the "real" or "authentic" version, of which the occupied, adapted, economically handicapped, ageing or inaccessible building seems only partly a valid version.[184]

Architectural discourse is at the same time fascinated by and repulsed by the blurring of "the real" and "the not real". As Rattenbury suggests, "{t}here's a strong argument, probably even a historical one, that architecture - as distinct from building - is always that which is represented".[185] With the spread of digital media, the willingness to accept representation as a genuine component of architecture has reached an unprecedented high. This willingness is

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181. Le Corbusier, 2000b. See e.g. pp. 37, 79, 163f, and 189.
182. Bell, 2006: 12.
183. Bell, 2006: 15.
184. Rattenbury, 2002b: 57.
185. Rattenbury, 2002a: xxii.

displayed by journalists, academics and teachers alike. Today, the means of mediation are all digitalised or inherently digital, and there is a widespread fascination with the possibilities thus opened to architectural design and manufacturing.[186] "The virtual" thus makes itself felt in architecture not only in the sense of the "not real" but also in the sense of the fast and malleable. The inherently fast and malleable virtual world might serve as an illustration of the increasingly representation-tolerant contemporary understanding of architecture, especially because virtual world user rely on maps not only as a supportive tool but also as a temporary substitute for the virtual world. The constant and smooth oscillation between the virtual world and its representation ultimately entails that the representation is understood more as a component of the virtual world than as a mere supportive tool, a relationship not unlike how that between architecture and representation is understood today.

(3) Cognitive mapping

As mentioned in the preceding section, Le Corbusier concluded his analysis of the Forum with the words: "It brings joy to the mind to look at such a plan, to walk through the forum". This invokes the notion of a cognitive map, i.e., a relatively stable, overarching sense of how the environment is organised, built up through a number of bodily encounters. Navigation of large-scale, digital spaces, e.g., the digital spaces of computer games, is widely believed to depend on cognitive maps. In a media studies context, however, cognitive mapping has only been alluded to in passing, and the literature not properly reviewed.[187] I would like to remedy this lack somewhat by pointing out

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186. See Kolarevic, 2003b. The opportunities offered to architecture by digital technology are also discussed in *Structured use*, pp. 89-93.

187. Grodal, 2000: 202, refers to "mental maps" very briefly but in a way that is in agreement with the literature I review in this section (Grodal mentions the concept of "landmarks" which features prominently in Lynch, 1960). Friedman, 2006 does not refer to the literature I review but to geographer David Harvey and influential cultural theorist Frederic Jameson's personal ways of using the term "cognitive mapping". By stating that "Lynch's subjects are rather clearly involved in pre-cartographic operations whose results traditionally are described as itineraries rather than as maps" (Jameson, 1991: 51), Jameson explicitly challenges Lynch's interpretation of his own data (for how Lynch interprets his data, see the Lynch quote on p. 71). Whyte, 2002: 36 provides a very brief overview of the literature focusing on Piaget and Inhelder, 1967, then picks out useful concepts (landmark, route and survey knowledge). Fuller and Jenkins, 1994 mention "cognitive mapping" in passing. I will deal with the text by Fuller and Jenkins in some detail in the main text. Marie-Laure Ryan comes very close to writing about the immersive qualities of literature in a manner congruent with theories of cognitive mapping. Ryan distinguishes between "a sense of place" and "a model of space" and: "in the most complete form of spatial immersion, sense of place is complemented by a model of space". "Through [models of space], [readers] orient themselves on the map

the most important contributions to the inter-disciplinary field of studies into cognitive mapping. The field has lost steam since its heydays in the 1960s and 1970s, but interesting work was published as late as the mid-1990s.[188]

Generally speaking, the cognitive map is not understood to be a full representation of the world. It is, rather, an important tool that helps a person handle the world, and has some influence over that person's outlook on the world. Theories of cognitive mapping thus resonate with the two senses of "orientation" I suggested earlier (see *Vocabulary*, pp. 6-10). On the one hand, orientation in an active sense of navigation (orientation performed in order to get from A to B to C to D). On the other hand orientation in a less action-oriented sense of understanding how the world is organised (orientation as an understanding of how A, B, C, and D relate to each other). This dual sense of orientation features prominently in cognitive mapping theory's foundational text, psychologist Edward C. Tolman's 1948 article *Cognitive Maps in Rats and Men*. As the title indicates, Tolman's starting point is experiments carried out with rats. The rats were put into mazes and other apparatuses and their behaviour observed. An experiment would typically show how the rats managed to get from a starting point to some end-point, e.g., a place where food was hidden. Over several attempts, the rats would gradually get better at navigating the maze (as measured, for instance, in the decrease in time getting from starting point to end point). This improvement is not, argues Tolman, a matter of certain stimulus-response connections being strengthened over time by trial and error. The rat is not "helplessly responding to a succession of external stimuli - sights, sounds, smells, pressures, etc. impinging upon his external sense organs - plus internal stimuli coming from the viscera and from the skeletal muscles".[189] With a metaphor that has certain Cold War associations, Tolman prefers the explanation that "the incoming impulses are usually worked over and elaborated in the central control room into a tentative,

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of the fictional world" (Ryan, 2001: 123). This passage is suggestive of the concept of cognitive mapping firstly because it invokes the internally constructed (the mental "model") and secondly because the function of that construct is to provide orientation. However, the relationship between "map", "model" and "fictional world" is not as clear in Ryan's account as in the theories of cognitive mapping I will be reviewing.

188. Apart from the sources mentioned in the following, substantial contributions to the study of cognitive mapping has been published in Downs and Stea, 1973, Cox and Golledge, 1981 and Portugali, 1996a. Following O'Keefe and Nadel, 1978 there has been some interest in the cognitive map from a physiological perspective, a strand of studies I leave out in the following.

189. Tolman, 1948: 189.

cognitive-like map of the environment".[190]

The cognitive map pieced together in the rat comes in many varieties, stretching "from a narrow strip variety to a broader comprehensive variety".[191] In other words, the cognitive map supports orientation ranging from pure navigation (the strip-map covering a route) to the more holistic survey-map of the world; the two basic types of cognitive maps could also be labelled special-purpose and general-purpose, following standard cartographic terminology. At this point Tolman turns his attention from rats to humans and his article becomes "cavalier, and dogmatic" as he himself puts it.[192] Tolman puts forward that the outlook of the healthy adult is supported by broad, general-purpose cognitive maps allowing a balanced and reasonable approach to the world. In contrast, Tolman suggests, reliance on narrow, special-purpose maps is the result of brain damage or at least symptom of a pathologically one-sided frame of mind. As an example of the latter, Tolman offers "[t]he poor Southern whites, who take it out on the Negroes". Because of "a narrowing of the cognitive map", these simple-minded people "are displacing their aggressions from the landlords, the southern economic system, the northern capitalists, or wherever the true cause of their frustration may lie, onto a mere convenient outgroup [in this case Afro-Americans, BL]".[193] Clearly, cognitive maps in humans are not mere tools for navigation. The cognitive map supports navigation but even though this is the functional root of it, the cognitive map also supports a more profound kind of orientation in "that great God-given maze which is our human world".[194] It is a very important point of cognitive mapping theory that the psychological functions of simple navigation and more holistic, human orientation are deeply intertwined. In 1960, Kevin Lynch expressed this point as follows (Lynch refers to the cognitive map as "environmental image" for reasons that will become clear shortly):

> Way-finding is the original function of the environmental image, and the basis on which its emotional associations may have been founded. But the image is valuable not only in this immediate sense in which it acts as a map for the direction of movement; in a broader sense it can serve as a general frame of reference within which the individual can act, or to which he can attach his knowledge. In this way it

190. Tolman, 1948: 192.
191. Tolman, 1948: 192.
192. Tolman, 1948: 206.
193. Tolman, 1948: 208.
194. Tolman, 1948: 208.

> is like a body of belief, or a set of social customs: it is an organizer of facts and possibilities.[195]

If "way-finding" and "body of belief" can not be kept apart, neither can cognitive mapping and ideology. This has been the case since Tolman's first use of the term "cognitive mapping", and the point is worth dwelling on with a prominent example from the game studies literature. Seen from within the humanities, it is refreshing to have Tolman arguing for the broad overview-map being the morally superior map imbued with "the virtues of reason".[196] Overview typically plays the villain in humanities writings on mapping where it is associated with mastery of various kinds.[197] Mary Fuller and Henry Jenkins give a computer games example of this with their joint 1994 article *Nintendo® and New World Travel Writing: A Dialogue* (the article is constructed as a dialogue with clearly marked parts for the two speaker-writers. I will indicated this by referring to both or one or the other as it is fitting). Fuller and Jenkins set out to "look more closely at the spatial logic and 'cognitive mapping' of video games" and they do so by comparing computer games to texts produced by European explorers of the New World.[198] The basic similarity between video games and New World travel writing being that standard narrative devices such as plot and character are downplayed whereas themes of exploring and mastering space take centre stage.

Fuller understands the three activities of navigating in space, mapping space and mastering space to be intertwined, with a historical shift from navigation to mastery taking place in the Renaissance. At this point in time, maps were no longer primarily constructed as special-purpose route maps but to provide general-purpose overview:

> The Renaissance was [...] the moment when mapmaking shifted from providing locally oriented maps of previous trajectories and observations by coastal navigators (rutters)

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195. Lynch, 1960: 125-26.

196. Tolman, 1948: 208.

197. For the larger part of history, maps have indeed been reserved for sacred (Cosgrove, 2007: 108) as well as mundane (Akerman, 2007: 23) authorities and played a part in the wielding of power. In scholarly writing on cartography, maps are also associated with power in general, e.g.: "Maps charm, intimidate, beguile, and browbeat - by their authority, their signs, what they show and how they show it," (Karrow Jr., 2007: 7) and "maps express the desire for [the] power [to] [exert authority over the world and to modify it]" (Edney, 2007: 119). See Harley, 1988 for a strong analysis of the connections between *Maps, Knowledge, and Power* (the title of the article) with numerous references to relevant literature.

198. Fuller and Jenkins, 1994.

to the universalized overview of the Mercator projection.[199]

This is where the morals sets in. In 1992, the USA marked the 500th anniversary of Columbus' landing on the American coast and Fuller and Jenkins are writing two years later and with explicit awareness of this fact. In this context, "trajectories" seem morally better than "universalized overview" because overview is associated with mastery and ultimately with colonisation. This association is exactly opposite to the one Tolman establishes when he associates the broad cognitive map with an open-minded, reasonable outlook on the world and the more specific or special-purpose cognitive map with narrow-mindedness. But then again, Tolman is worrying abut the Cold War rather than Columbus: "we Americans who criticize the Russians and the Russians who criticize us, are [...] engaging, at least in part, in nothing more than [...] irrational displacements of our aggressions onto outgroups".[200] The significant difference between Fuller's and Tolman's moral evaluations of overview mapping is a good illustration of the need to keep explicit the contemporaneous concerns impacting studies of mapping's ideological aspects.[201]

Let me return to the presentation of literature on cognitive mapping. In the above quote, Lynch referred to the cognitive map as "environmental image". This was undoubtedly due to the influence of

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199. Fuller and Jenkins, 1994. Strictly speaking, Mercator's projection was not invented to generate overview but to generate nautical charts (i.e., special-purpose maps rather than general-purpose maps). The unique property of a Mercator chart is that for any straight line you draw on it you will be able to draw a straight line corresponding to that line in the real world. Since this means you can set a course and simply follow it straight ahead to your destination, a Mercator map is extremely useful for planning a route at sea, even though "the length of the line [drawn on the map] may not be correct", as Mercator points out himself. Mercator continues: "You may get their sooner or may not get there as soon as you expected, but you will certainly get there" (Mercator quoted in Hodgkiss, 1981: 35. Exact source not specified). That these were Mercator's intentions does not rule out, of course, that a Mercator projected nautical chart might serve as general-purpose map, or "world view", for many people (Hodgkiss, 1981: 35). Mark Monmonier points out that the Mercator projection proved useful for propaganda during the Cold War. It distorts and enlarges the size of the northern landmasses, thereby enlarging the size of the USSR and the sense of communist threat that country represents (Monmonier, 1991: 95). Cosgrove, 2007 provides the criticism raised against Mercator projection (by Monmonier and others) with a wider context.

200. Tolman, 1948: 208.

201. It adds a tense richness to Fuller and Jenkins' text that Jenkins associates colonisation with route mapping rather than overview mapping. Jenkins draws on Michel de Certeau who holds that a place "constitute a 'stability'" that holds the potential for meaning (Fuller and Jenkins, 1994). That potential gets unleashed when the place comes into contact with narrative agents. Through such contact, place is disrupted and transformed into *space*, and this process can be called either narration or colonisation. In Jenkins' reading of de Certeau, colonisation is thus associated with routes through space rather than overview.

Kenneth Boulding's 1956 book "The Image". Boulding disregarded experimental foundation entirely (unlike Tolman who kept his discussions grounded in laboratory results) and widened the range of subjects relevant for cognitive mapping theory so much that the concept became suggestive of a worldview.[202] Importantly, Boulding's philosophical, holistic, worldview-suggestive mental "image" is not a static one, leading Boulding to proclaim that: *"The meaning of a message is the change which it produces in the image"*;[203] this idea inspired a certain Marshall McLuhan so much that he felt obliged to acknowledge Boulding with one of his few and far between references to other scholars.[204]

In 1960 came Kevin Lynch's seminal "The Image of the City", taking something of a middle position, as it were, between the experimentally grounded Tolman and the holistically inclined Boulding. Lynch was concerned with city planning. It is vital, argues Lynch, that a city has salient features aiding its inhabitants in "structuring and identifying the environment",[205] i.e., in forming an "image of the city": "In the process of way-finding, the strategic link is the environmental image, the generalized mental picture of the exterior physical world that is held by an individual". This might give the impression that Lynch only concerns himself with the design of efficient cities offering easy way-finding,[206] but Lynch continues: "A good environmental image gives its possessor an important sense of emotional security. He can establish a harmonious relationship between himself and the world".[207] The notion of "harmonious relationship" between human and world resonates with an orientationalist understanding of architecture (see Vocabulary, pp. 6-10). In fact, Lynch hints at the affinity between his "image of the city" and architecture on the very first page of his book, stressing how both the image and architecture are

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202. As David Canter puts it, Boulding's contribution is in fact "more philosophical than psychological" (Canter, 1977: 22). In his tracing of the roots of the cognitive map concept, Canter focuses not so much on the label "cognitive map" but looks more widely for psychologists with an interest in "the cognitive systems enabling the individual to cope with the environment" (ibid., p. 13). Canter's starting point thus becomes the early 1930s laboratory work of Frederic Bartlett.

203. Boulding, 1956: 7.

204. McLuhan, 2003: 43.

205. Lynch, 1960: 3.

206. It was exactly the parts of Lynch's book dealing with way-finding and offering concrete suggestion as to how to improve the possibilities of successful way-finding which Richard Bartle found inspiring when co-designing *MUD1*. To support the user's navigating the MUD, Bartle thus attempted to integrate Lynchian *landmarks* in *MUD1* (private conversation, May 2008).

207. Lynch, 1960: 4.

"temporal [arts]".[208] It takes time and use to build up an image of the city and it takes time and use to build up a sense of architecture as well. As architect Juhani Pallasmaa puts it, architecture offers "slow, low-efficiency communication" in marked contrast to "the quick, the forceful, and the overwhelming" favoured in all other areas of communication and art.[209] Architecture is slow because it depends on the formation of images (or, cognitive maps) for its full impact, and the formation of images depends on embodied encounters. As we saw earlier, Le Corbusier found that the architectural experience proper requires the embodied encounter to trigger a sense of "plan"; without such a sense of plan one is merely enjoying a piece of engineering, not architecture. Let me paraphrase that into Lynch's urban subject matter: without an "image" the city is not a city but a mere aggregation of buildings.

Lynch's experimentally grounded work confirmed Tolman's notion of two different kinds of cognitive maps (route and survey, or special-purpose and general-purpose). Contemporaneous work in developmental psychology affirmed this as well.[210] Lynch's method was to be copied widely in the following decades. That method was to have a number of inhabitants draw maps of their city from memory whilst being interviewed following a fixed set of questions.[211] I tried the method out on two experienced *World of Warcraft* players, having the players sketch maps of the Eastern Kingdoms continent from memory whilst interviewing them. This is not a proper experiment or even a pilot for one but serves as an illustration of Lynch's method. It also highlights an important feature of cognitive maps, namely, that "one constructs [cognitive maps] by means of visual, as well as non-visual, modes of sensation and information: text; auditory, haptic and olfactory means for example, or by inference", as Juhani Portugali puts it.[212] The sketches made by two *World of Warcraft* players illustrate how the player's firsthand experience of the virtual world is infused with other sources. Below are the two players' drawings of the Eastern Kingdoms, as well as the in-world map.

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208. Lynch, 1960: 1.

209. Pallasmaa, 2005g: 255.

210. Kuipers, 1982: 206 referring to Piaget and Inhelder, 1967.

211. Lynch, 1960: 140-45.

212. Portugali, 1996b: 1. On the "mixed-metric" origins of cognitive maps, see also Golledge and Stimson, 1997: 234.

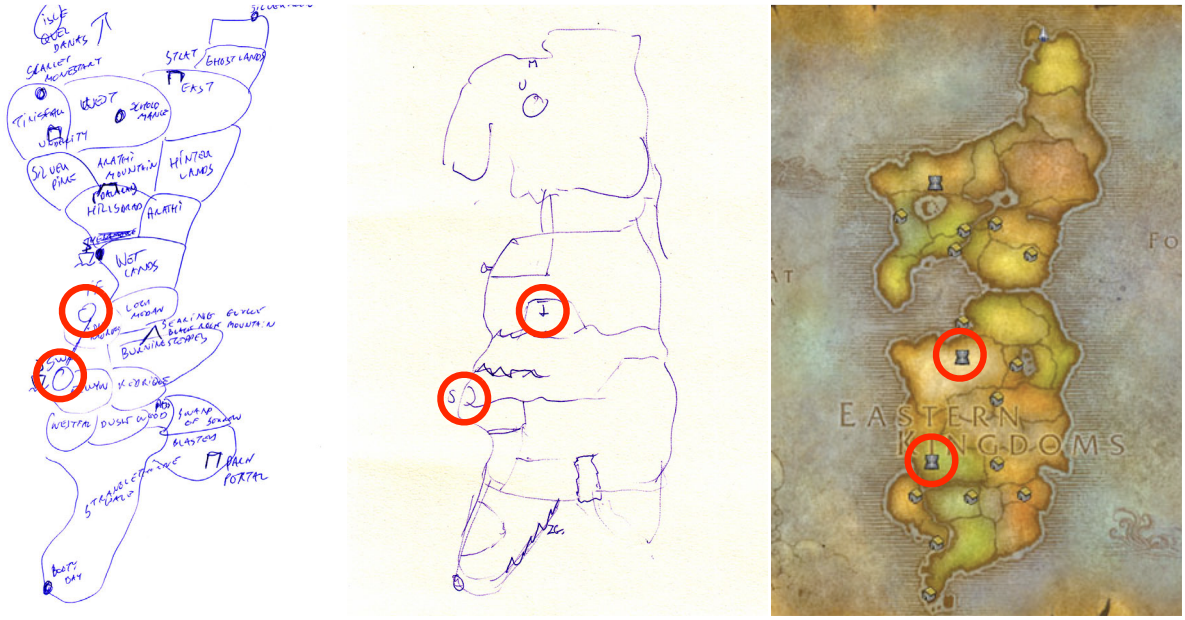

Figure 10: *World of Warcraft*, Eastern Kingdoms. Cognitive mapping sketch exercises and in-world map

To guide comparison of the three maps I have circled two important locations: the cities of Ironforge and Stormwind (the latter is the southernmost of the two). The player who produced the map to the left resolutely started out by marking these locations which serve as bases for his play. Since the two cities are connected with a fast and convenient underground train line the player underestimated the actual distance between them. The player then added *zones* to this starting point. Unlike other virtual worlds such as *EverQuest* and *EverQuest II*, *World of Warcraft* allows free movement within continents, i.e., without the player having to wait for new parts (zones) of the world to load. *World of Warcraft* is, however, still divided into zones. The southernmost zone of the Eastern Kingdoms, for instance, is called Stanglethorn Vale. It is a jungle-themed zone with mobs and quests roughly fitting characters of levels 31-45 (the *avatar* is the graphical focus of sense of agency. The *character* is a set of attributes relating to a game, e.g., values for attributes such as strength, intelligence and attack capabilities. I bracket off attributes such as gender and appearance here.[213])

213. I bracket off these important issues, and focus on only the most basic sense of agency, in accord with my architectural sources (see *The universal body*, pp. 39-59) and in accord with the game scholars

The play style of the first player is highly efficient and characterised by long-term planning of a character's progress (for more on efficient play, see *Maximal efficiency*, pp. 181-184). His cognitive mapping of *World of Warcraft* reflects this, performed as it is in terms of game zones. This stands in contrast to the second player, who produced the middle map. The second player also started out by marking the locations of Ironforge and Stormwind. He then carefully outlined the entire continent. Interestingly, the second player draw a part of the Eastern Kingdoms lacking in the map of the first player, namely, the archipelago to the north-west, across the water from Ironforge. This archipelago is called Gilneas. Gilneas is as yet not accessible for players because an enormous wall barricades it from the rest of the virtual world. The first player disregards Gilneas because he is thinking of the Eastern Kingdoms in terms of his own game activities. Therefore a zone where he has nothing to do is not part his cognitive map of *World of Warcraft.* The second player, on the other hand, includes Gilneas in his cognitive map. The second player is relatively more interested in the back story of *World of Warcraft* and relatively more influenced by the imagery of the maps of the world; typically of this player, he buys "collector's editions" of *World of Warcraft* and its expansions. These special editions come with beautifully illustrated books of concept art as well as maps printed on cloth. This material supplements the second player's firsthand experience of *World of Warcraft*, and the sketch map confirms this. Another sketch map detail revealing the second player's less efficient and more background-oriented attitude is his emphasis on the bridge connecting the Wetlands with the Arathi Highlands. The bridge is drawn as two parallel lines due north of Ironforge. The bridge is called the Thandol Span, an impressive bridge in a mountain setting of natural beauty. It adds to the player's enjoyment of crossing the bridge that his main character, which he has played for years, is a dwarf and that according to the lore of the virtual world the bridge is built by dwarves.

Cartographic maps, then, provide source material for the construction of cognitive maps of the virtual world, along with background story, concept art, the player's sense of certain places being aesthetically pleasing or resonating with his character's background etc. We also draw on diverse

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inclined towards phenomenology and cognitivism referenced throughout the chapter on the *Body.* As shown by Nick Yee, perception of one's own appearance impacts behaviour, especially when interacting with a member of the opposite sex and also when that interaction is undertaken through an avatar (Yee, 2007). Gender and appearance would thus seem to belong to the avatar rather than the character, or perhaps to both, but I am not going to discuss this in detail here.

sources when we construct cognitive maps of the real world but the tendency is stronger for virtual worlds. The sensory information offered by the virtual world is minuscule compared to what the real world offers, hence other sources are relied more heavily on in the case of cognitive mapping of virtual worlds. Thus the virtual world is, at its core, open to supplementary description from other sources and invites the work of the imagination.[214]

As a concluding vignette to this section follows a quote from Michael Chabon's novel "The Amazing Adventures of Kavalier and Clay". After some time in New York City, one of the two main characters, the young emigrant Joe Kavalier, has build up a cognitive map of his new home, giving him a sense of connectedness:

> He looked up and down the street. He was struck by a sudden sense of connectedness to it, of knowing where it led to. The map of the island - which looked to him like a man whose head was the Bronx, raising an arm in greeting - was vivid in his mind, flayed like an anatomical model to reveal its circulatory system of streets and avenues, of train, trolley, and bus routes.[215]

Humans share the ability to construct cognitive maps with other animals, but humans are able not only to *handle* the world in terms of moving themselves around in it (i.e., in terms of navigation). Humans also have the ability to *grasp* the world, and can take some pleasure in doing so, like Joe Kavalier does when he feels connected to New York City. Cognitive maps serve both the function of guiding specific actions and of providing overview, and the two functions are intertwined. For some virtual worlds, however, it might be a reasonable design strategy to undermine the user's attempt at cognitive mapping. To take an offline example, the game *Fallout 3* takes place in Washington DC but in a hideous nuclear wasteland version of the capital and its surroundings. With its few and far between settlements it is easy enough to gain overview of the rural part of this bleak virtual world, but downtown Washington is a different story. Landmarks such as the Capitol and the Washington Monument give but little help in streets blocked by collapsed buildings and makeshift enemy camps. To travel through the city, the player frequently has to go underground, into the abandoned and partially collapsed metro system and hope to find exits leading overground at new locations. These frequent detours into the underground

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214. Downplaying the role of direct perception and stressing the role of imagination allows Richard Bartle to see a distinct similarity between the early, text-based MUDs (Bartle co-wrote the very first one in 1978) and today's 3D virtual worlds (Bartle, 2007: 158).

215. Chabon, 2000: 166.

effectively block the construction of a coherent cognitive map of downtown Washington and as it happens, this element of disorientation suits the atmosphere of the place perfectly. The murderous raiders and Super Mutants crawling amongst the ruins are not exactly welcoming but even without those adversaries the place itself would be unwelcoming because of its refusal to be mapped.

(4) Inhabitation of the plan

As touched on in the above, Le Corbusier insists on the plan of architecture being something internal built by eyes and legs, i.e., by looking at and moving through the architectural work. With the mixture of theorisation and polemics so typical of architectural theory, Le Corbusier holds this view in opposition to specific institutions (namely, the École des Beaux-Arts and the Prix de Rome[216]):

> [At the École des Beaux-Arts], the principles of good plan have been studied, then, over the years, dogmas, formulas, and tricks have become fixed. [...] The inner idea has been made into a few hallowed exterior signs and appearances. The plan, a cluster of ideas and an intention integral to that cluster of ideas, has become a sheet of paper on which black marks that are walls and lines that are axes play at being mosaics and decorative panels, make diagrams with dazzling stars, create optical illusions. The most beautiful star becomes the Prix de Rome.[217]

The grand plans of, e.g., Versailles or Karlsruhe, might look good on paper with their axes crossing to form stars but "a man has only two eyes that are 1 meter 70 from the ground".[218] The bodily framework of the human in general, including the perceptual framework in particular, does not allow for any human to enjoy the paper plan of Versailles. The actual environment does not fit the human experiencing it, thus Versailles does not allow the construction of a cognitive map resembling its plan. In the preceding section I emphasised how supportive descriptions aid in cognitive mapping but there are limits to this, and Le Corbusier urges the architect to stay within those limits. Bodily grounded orientation must remain possible. Things are different, however, in virtual worlds. That was seen earlier with the screenshots from *Conquer Online* (p. 62), where a Forbidden City-like structure is very much based on an axis of the kind Le Corbusier is sceptical

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216. The Prix de Rome is a prestigious, French scholarship awarded to young artists based on submitted works. It used to have an architecture category.

217. Le Corbusier, 2008: 215.

218. Le Corbusier, 2008: 229.

of. When the player is navigating the avatar whilst simultaneously and literally navigating the plan, a sense of the axis does indeed gain the bodily and perceptual grounding lacking when experiencing the axes of Versailles. What is impossible at Versailles becomes possible in miniature in *Conquer Online*.

Interesting experiments into integration of plan and environment proper have emerged in *Second Life*. In the screenshot below, my avatar can be glimpsed as a tiny figure standing in front of a giant map. It can be made out how the semicircular building in the upper left corner of the screenshot is shown on the map.

Figure 11: *Second Life*. Plan and building integrated

The giant map is just as much part of the environment as are the trees and the walls and the avatar. Yet the map can only be seen in avatar-detached, objective perspective, e.g., from where the screenshot was taken. In virtual worlds, the plan can be an integrated part of architecture.

Another *Second Life* example: Although not a map, the giant image seen on the lower ground of the Bacchus Mall in the below screenshot is yet another place laid out not only for avatars but also for users. It is a place designed to be experienced in both objective perspective (design for users) as well as subjective and self-perspective (design for avatars). The tiny figures dotting the enormous, horizontal image of the scantily clad couple are avatars, spread out on the dance floor of the club situated at the lower level of the mall.

Figure 12: *Second Life*, The Bacchus Mall

Some of the mall's 215 rental spaces can be seen on the ground and first floors. It is as if a paper plan has been enlarged to 1:1 scale and spread out for the avatars. Then the plan has been thinly disguised with a little greenery (along the edge of the giant hole exposing the underground club). This is not so much a building as a navigable, 1:1 plan. Following Le Corbusier, the user must internalise that plan to fully appreciate the place. In virtual worlds, the plan can come to the surface of the place, as an external skin of the place. With the *Second Life* example above, the plan is all there is. This might be a "virtual place" in the sense of a place that is not quite real, but *plan-place* would be a more precise designator.

Plans (and plan-places) can be infused with certain values. Charles Rice has explored how such value infusion began in the latter half of the nineteenth century. At that point in history, the plan became a tool for what Rice calls "imaginative inhabitation":[219] "[T]he plan exists as a coding of a proposed material reality on the one hand, and on the other, a device by which to inhabit this condition immaterially".[220] All plans are, of course, meant to be suggestive of material, built reality; they are blueprints, that is. The originality of Rice's observation lies in the exact meaning of the word "inhabit". When presented with the plan, the clients perform a kind of imaginative testing of the proposed building. In the nineteenth century, imaginative testing guided by the architect was not aimed at use or functionality (values Le Corbusier would later guide his clients

219. Rice, 2007: 59. Rice credits Paul Emmons with coining "imaginative inhabitation" in the article *Intimate Circulations: Representing Flow in House and City*, in *AA Files*, no. 51, 2005.

220. Rice, 2007: 67f.

towards[221]) but at values which had recently risen to prominence: privacy and comfort. How exactly is the plan used for promoting such values? Rice points to the influential treatises on planning written at the time, e.g., Robert Kerr's "The Gentleman's House" (1871). Kerr complements the drawn plans with commentary "not only about certain technical aspects of the house as a building, but about how to imagine and test a possible sensory environment".[222] Kerr thus guides potential inhabitants towards a sense of comfort and privacy by aligning these values with specific features of the plan. Kerr compares, e.g., the plan of a French bedroom with the plan of an English bedroom, implying that the Englishman will feel most at home in the plan he or she is native to. The client will, in other words, experience comfort in a home is planned in accord with national character. Typical of his time, Kerr argues that national character is tightly connected to the country as a concrete, geographical entity characterised by a certain climate, certain landscapes, etc. Consequently, Kerr proposes a special affinity between a distinct English sense of home and the asymmetrical "Gothic" or "medieval" plan. Such a plan creates the exact right conditions for the qualities of privacy and comfort assumed to be favoured by the English. The symmetrical "classical plan", on the other hand, "favours publicity and openness" and is assumed more suitable for Italians and other inhabitants of the warmer, Southern parts of the continent.[223]

Some users of virtual worlds are very keen on obtaining a sense of home, as I will show in the chapter on *Building*. These virtual world users might not be working with the plan in the manner of Kerr, but they certainly pay attention to the plan, first of all by considering the scale they build on. One builder redesigned a beach environment and carefully scaled it down so it would not feel too big to visitors. A group of builders I followed for several months engaged in large building projects aimed explicitly at providing a "home" for the group (for a more detailed account of this

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221. Le Corbusier famously described a house as "a machine for living in". When the 1923 manuscript of "Toward an Architecture" was revised into its 1924 version, Le Corbusier even changed *demeurer* in the original aphorism, "la maison est une machine à demeurer", to *habiter* which does not carry the "static and bourgeois connotations" of *demeurer* (Cohen, 2008: 14). Note, however, that Le Corbusier's promoting use and functionality does *not* entail that he is opposed to the idea of feeling at home as such (see p. 16). Le Corbusier is arguing for a modern, functional way of being at home, as opposed to the Romantic sense of being at home promoted in the nineteenth century.

222. Rice, 2007: 61.

223. Rice, 2007: 62.

group, see *Virtual dwelling*, pp. 133-136). They took all major decisions as a collective, and the plan of the building emerged very slowly. In the screenshot to the left (see below), I am meeting with a couple of the builders who are "resting from hard work" (April 2008). The result of their hard work is hanging in the air above. They have planned a floor and a few walls and what have emerged is, at this point, not so much a half-finished building as a 1:1 plan. Hence, it is more fitting for the avatars to relax around a fireplace on the ground, rather than in the half-finished, flying structure. Being able to dwell like they do around the fireplace is one of the reasons why the group is building the large structure. The building is aimed at dwelling, right from its germination as plan.

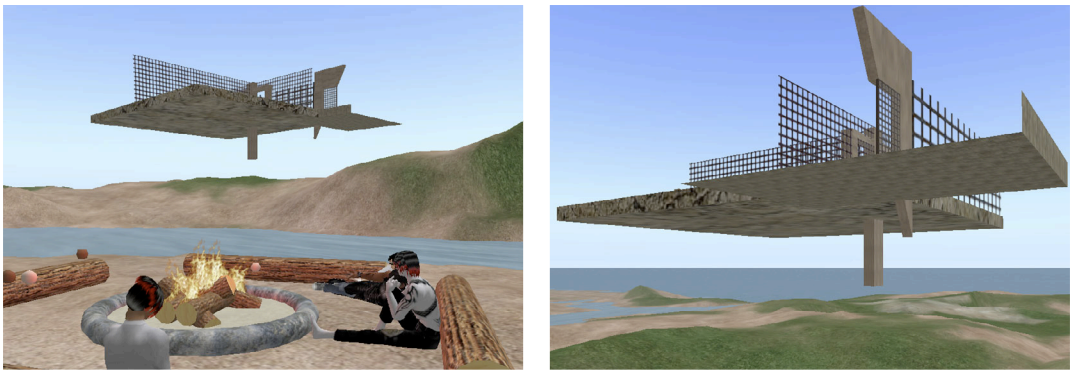

Figure 13: *Second Life*. Between building and plan

In the chapter on the *Body*, I described the avatar as a stand-in for an otherwise purely imagined virtual body. Taking a cue from Merleau-Ponty, the avatar was described as an aid in inhabitation of place by proxy (p. 48). In virtual worlds, the processes of building and planning can blur into each other. Or, the plan can become a device for playful building by proxy. "Playful" is inserted to distinguish between how users such as the builders in the screenshots above play at architecture as opposed to how real architects use virtual world-like programs. The real architect typically use a specialised piece of software such as a special version of a game engine, rather than a program such as *Second Life*. For the real architect, such virtual world-like technology is used exclusively to present projects to client or to the public. The virtual worlds under consideration here are, in other words, not employed as design tools.[224] Digital technology as such has, however, had a huge

224. Kalay, 2004: 143.

impact on the architectural profession and I will touch on this impact in *Structured use* (pp. 89-93).

(5) Player cartography

The next two sections deal with the creation or modification of special-purpose maps performed by players of game worlds. My explanation for this cartography is that players attempt to explicate certain structures of the virtual world which are not visible to the average observer,[225] and ultimately that players aim at attuning their own behaviour into those structures. First a handful of examples. I already mentioned *Cartographer*, the add-on for *World of Warcraft* which allows players to customise size and opacity of the overview map (p. 63). *Cartographer* is also used to customise this general-purpose map into a special-purpose map. It can, e.g., show the player were to find gold ore by superimposing the position of gold ore onto the standard map. *Cartographer* does so based on where players have previously found gold ore and that information is available to *Cartographer* because a number of players have installed another small program which automatically enters information about what the player finds, and where they find it, into a central database. The players are, in other words, extracting information from the game world collectively and using that collectively gathered information to harness the natural resources of the game world in an efficient manner.

Instead of accessing resource data by having it superimposed on in-game maps, players also access similar maps through their web-browsers, as seen below.

225. Such maps could also be labelled *thematic maps*, "maps whose primary function is not to show the obvious geographic features of an environment, but to depict the distribution of phenomena that would be invisible to the average observer" (Karrow Jr., 2007: 10f). Thematic maps rose to prominence in the 19th century showing, for instance, zones of average temperature but also the spatial distribution of religions and human "races". Thematic maps have been deemed "controversial" by contemporary commentators such as Denis Cosgrove, due to "[t]heir persuasive graphic authority and their tendency to generalize the complexity, flexibility, and mobility in fixed, territorial patters" (Cosgrove, 2007: 104). Although I see a critical potential in exploring player cartography of virtual worlds, and I explore this potential in the chapter on *Worldview*, I prefer to set out using the more neutral label "special-purpose map" rather than "thematic map".

Figure 14: *World of Warcraft*, Terokkar Forest. Special-purpose maps (details) helping players to gather fel iron. From *Thottbot* (left) and *WoW Guide Online* (right)

To the left is a detail of a map found on the *Thottbot* site. The symbols are explained as follows: "White squares are recent locations, yellow squares are old. Solid squares represent frequent sightings, translucent squares less frequent. Very common locations are circled and listed below".[226] A certain aspect of the world, namely, the location of fel iron, is made visible to the player in great detailed. To the right is a somewhat similar map, found on the *WoW Guide Online* site.[227] The red line signifies a Terokkar Forest Mining Route, suggested by one player to his fellow players. If fell iron is to be mined efficiently, suggests the helpful (and/or boastful) player, simply follow the suggested route repeatedly. The route corresponds quite well to the statistically available data, except for the player's suggesting to skip the resource rich north-west. Here the statistics are modified by experience. Perhaps the north-western part of the forest is too heavily infected with monsters, perhaps it is too heavily infected with competing resource gathers. Whatever the reason, it is the player's experience that the red route yields the best results and he communicates this view to other players with a special-purpose map to be found in a browser window outside of the virtual world proper.

Examples of the superimposition of collectively gathered data abound. On the *MapWoW* site, data

226. [http://thottbot.com/o181555/z3519. Accessed 29 November 2008].
227. [http://www.wowguideonline.com/terokkar_feliron.html. Accessed 29 November 2008].

is not superimposed on maps, but on what appears as footage obtained by satellite, as seen below (the site utilises the *Google Maps* API).[228]

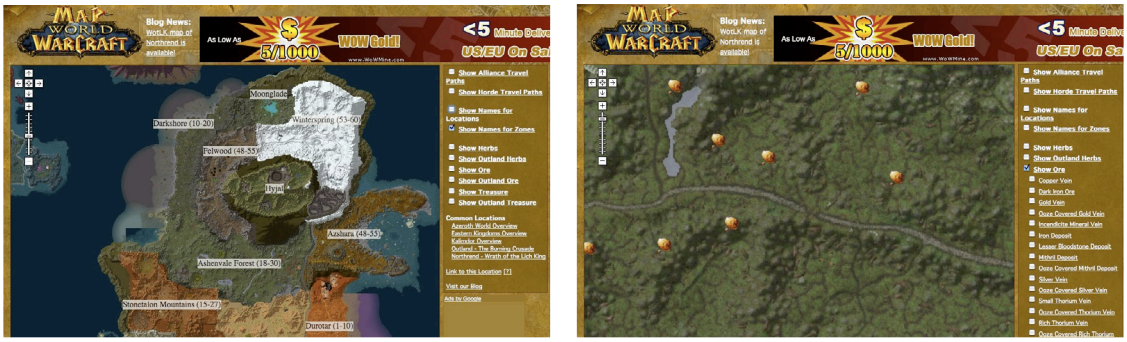

Figure 15: *World of Warcraft* as presented on *MapWoW* utilising Google Maps

Incidentally, the *MapWoW* screenshots illustrate how the line between player cartography and commercial interests have become blurred. As can be seen at top of the screenshots, the site is heavily supported by advertising, particularly advertising for in-game gold at sale for real-world money. This practice is condemned by the makers of *World of Warcraft* and remains highly controversial amongst Western players (for more on so-called gold-farming, see *Maximal efficiency*, pp. 181-184). Although the *MapWoW* site is clearly motivated by profit, the site still has a community flavour to it, e.g., with users enthusiastically using associated blogs to point out where bits and pieces of information is missing from the maps. The same mixture of profit-motivated entrepreneurism and player community at work characterises a site such as *Thottbot*.

The superimposition of data on existing maps takes place in all game worlds, not just *World of Warcraft*. Below is an example from *Lord of the Rings Online: Shadows of Angmar* indicating the location of creatures.[229] This map is published without advertisement on a genuine fan-site.

228. [http://mapwow.com/. Accessed 29 November 2008].

229. [mehq.net. Accessed 22 July 2009].

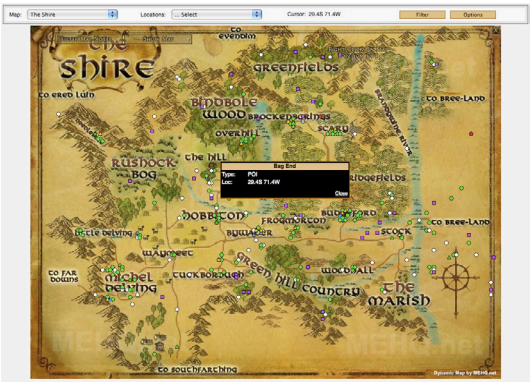

Figure 16: *Lord of the Rings Online*. Dynamic map from the *Middle Earth HeadQuarters* site

The location of both friendly and unfriendly creatures have been added onto the in-game map as small symbols. Additional information is available by clicking on the symbols (very much like maps work in *EverQuest II*, after the *Shadow Odyssey* expansion), and navigation between in-game maps is made easy by the menus in the top of the browser window.

Special-purpose maps can also be made without grounding in maps (or "satellite footage") taken directly from the virtual world. Below is a flight chart[230] covering *World of Warcraft's* Eastern Kingdoms, complete with express routes.[231]

Figure 17: *World of Warcraft*, Eastern Kingdoms. Flight chart from *Wowmastery.com*

230. On the exact use of the word "chart", see note 172, p. 61).

231. [http://wow-mastery.com/Eastern-Kindoms-Flight-Chart.php. Accessed 4 November 2008].

In contemporary, architectural parlance, all of these examples of special-purpose mapping can be said to expose certain *structures* of the virtual world. The concept of structure has many uses in architectural discourse. Adrian Forty identifies three such uses, the earliest being "any building in its entirety". Around the second half of the nineteenth century, an alternative was added to the original usage of the word: "the system of support of a building". During the twentieth century, a third way of using "structure" was added and this is the meaning of the word relevant here, structure as "schema":

> A schema through which a drawn project, building, group of buildings, or entire city or region become intelligible. The schema may be identified through any one of a variety of elements [...] none of [which] are themselves a "structure", only signs that give cause for the perception of "structure".[232]

Le Corbusier can be found as an exponent of the trend towards structure in Forty's third sense. When Le Corbusier turns his attention from the singular dwelling and toward the urban, it is with a focus on and fascination with infrastructure, with "all the organs that up to now have been buried in the ground and inaccessible: water, gas electricity, telephone, pneumatic tubes, sewers, neighborhood heating, etc.".[233] The quote is from the 1924 version of "Toward an Architecture", in which Le Corbusier tentatively toys with the idea of making the concrete infrastructure visible and suggests that the time has come for grand new forms of urban plan. Later, in the books on his *Modulor* proportional system (1948 and 1955), these ideas have come into full bloom. Describing his largest ever project, the city of Chandigarh, Le Corbusier writes about "a cardiac system leading to the door of each of the habitation cells of a sector, but fitting in also with the constituent elements of the city - an urban entity".[234] Just as water and electricity flow in the organs of the city, the movements of the inhabitants will flow according to machine-age plan. This kind of new, rational city plan will generate not only optimal flows of people, communication, power, etc., but also a kind of spiritual connectivity in the lives of the inhabitants. Although Venturi disagreed with Le Corbusier on the role images should play in architecture, his opinions on city planning resonate with Le Corbusier's. Contrasting contemporary (what Le Corbusier would call modern) city planning with medieval and baroque

232. Forty, 2000: 276.
233. Le Corbusier, 2008: 127.
234. Le Corbusier, 2000b: 170.

city planning, Venturi holds that the contemporary city plan must include "[elements] which could easily [be excluded]. Arterial circulation can be a dominant device in contemporary urban planning".[235]

The widened meaning of the word "structure" is very important for understanding 20th century architecture. Adrian Forty goes as far as to describe "the increase in the numbers of elements perceived as bearing 'structure' [as the] main feature of the twentieth century" architectural discourse.[236] If we look to the 21st century, the extended sense of structure is at the heart of the work of today's most famous structural engineer, Cecil Balmond.[237] Balmond holds that "[s]tructure is a network of connectivity. [...] Structure is skeleton and skin".[238] This statement, with is inherent refusal to delegate structure to the mere inside of architecture, is echoed by José Antonio Sosa:

> The network is a structure of non-hierarchical connections that are superimposed on an environment (territory, city, etc.), often invisibly so. [...] Architecture [...] does not create space, but rather occupies or captures it.[239]

Or, in the words of Salvador Pérez Arroyo: "New engineering and new tech architecture use [structure] as a symbol and communication [sic.] systems".[240]

As these quotes suggest, contemporary discussion of the concept of structure is not devoid of ideological and moral sentiments; the conflation of inside and outside has a normative ring, so has the mention of "non-hierarchical" connections, of architecture "occupying" space, etc.[241] Bracketing ideological issues for the time being, the extended, contemporary understanding of

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235. Venturi, 2002: 100.

236. Forty, 2000: 276.

237. For illustrations of the weight Balmond carries in current architectural debate, see Leach, 2009: 37 and Foster, 2008: 178, n. 35. The only engineer to rival Balmond in fame is Santiago Calatrava. Terry Smith uses Calatrava rather than Balmond to exemplify various trends in current architecture (Smith, 2008: 6).

238. Gausa et al., 2003: 575.

239. Gausa et al., 2003: 554.

240. Gausa et al., 2003: 575.

241. The conceptual connections between colonisation of real worlds spaces and mastery of game worlds are explored in the highly original and thought-provoking "dialogue" between Mary Fuller and Henry Jenkins (Fuller and Jenkins, 1994). I referenced the text in some detail earlier (see *Cognitive mapping*, pp. 68-78).

structure fits very well with the experience of virtual worlds, especially game worlds. The virtual world is an amalgam of buildings and landscapes fitting a relatively straightforward, everyday understanding of the word "architecture", onto which is superimposed flows of transportation and resources. As the cartographic examples above indicate, users are keenly aware of these flows, and they are likewise aware of their mechanical regularity, of their structural nature, if you will. They are trying to understand these invisible structures and, to some extent, explicate them through cartography. They are simultaneously navigating the buildings and landscapes of the virtual world proper and its structural flows. This is close to the situation envisaged in more or less utopian, or at least futuristic, architectural writings on structure.

(6) Structured use

Let me take the analogy between structures of architecture and virtual worlds a little further. Are structures understood from the viewpoint of the experiencer/player/user or do the concept in fact entail the user's appropriating the viewpoint of the designer/architect? Current media studies is fascinated with the blurring of roles in the production and consumption of media. Is player cartography a good example of this? But first a little more background information about the relationship between contemporary architecture and digital technology. Above, Arroyo held that "[n]ew engineering and new tech architecture use [structure] as a symbol and communication [sic.] systems". He continues:

> The building is more and more a collection of different functional elements joined together with dry connections. [...] the natural universe is based upon flexibility and mutations. The bird's wings, the branches of trees, the natural elements of water and strong winds. We are surrounded by mobility and transformations. Structure and architects will follow this reality.[242]

Arroya and many other architects are fascinated with the simulation of natural processes through digital computation. The purpose of these simulations is to make possible an architecture which is not so much form as process. Gregg Lynn has been at the forefront of these developments with projects sometimes labelled *topological* (see *Place and space*, pp. 17-25). "According to its mathematical definition," explains Branko Kolarevic,

> topology is a study of intrinsic, qualitative properties of geometric forms that are not

242. Gausa et al., 2003: 575.

> normally affected by changes in size or shape, i.e., which remain invariant through continuous one-to-one transformations or elastic deformations, such as stretching or twisting.[243]

Kolarevic goes on to suggest that topology thus undermines "the normative distinction of 'inside' and 'outside'", something which was also suggested in Balmond's comment above ("structure is skeleton *and* skin"). When it comes to actual design, topological geometry remains a broad notion inspiring the design, rather than an actual part of the design process. As Kolarevic puts it,

> it is not about 'blobs' [i.e., architecture characterised by curvilinear shapes, such as Frank O. Gehry's landmark Guggenheim Museum in Bilbao, BL]. What should make the topology particularly appealing are not the new forms but, paradoxically, the shift of emphasis from the form to the structure(s) of relations".[244]

As for how digital simulation actually informs the contemporary, architectural design process, "motion" seems a more reasonable label than "topology". This is exemplified by Lynn's use of "an entire repertoire of motion-based modeling techniques, such as keyframe animation, forward and inverse kinematics, dynamics (force fields), and particle emission".[245] Perhaps "natural motion" would be even more fitting, emphasising that the motions underlying Lynn's models are motions found in nature (cf. Arroyo's invoking "[t]he bird's wings, the branches of trees, the natural elements of water and strong winds"). Lynn himself talks of "systems that can *simulate the appearance of life* [developed by] the special effects and animation industry".[246]

Questions of correct labelling aside, some architectural projects are indeed finalised into shapes which can be walked around or through. Consequently, some critics are dismissive of the notion of topology in architecture. Kenneth Frampton:

> For Lynn, new form can only come into being through the continual warping of variously curved surfaces over time, as though such form might quite literally emerge from the dynamics of animal motion [...]. This arbitrary selection of a particular shape is justified solely on the grounds that at a given instant it may be found somewhere in nature.[247]

Frampton polemically "forgets" that it is the process leading up to the shape, not the shape itself,

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243. Kolarevic, 2003b: 13.
244. Kolarevic, 2003b: 27 and Kolarevic, 2003a: 6.
245. Kolarevic, 2003b: 19.
246. Gregg Lynn quoted in Lenoir and Alt, 2003: 328. Emphasis added.
247. Frampton, 2007: 359.

which is important in computer-aided "topological architecture". Le Corbusier was, incidentally, critical of

> mathematicians of the present age. Helped by their calculating machines, they have invented sensational new combinations of numbers (sensational to them but not to the rest of us who cannot understand them).[248]

As an architect and as a human being, Le Corbusier focuses on "[t]hings which constitute our environment", including "the spectacle open to our eyes".[249] Like Le Corbusier, Frampton insists on evaluating architecture based on direct experience rather than on any invisible, underlying design process. In the words of Giovanna Borradori, "topology has pushed architecture to stop viewing form as its ultimate parameter but rather as a by-product of the design process".[250] If it has pushed anyone or anything, topological architecture has exactly pushed those engaged in design, i.e., the *profession* of architecture, not the experience of it.

The discussion of topology highlights the distinction between experiential and design perspectives. The strand of architectural discourse I label orientationalist comes out on the side of user experience, criticising fascination with digital technology for leading to the architect's loosing sight of the actual, embodied experience of architecture. In academic discussions about digital media, the distinction between the experiential and the design perspectives is sometimes purposely blurred. This fusion of perspectives can be the result of idealism, as in the notion of the *prosumer* where producer and consumer are quite literally blurred into the same word. The logic behind the prosumer neologism is that when the consumer takes over some of the functions traditionally controlled by the producer, such as design of the product, the empowered consumer is also entitled to take over the prefix *pro-*.[251] The fusion of experiential and design perspectives can also be part of broadly aimed cultural analysis as exemplified by Charlie Gere's discussion of *hacking*.[252] Gere understands hacking to be a historically placeable practice and one of the many roots of today's "digital culture". When hacking a software system, the hacker's desire to make the system perform as well as possible leads to an authority-defying attitude. If the hacker has to bend

248. Le Corbusier, 2000b: 19.
249. Le Corbusier, 2000b: 19.
250. Borradori, 2000.
251. Dovey and Kennedy, 2006: 15.
252. Gere, 2002: 131ff.

a few rules in order to squeeze more power out of the machine, so be it. The hacker does not shy away from breaking into the control room, or forcing the hood of the car open, as it were. Gere claims that hacking is one of the roots of an anti-authoritarian aspect of today's digital culture (for a comparison of hacking and *tweaking*, see *Maximal efficiency*, pp. 181-184).

Is player cartography of structures indicative of a hacker's attitude? Not really, or at least not without qualification of what we mean by "hacking" today. I think Jon Dovey is right in noting that "the hacker ethos has been successfully commodified within a production line system that would have made Henry Ford proud" whilst finding the hacker ethos alive, on the other hand, "in the creative passions that developers and users bring to the [computer game]".[253] A commodified ethos is not a dead ethos. We are not forced to choose between either deploring the ultimate victory of the Fordist production system or celebrating every little independent action taken by a user as a sign of revolutionary potential. A more balanced description is possible. As they demonstrate with their cartographic practices, users of virtual worlds are keenly observant of structural flows but not the computational processes behind them. They are observing patterns within "[t]he bird's wings, the branches of trees, the natural elements of water and strong winds" (the spawning of monsters, the recurrence of resources and the regularity of flight paths, that is), not the blueprint of Nature. They are following the curves of architecture, not grasping the topological geometry behind it, as it were. They are highly attuned users of very complex, large-scale products, but they are not architects or developers.

Taking a cue from the complex use of "structure" in architectural discourse, player cartography, including the use of cartographic add-ons, should be labelled "structured use" rather than "hacking" or "prosuming" of virtual worlds. Players use cartography to explore, explicate and discuss structures which are not visible to the average observer, and they sometimes do so in quite independent ways. Player independence comes in both entrepreneurial (e.g., *MapWoW*) and creative (e.g., the dynamic *Lord of the Rings* map) flavours but the ultimate purpose of these maps is to explicate structures so that players can attune their behaviour to them. Virtual world structures are not without inherent values or underlying principles. Attuning oneself to an endless flow of resources, for instance, entails that a Principle of Unlimited Good is embraced. The player

253. Dovey, 2006: 139.

must, in other words, accept that the resources of the virtual world are unlimited in order for typical engagement with the virtual world to occur. I return to the Principle of Unlimited Good and to other such principles in the chapter on *Worldview*.

(7) A note on world building

The points of intersection between virtual worlds, architecture and maps have been explored in the preceding sections. Before I end this chapter with a summary, I would like to broaden the scope and consider the role played by cartography in the building of non-digital, imagined worlds. The examples have been chosen to reflect on cartography as a practice which is descriptive but also constructive. Until now, this has been implicit in the virtual worlds examples. In the cases of "inhabited plan", where a very simple or half-finished virtual building is best understood as 1:1 plan, user cartography is a kind of construction; drawing the plan is a kind of building. Player cartography of game worlds, on the other hand, is of a more descriptive nature. It describes an already existing, virtual world but in a very specific way, highlighting structures to allow attunement. In the non-digital examples below, the construction/description dichotomy will play a key role. The discussion will lead to my considering cartography as well as the use of computers as "techniques of realism" in connection with imaginary and virtual worlds.

Psychologists have been taking an interest in maps as evidence of the construction of *paracosms*, a word coined by Robert Silvey to denote children's "spontaneous imaginary private worlds".[254] Silvey himself built a paracosm as a child. As an adult, he worked as a researcher for the BBC and decided to make a public call for paracosm builders to share their creations with him. He was soon busy collecting maps and texts and interviewing adults about their imaginary, childhood worlds and the social, religious and psychological context they were created in. David Cohen and Stephen MacKeith then edited Silvey's material into a book documenting 57 paracosms (Cohen and MacKeith supplemented Silvey's material with their own). "From a psychological point of view", writes Cohen and MacKeith,

> paracosms are interesting [...] because they are specialized examples of [...] imagination at work and because some of them leave permanent records. [...] Making up worlds is only one kind of imaginary activity - and a rare and specialized on at that

254. The term paracosm was coined by Ben Vincent (Cohen and MacKeith, 1991: vii).

> - but it allows us to get a fix on what children do make up and invent as though it were in cold storage.[255]

Children return regularly to their paracosms, sometimes during a period of several years. Some paracosms are upheld in the imagination of a child (or group of children) entirely without external aids. Other paracosms are upheld with the aid of cartography and writing, and these activities can become quite laborious: "This kind of systematic imagination is psychologically very curious. On the one hand, children are playing, fantazising, imagining; on the other hand, the fantasy is very logical. [...] It looks much more like work than play".[256] The case of Crab, an imaginary country created by Erica, illustrates the work-like aspect of world building. At first, Erica's private world evolved around imaginary people, but the country these imaginary people lived in became more and more important. Erica began to "invent historical events for Crab" and "began to feel the need for a continuous history but she does not seem to have invented one". She also attempted to invent a Crabian language "but reluctantly, and with some sense of frustration, abandoned the attempt as too difficult".[257] Increasingly, Erica's world building seems to have been performed in response to the demands of the inner logic of Crab. After the initial push to establish the general outline of Crab, fleshing out the details turned out to be an almost work-like activity. It has been noted by several that repetitive online gaming is more work than play.[258] The boundary between work and play is not clear-cut when it comes to children's imaginary worlds either.

Famously, some adults create imaginary worlds. In doing so, they often employ cartography. One famous example is the *Treasure Island* drawn-constructed by Robert Louis Stevenson in co-operation with his father and stepson. Only later did Stevenson decide to use Treasure Island as the setting for his classic story about pirates and treasure hunters.[259] On a much larger scale, we find the world of *Middle-earth* created by J.R.R. Tolkien and used as a setting for his two extremely popular books: "The Hobbit" (1937) and "The Lord of the Rings" (1954-55). Tolkien had begun creating Middle-earth in 1917 and "The Hobbit" in the early 1930s, but the world

255. Cohen and MacKeith, 1991: 11.
256. Cohen and MacKeith, 1991: 53.
257. Cohen and MacKeith, 1991: 50.
258. E.g. Yee, 2006b.
259. Padrón, 2007: 265f.

and the story were not connected from the outset.[260] The story of "The Hobbit" was written rather casually as a serial read by Tolkien to his three sons, and the wider world surrounding the story's hero was mainly described as necessitated by the story. Later, Tolkien decided that the story of "The Hobbit" had taken place in the vast world of Middle-earth, and some events of "The Hobbit" took on a significance they had not had to begin with (e.g., the magical ring Bilbo won from Gollum in a riddle contest turned out to be an all-powerful, ancient artefact). Tolkien might have made many decisions regarding events and characters of "The Hobbit" retrospectively, but he did draw a special-purpose map of Bilbo's journey early on. The map guided Tolkien in his telling the story of "The Hobbit", and he was to make good use of cartography later, during the 12 years it took him to write "The Lord of the Rings". Tolkien "made (and adapted) [maps] as he went along", as Brian Sibley puts it after quoting Tolkien's own words: "It is impossible to make a map of a story after it has been written".[261] Tolkien's maps were dynamic aids in storytelling, not summaries produced after the fact.[262] At least at some points in time, Tolkien's map-making was aimed at world building rather than story-telling. This mirrors Erica's relationship with her imaginary world of Crab, as summed up by Cohen and MacKeith: "The pleasure which Erica derived from her fantasy arose as much from the creating and elaborating of it as from telling herself stories about it".[263]

Cohen and MacKeith's document how paracosms are frequently built entirely without the ambition of using the world as a setting for stories. The world of Possumbul, for instance, was created by the cousins Dan and Peter who were "fascinated less by any personal dramas than by the act of creation".[264] Possumbul also exemplifies a realist tendency noted by Cohen and MacKeith. Paracosms mirror the real world more closely than the grownup, fictional worlds produced by "writers like Tolkien and Ursula Le Guin": "The children seem not to make these leaps into imagining very different worlds but to create something that is very close to what what

260. Sibley, 1995: 15.

261. Sibley, 1995: 16.

262. The maps illustrating the "Lord of the Rings" books themselves are actually produced by Tolkien's son, Christopher Tolkien (Padrón, 2007, n. 10, p. 289).

263. Cohen and MacKeith, 1991: 51.

264. Cohen and MacKeith, 1991: 75f. Cohen and MacKeith add the following caveat: "or so they remember, or like to remember".

they know - embellishing it with passion and frenzy".[265] Thus Possumbul is governed by a prime minister of the name of "Mr Anderson, a name which may well have been chosen for its similarity to that of Arthur Henderson, the British Labour leader of the time, much admired by the boys' parents".[266]

If we look for realist ambition in the building of imaginary worlds amongst adults, N. Robin Crossby and his world of Hârn is the most striking example I know of. Crossby was almost obsessive when it came to Hârn. Not only did Crossby write or edit information on everything from major ocean currents to average incomes (for teamster, thatchers, toymakers etc., etc.), from major historical events to language families, but he also insisted on using *sinusoidal* projection for his maps (also known as *interrupted epizenithal* projection). Whilst acknowledging the more common Mercator projection's usefulness for navigation, Crossby argued that sinusoidal projection should be used for general-purpose maps since it does not distort relative size the way the Mercator does.[267] This decision gives a sense of Crossby's obsessive attitude to the details of Hârn and his fondness of cartography. From the outset, Hârn was intended as a setting for pen-and-paper role-playing. For this purpose, Hârn was published under the telling title "HârnWorld: A Real Fantasy World", emphasising the realism of the setting. That emphasis on realism would properly have appealed to child world builders such as Possumbul's creators, Dan and Peter. As Dan later recalls: "A [dream] world without rules would, apart from anything else, not be any fun".[268] These "rules" are, however, of a particular kind, just as the "realism" of Hârn is of a particular kind. Dan would "spend hours drawing elaborate maps of his capital, Padington (*sic*)" and "[p]lanning itineraries for Mr Anderson's speaking tours in the suburbs could be an arduous business".[269] These are, strictly speaking, not "rules" but *techniques* of a particular kind of "realism". The making of itineraries and maps lends realism to the paracosm. It does not really matter where Mr Anderson goes, what matters is to invoke rule-like regularity through the making of an itinerary. Crossby's sinusoidal projection is also a technique of realism. It is, of

265. Cohen and MacKeith, 1991: 70.

266. Cohen and MacKeith, 1991: 74.

267. [http://www.lythia.com/forum/viewtopic.php?f=30&t=4346&start=50. Accessed 19 December 2008]. For more on the Mercator projection, see n. 199, p. 72.

268. Cohen and MacKeith, 1991: 75.

269. Cohen and MacKeith, 1991: 75.

course, not inconsequential what the map shows, but the special projection technique in itself invokes realism. Not only a map is projected, also realism is projected.

This leads us back to virtual worlds. The average user of computers does not understand algorithms and software. The average user does, however, understand that computers are rule-abiding machines. Thus the virtual world is understood to be "realistic", in the sense of regular and rule-like, because it is upheld by a computer. The computer is not only a technical instrument doing calculations but becomes a technique of realism. Not only is 3D graphics rendered, also realism is rendered. It is a particular brand of "realism" hinging on a secular belief in regularity; that natural law and causality are the over-arching principles guiding the universe. Even when magic is encountered in the paracosms mentioned here, and this goes for magic in adult, imaginary and virtual worlds as well, magic is "realistically" rule-bound unlike the magic performed in religious stories (i.e., miracles).[270] Christians have warned against the satanic influence of imaginary worlds, e.g., the world of Harry Potter, on grounds of engagement with such worlds leading to a belief in magic.[271] But surely it should not be the magical content of paracosms, adult imaginary worlds and virtual worlds that offend religious people, it should be their inherent secularism.

(8) Summary

Maps and mapping play important roles in the experience of both virtual worlds and architecture but, of course, with notable differences. In virtual worlds, the possibility of objective perspective allows maps (and other imagery) to become an integrated part of architecture. This property can to some extent overcome Le Corbusier's criticism of plans that are entirely abstract and impossible to internalise through walking and looking. Such repeated, bodily encounters are essential for the experience of both the virtual world and architecture (distinguishing both from literary and

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270. Tolkien famously uses giant eagles as a deus ex machina towards the end of "Lord of the Rings". The use of the device has strong, religious undertones because it is used at a point immediately after the protagonist (Frodo) has essentially failed his mission by giving in to the temptation of the master-ring. Ultimately, Tolkien seems to tell us, we are in the hands of greater powers which are not bound by natural law. Tolkien's strong Roman Catholic Christian faith, and its influence on his work, has been thoroughly discussed. For an introduction to these themes, see Drout, 2006 (the entries on *Catholicism*, *Christ* and *Christianity*).

271. See Jenkins, 2006: 192-205 for an overview of the controversy surrounding Harry Potter.

cinematic experiences relying less on *Sense of agency*, see pp. 41-46), but embodied encounter with the virtual world is supplemented more heavily with secondary sources. Secondary sources are readily available to the virtual world user, literally at the tip of his or her fingertips. Cartographic maps of the virtual world can be called onto the screen instantly or superimposed onto the virtual world, allowing the user to navigate the virtual world and the map simultaneously.

Not only cartographic maps but also other kinds of background information is widely available on the very same Internet that sustain the virtual world proper. Non-digital sources are employed as well, such as books, magazines and printed maps. All of these sources supplement firsthand experience as the user creates cognitive maps to aid him or her in navigating the virtual world whilst providing an overall sense of how the virtual world is structured and a sense of connectedness.

Maps play an important role for the architectural profession in the shape of plans. Architectural plans are infused with certain values as architects attempt to guide how their projects are understood. In virtual worlds, the infusion of values is very much user-driven. Some *Second Life* users aim their building projects explicitly at obtaining a sense of home. Since they constantly oscillate between objective, subjective and self-perspectives, their building projects are to some extent to be thought of as 1:1 plans. Such a half-built, plan-like building can be a focus for attempts at online inhabitation (more on this in the chapter on *Building*).

Perhaps the most striking example of cartography in connection with virtual worlds is the maps produced by players of game worlds. Players use and make (or modify existing general-purpose maps into) special-purpose maps. The goal is to explicate structures, i.e., "structures" in the sense that has become increasingly popular in architectural discourse throughout the 20th century: visible as well as invisible networks of flow, including flows of transportation and communication. In the typical game world, these structured flows include the steady yet slightly varied re-growth of natural resources such as ores, fish and herbs, lines of transportation and the mechanically regular wanderings of animals and monsters. Explication of such structures is intertwined with attempts at fitting into the virtual world, or attunement to the virtual world. Such attunement to structure is not value-neutral but entails the embracing of certain basic principles of the virtual

world (more on this in the chapter on *Worldview*).

Cartography, detailed descriptions of regularity (e.g., the making of an itinerary) and the use of computers can all be considered techniques of realism. Such techniques produce "content" (maps, itineraries, 3D graphics) but they also produce realism of a certain kind, namely, a sense that rule-like regularity is being observed.

4. Landscape

(1) Introduction

Figure 18: *World of Warcraft* and *Second Life*. Landscapes (left: from *Flickr*)

The two screenshots above is a preview of things to come in this chapter. The screenshot to the left is taken by a *World of Warcraft* player and then uploaded to Flickr to be shared with other players. The production and distribution of such images is a testament to the pleasure many players take in the lush landscapes of virtual worlds, including hack 'n slash game worlds such as *World of Warcraft*. The screenshot to the right shows beach houses in *Second Life* surrounded by trees, bushes and huge images of landscapes. The landscape images are but one pixel thin but when seen in subjective perspective from within the buildings they form an impressive backdrop to the beach houses. In the objective perspective employed when the screenshot was taken, however, the landscape images seem like giant billboards rather than natural background, highlighting the possibility of integrating landscape-images into virtual world architecture. In other words: the image and the landscape play important roles in architecture and those roles are clarified and amplified in virtual worlds.

This chapter enhances understanding of examples such as the above. The section following immediately below provides a theoretical backdrop and brings out connections between this and other chapters, focusing on "landscape" as "architecture" in an extended sense (*Landscape and architecture*, pp. 101-104). I then introduce landscape aesthetics by way of distinguishing between naturalist and culturalist attitudes to landscape. The naturalist attitude can be summed up as the

view that "landscape" is another word for "environment", the culturalist attitude that "landscape is another word for "image" (*Environment and image*, pp. 104-106). For analytical purposes, it is convenient to hold on to the distinction between landscape-environment and landscape-image (although the two are integrated in the actual experience of landscape). The landscapes of game worlds lend themselves easily to conceptualisation as pure environments of survival (*Landscape-environment*, pp. 106-112), but landscape connoisseurship in game worlds and the use of landscape-image in virtual world building projects (such as the beach house project depicted above) point to other understandings and uses of landscape (*Landscape-image*, pp. 113-118). The discussion of landscape connoisseurship is extended into a consideration as to how the landscape-image fits into current ludology. Novice players take an interest in the landscape-image and experienced players tend to ignore the landscape, but distinctive personal modes of experience allow for connoisseurship of landscape-images (*Environment and image in a ludological perspective*, pp. 118-123). The chapter is concluded with a Summary (pp. 123-124).

(2) Landscape and architecture

The meaning of "architecture" was extended during the 20th century. This conceptual extension has followed various overarching concepts. One of them is "structure", as shown in the preceding chapter (see *Player cartography*, pp. 83-89). Other concepts used to avoid architectural thinking closing itself around the individual building are "landscape" and "the urban". I will briefly consider "the urban" and then "landscape" as extended senses of "architecture".

During the 20th century, architects began to regard not only the individual building but the entire city or region as their subject matter. Le Corbusier's ambition in this regard is very outspoken. In his texts, the thoughts on individual buildings and city planning intermingle seamlessly. As for realised projects, Le Corbusier tried his hands on both buildings and cities (the most prominent example of the latter being the Indian city of Chandigarh). In Venturi's "Complexity and Contradiction in Architecture", there is a similar tendency to slide quickly from examples of individual buildings to cities and back again[272] and this goes to build up a central

272. E.g. Venturi, 2002: 62, 72, 92, 100.

challenge: that "architecture opens the door once again to an urbanistic point of view".[273] Venturi comes to this battle cry for "an urbanistic point of view" through the realisation that architecture has lost its way by forgetting the basic distinction between outside and inside. He calls for "a break away from the contemporary concept (call it sickness) of spatial continuity and the tendency to erase every articulation between spaces, i.e., between outside and inside, between one space and another (between one reality and another)".[274] When Venturi is attacking "spatial continuity" it should not be read as a defence of "the interior" against "the outside" but as a defence of "the between": "Since the inside is different from the outside, the wall - the point of change - becomes an architectural event. Architecture occurs at the meeting of interior and exterior forces of use and space".[275] The Sydney Opera House can be used to exemplify Venturi's thoughts on the in-between. In the words of Kurt W. Foster, Jørn Utzon consciously designed the Opera House as "a continuum between inside and outside".[276] The Opera House is made up of several individual buildings placed on a platform. The buildings house various venues and as the public moves to, from and in between these venues, it disregards the difference between inside and outside. Additionally, the platform with its attractive waterside location generates a flow of pedestrian movement, exemplifying Venturi's "exterior forces of use".

Venturi uses the urban as a frame for his thoughts on the inside, the outside and the in-between but another frame presents itself: landscape. According to Richard Weston, Utzon thought of the Opera House as a "continuous landscape".[277] The concept of landscape is, however, not only found in writings on certified masterpieces. Venturi hinted at the landscape in "Complexity and Contradiction in Architecture" as he found fuel for his urbanistic point of view in "the everyday landscape, vulgar and disdained".[278] Venturi was alluding to the landscape of the typical American Main Street. In "Learning from Las Vegas" he was to boost his attack on the architectural establishment by turning his attention from Main Street to something even more "vulgar and

273. Venturi, 2002: 88.

274. Venturi, 2002: 80.

275. Venturi, 2002: 86.

276. Forster, 2008: 27.

277. Richard Weston (2002): "Utzon: Inspiration, Vision, Architecture". Hellerup: Bløndal, p. 117. Quoted in Forster, 2008: 27.

278. Venturi, 2002: 104.

disdained", namely, the Strip of Las Vegas. Main Street and the Strip are "our real landscape" because they are built for how people actually live, i.e., (in Venturi's American context) as consumers who travel by car.[279] At this point, in the landscape of highways, gas stations, ramps and strip malls, the distinction between nature and the built becomes blurred. Or as Anthony Vidler has written about the "new condition of architecture" in general: "'Landscape' emerges as a mode of envisaging the continuum of the built and the natural, the building and the city, the site and the territory".[280] In the virtual world, a sense of trees being natural and buildings being built still lingers, but a true distinction between built and natural is an impossibility. The concept of landscape nicely captures this sense of soft difference, or continuum.

"Landscape", then, is another way of guiding an extension of what "architecture" means. Landscape is not interior, and landscape organises several distinct spatial units, or *places*. Places are, in the view of Edward S. Casey "the constituent units of every landscape, its main modules, its prime numbers".[281] Landscape plays an existential role by "[bearing and configuring] the places that hold our lives together".[282] This notion of the existential, organising function of landscape is reminiscent of cognitive mapping, also said to play such a holistic role (see *Cognitive mapping*, pp. 68-78). Empirically based work on the experience of landscape by psychologists Rachel and Stephen Kaplan does indeed come very close to suggesting that the pleasure taken in landscapes is the pleasure of cognitive mapping: "A landscape is more than the enumeration of the things in the scene. A landscape also entails an organization of these components".[283] In the Kaplans' account, it is a pleasurable experience to sense the connections between the components that make up the landscape. This process of understanding does not entail a conclusion in the shape of a final and fixed world-map. The Kaplans underscore how it is a sense of "organizational patterns", and a

279. Venturi et al., 1977: 139. Whereas Venturi et al. has taken close look at the 1970s Strip, Alan Hess has taken a close look at 1950s roadside architecture, i.e., broadly speaking all buildings designed to be reached only by car (restaurants, theatres, markets, service stations, etc.). Hess emphasises how such buildings are inherently connected buildings, pointing to a "new organization of the American city" (Hess, 2004: 29).

280. Vidler, 2008: 149f.

281. Casey, 2002: xv.

282. Casey, 2002: 230.

283. Kaplan and Kaplan, 1989: 10.

"higher-level sense of connectedness",[284] rather than a totalising worldview, that makes one feel comfortably oriented in the world. In other words, the pleasure of landscape experience stems from the underlying process of cognitive mapping rather than the cognitive maps in themselves. To equal "cognitive mapping" with "landscape experience" would, however, be an unproductive reduction of both concepts. Unlike cognitive mapping which is a fundamentally internal process there is a strong element of external appearance to landscape which I now turn to.

(3) Environment and image

The concept of cognitive mapping usefully hints at the pleasure taken in landscape, but landscape is never only an internal, mental construct. Landscape comes wrapped in its own representation and can never be fully disentangled from it. The following image illustrates this point:

Figure 19: *World of Warcraft* meets Magritte: This is not a landscape

In the late 1920s, René Magritte famously wrote "Ceci n'est past une pipe" on a painting of a pipe. With "This is not a pipe" it is known that there might be a real pipe somewhere which the representation is not. But when "This is not a landscape" is written on a *World of Warcraft* screenshot things become more complicated. What exactly is the screenshot not? The image seems to be an inescapable part of the landscape. The image can, however, be understood to denote something *more important* than the image, namely an environment. The focus on environment stems from an urge to explain aesthetic occurrences through the lens of evolution. Following Tim Ingold, I label this environment-focused approach "naturalistic" as opposed to a "culturalistic" strand of landscape

284. Kaplan and Kaplan, 1989: 10, 190.

aesthetics focused on the image.[285]

In the naturalist view, landscape-images are cues or visual shortcuts to an understanding of the environment. It is symptomatic to find the following formulation in a book by one of the latest proponents of this approach, Denis Dutton: "The most attractive landscapes [...], in pictures as much as in reality".[286] Pictures are simply a thin surface layer guiding our attention to the environment. Since the human race spent 80.000 generations on the savannah of the Pleistocene epoch, argues Dutton, it is this environment we have been outfitted for through evolution and our landscape preferences can be explained by this fact. Humans have only been capable of feats such as writing, agriculture and the building of cities for roughly 380 generations.[287] Hence in the grand perspective of evolution (80.000 generations on the savannah, 380 generations beyond the savannah) various representational techniques have had practically no time to influence our response to landscapes. Are we experiencing a real landscape, a landscape painting or the landscapes of a virtual world? It does not matter, the argument goes, because the real savannah landscape our race has evolved to prosper on has left such a powerful mark. In the naturalistic perspective, the landscape is environment. The image is a minor detail which have only risen to prominence very recently, as a thin surface layer pointing to environmental reality.

In the culturalist view, on the other hand, representation is much more important. Edward S. Casey: "The truth is that representation is not a contingent matter, something merely secondary; it is integral to the perception of landscape itself – indeed part of its being and essential to its manifestation".[288] Or as Casey puts it elsewhere: "Nature as depicted in landscape painting is Nature *as seen* by human beings".[289] Not Nature perceived by any animal but Nature perceived by humans who can not but let the image into their seeing the environment. This is congruent with how architecture was described in the previous chapter: "architecture - as distinct from building - is always that which is represented" (Kesster Rattenbury, originally quoted on p. 67). Following culturalist logic, that could be

285. Ingold, 2000: 189.
286. Dutton, 2009: 21.
287. Dutton, 2009: 23f. It is the same
288. Casey, 2002: xv. Emphasis in the original removed.
289. Casey, 1993: 232. Emphasis in the original.

paraphrased into: landscape - as distinct from environment - is always that which is seen and represented as image.

Both a naturalist emphasis on the *landscape-environment* and a culturalist emphasis on the *landscape-image* can enhance understanding of virtual worlds. I will consider the relevance of these two approaches in the following.

(4) Landscape-environment

1975 saw the publication of Jay Appleton's book, "The Experience of Landscape", a foundational text for naturalist landscape aesthetics.[290] I will be referring to Appleton but to represent the naturalist stance I will turn also to a more recent but lesser known source, Steven C. Bourassa.[291] My preference for Bourassa stems from his providing the work of Appleton and others with philosophical and psychological context. Bourassa spends refreshingly little time polemically attacking culturalist positions and more time offering useful frameworks for understanding the experience of landscape.[292] From the outset, Bourassa frames the *image vs. environment* problem by enrolling the combatants in a much larger fight, namely, that of *nature vs. nurture*, or *biology vs. culture*. Eventually, Bourassa lets nature win. His case for nature is an echo of Appleton: Preferences for certain landscapes can ultimately be explained with their potential for survival. If a landscape is found pleasing, this positive reaction can be explained by that landscape's relatively high potential for survival. Therefore, landscape is simply another word for environment. This

290. Dutton provides an overview of the wide range of naturalist landscape aesthetics, with Appleton's work described as an initiating factor (Dutton, 2009: 19, 22, and 248). Appleton added a postscript to his 1996 second edition of "The Experience of Landscape" which also give some overview of the field (Appleton, 1996: 235-55).

291. Bourassa, 1991.

292. The naturalist approach to landscape aesthetics is sometimes marred by an unproductively polemic attitude and a deep gap between grand ambition and meagre explanatory power. Dutton is a good case in point. In the introduction to his book, "The Art Instinct", he invokes "the Darwinian spirit" and "hope [to] have done justice both to him and to the great artists whose achievements so captivate us" (Dutton, 2009: 9 and 12). Perhaps a little unfairly I am only considering the chapter on landscape aesthetics but that chapter does not seem to do anybody justice. The following observation is typical of the chapter and is perhaps also its most original contribution to landscape aesthetics: "A climbable tree was a device to escape predators in the Pleistocene, and this life-and-death fact is revealed today in our aesthetic sense for [climbable] trees [such as *Acacia tortilis*] (and in children's spontaneous love or climbing them)" (Dutton, 2009: 20).

holds true even for humans who have been comfortably unconcerned with survival for a long time; as Dutton reminded us, "a long time" in human perspective is but the blink of an eye in evolutionary perspective. This is how Appleton puts the importance of survival and evolution: "The removal of urgent necessity does not put an end to the machinery which evolved to cope with it".[293]

Bourassa then finds support for this *nature over nurture* position in the aesthetics of philosopher John Dewey. In Borussa's words, Dewey held the idea that aesthetic experience is an "intensification and enhancement of everyday experience",[294] a view held in explicit opposition to Kantian aesthetics. Since Dewey thought of the aesthetic experience as an intensified continuation of everyday experience, Kant's notion that the aesthetic experience is somehow an addition to normal, everyday experience, and an exclusively human one at that, struck Dewey as an "ironic perversity".[295] Bourassa consequently labels Kant's aesthetics "detached" as opposed to Dewey's "aesthetics of engagement", or "aesthetics of everyday experience".[296] Bourassa's fondness for Dewey's "aesthetics of engagement" is mirrored by the recent popularity enjoyed by psychologist J.J. Gibson amongst Scandinavian game scholars.[297] Gibson's theory is worth mentioning in passing since it gives a sense of what an "aesthetics of engagement" would look like if taken to its logical extreme. It is especially for his twin concepts of affordances and constraints Gibson has risen to game studies fame. "The affordances of the environment," according to Gibson, "are what it offers the animals, what it provides and furnishes, either for good or ill".[298] A frozen lake, for example, offers the directly perceivable affordance of being stand-on-able (unless the perceiver is too heavy) and walk-on-able (if the perceiver has legs and a sufficient sense of balance; a rabbit might do better than a deer), but the ice comes with a constraint on swimming (unless the

293. Appleton, 1996: 149.

294. Bourassa, 1991: xv. When the second edition of Appleton's book came out in 1996 he added a postscript in which he recommends Bourassa (Appleton, 1996: 242).

295. Dewey, 1934, quoted in Bourassa, 1991: 37.

296. Bourassa, 1991: xiv, xv.

297. E.g., Linderoth and Bennerstedt, 2007: 601, Meldgaard, 2008, and Wilhelmsson, 2006. Also Appleton has expressed his positive interest in Gibson's theory which was published, however, four years before "The Experience of Landscape": Appleton makes a short mention of Gibson in the 1996 second edition of that book (Appleton, 1996: 239).

298. Gibson, 1986, quoted in Linderoth and Bennerstedt, 2007: 601.

perceiver is, e.g., a walrus in which case the ice might be thin enough for the walrus to break as it swims). This way of understanding an environment has important implications. Assigning agency to all animals and not only to humans is shamelessly at odds with the core, humanistic idea of agency being an exclusively human property. The humanistic concept of agency stresses the difference between human action resulting from choice and occurrences in the world stemming from unthinking, natural forces. In contrast, the perspective of Gibson's so-called ecological psychology stresses how all choices made by animals, including those made by humans, depend on affordances perceived directly from the environment. In other words, actions are not simply decided upon and then imposed *on* the environment, but the range of possible actions are given *as* environment. In Gibson's perspective, the very notion of an "environment" as distinct from the physical world in itself does not make sense without an agent. Environment and agent are complementary concepts. Employing Gibson in aesthetics would thus be to take an "aesthetics of engagement" to its logical extreme.

The landscapes of virtual game worlds can easily be thought of as environment in the sense I have been circling around in the above. Take for instance *World of Warcraft*, a survivalist arena where players kill to get ahead in the game and try not getting killed too often in the process. Players participating in this game of survival are certainly "engaged" rather than merely contemplating images. This attitude fits Appleton's suggestion as to how one must engage with "landscape aesthetically": "an observer must seek to re-create something of that primitive relationship which links a creature with its habitat. He must become 'involved'".[299] But does this emphasis on involvement and environment leave any room for the landscape-image? There is indeed room for the landscape-image but it is only allowed certain, distinct functions. This is particularly clear in Bourassa's schematic approach. Bourassa proposes that landscape experience has three aesthetic-experiential modes: biological, cultural and personal.[300] "Mode" is to be understood as a distinct kind of attunement to the landscape. Appleton's above formulation ("an observer must seek to re-create something of that primitive relationship which links a creature with its habitat") can be

299. Appleton, 1996: x.

300. Bourassa suspects the three modes of landscape experience to come together in "some kind of synthesis" in the actual experience of landscape but does not pursue the matter further (Bourassa, 1991: 191).

understood as a call for a conscious willingness to enter into on of these modes, namely, the biological.

The theoretical underpinning for Bourassa's three modes of landscape experience stem from Russian psychologist Lev Vygotsky's theory of development. According to Vygotsky, psychological development plays out as three intertwined processes: phylogenesis (biological evolution), sociogenesis (cultural history) and ontogenesis (individual development). The modes of aesthetic landscape experience mirror these processes, and come with various constraints and opportunities, as seen in the table below ("constraints" is to be understood in the everyday sense, i.e., not in the specialised Gibsonian sense).

Process of development	Mode of aesthetic experience	Constraints and opportunities
Phylogenesis (biological evolution)	Biological	Laws
Sociogenesis (cultural history)	Cultural	Rules
Ontogenesis (personal development)	Personal	Strategies

Table 2: Bourassa's Vygotskyan paradigm for landscape aesthetics[301]

I will return to strategies later (see *Environment and image in a ludological perspective*, pp. 118-123). The remainders of this section deal with laws and rules.

The laws governing the biological mode have been set by evolution. Appleton provides examples of this by identifying a number of "sign-stimuli indicative of environmental conditions favourable to survival" which he believes to trigger "aesthetic satisfaction".[302] In accord with Gibson's affordance concept, Appleton believes many of such "signs" to be directly perceivable, and distinguishes between these *direct* signs and other, *indirect* signs. An example of an indirect sign can be found in the below screenshot, taken on *World of Warcraft's* Sunstrider Island.

301. Based on text material and tables 1 and 3 in Bourassa, 1991: 55 and 64.

302. Appleton, 1996: 62.

Figure 20: *World of Warcraft*, Sunstrider Island. Indirect prospect. From *Flickr*

The tower in the background, half hidden by trees, is what Appleton labels an *indirect prospect*. A *prospect* is defined as a vantage point from which a creature can survey its surroundings; to be able to survey the surroundings is of obvious benefit to survival. The overview from the top of the remote tower is, however, only *indirect* or potential. In order to sense the overview from this relatively far-away place, I have to "call on my virtual body, which is capable of inhabiting even the most remote and seemingly vacuous place", as Casey put it earlier (p. 47). I will have to project my viewpoint to the tower where I expect to find a panoramic overview of my surroundings.

The prospect forms one half of Appleton's dual concept of the *prospect-refuge*. A refuge is beneficial to survival because it offers an opportunity to hide. The perfect place then, from a survivalist perspective, is a prospect-refuge combining the qualities of the prospect (with its opportunity to survey) with those of the refuge (with its opportunity to hide). The Dwarven citadel-capital of Ironforge is an example of such a hiding place with a view:

Figure 21: *World of Warcraft*, Ironforge. Prospect-refuge. From *Flickr*

Prospects, refuges and other signs essential for survival can be explicated and become the essential material for landscape paintings and other kinds of landscape art such as gardens, cities, photography etc.[303] Virtual game worlds can be added to the list of forms of landscape art in which survival signs are employed, as demonstrated with the two examples just mentioned. The focus on survival signs is the main thrust of Appleton's landscape aesthetics and of naturalist landscape aesthetics in general, but Appleton is aware of the role played by culture. He was quoted earlier for stating that "[t]he removal of urgent necessity does not put an end to the machinery which evolved to cope with it" but that quote actually continues: "rather it frees that machinery to achieve different objectives which themselves are constantly changing with the aspirations and caprices of society".[304] These "aspirations and caprices" are called "rules" in Bourassa's framework.

The rules governing the cultural mode are shaped by cultural history. Landscape in the cultural mode is described by Bourassa as a "form through which cultural groups seek to create and preserve their identity" and, additionally, as the ways in which "one's experience of a place is

303. On the various forms in which survival signs can be employed, see Appleton, 1996, chap. 7. Just as naturalist approaches entail a focus on certain forms, culturalist approaches entails a focus on other forms. Casey's culturalist approach, for example, have the connectedness of places that makes up a landscape as its main theme. Therefore Casey considers the landscape painting and the map privileged forms in landscape aesthetics. In other words, these forms are superior because of a special potential for expressing connectedness (Casey, 2002: 230).

304. Appleton, 1996: 149.

imbued with [...] social significance".[305] Appleton provides a useful example of this, when he points out how the Rhine area is, in "the public mind", symbolised by picturesque castles along the river, even though the castles are "confined to a comparatively short stretch of it".[306] In a virtual world, the user comes across nothing *but* short stretches of river, segments of mountain, fragments of dessert etc. The virtual world is simply too small for anonymous, insignificant mountain ranges, hence only mountain ranges of cultural and symbolic significance are to be found, e.g., Dun Morogh where Ironforge lies. On that note, Espen Aarseth distinguishes between the "fictional world" of Azeroth and "a (virtual) theme park version of it". The fictional world is known from novels and off-line games, the theme park version of that world is the *World of Warcraft* game. As mentioned earlier, Aarseth has pointed out that *World of Warcraft* is really quite small, roughly the size of Manhattan (see *What is called "a virtual world"?*, pp. 31-34) and therefore not as big as the fictional world Azeroth known from *Warcraft* novels and earlier, offline games. *World of Warcraft* is, in Aarseth's view, Azeroth downsized and condensed into a theme park, hence made into "a functional and playable game world".[307] In the context of landscape aesthetics, this is a highly useful way of thinking about *World of Warcraft*, highlighting how that world is packed with significant features. As it happens, it also highlights the kinship between virtual game worlds and a kind of game worlds upheld by non-digital means, namely, the game worlds of pen-and-paper role-playing games. M.A.R. Barker created a fantasy world called Tékumel by fixating in writing its society, religion, technology and so on. Barker then created a role-playing game set in Tékumel and according to Gary Allan Fine, Barker is fully aware of the difference between the two versions:

> Barker emphasizes that the two "realities" are not identical. Because of the desires of game players, "game" Tekumel has more magical devices, more money, and greater ease for advancement than is "true" in "real" Tsolyani society [Tsolyanu being an important empire in the world of Tekumel, BL]".[308]

This mirrors the difference between "fictional Azeroth" and "game Azeroth" noticed by Aarseth.

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305. Bourassa, 1991: 101.
306. Appleton, 1996: 215.
307. Aarseth, 2008: 119 and 118. Emphasis in the original removed.
308. Fine: 134. For some reason Fine leaves out the accent in Tékumel.

(5) Landscape-image

World of Warcraft and similar game worlds can be conceptualised as arenas for survival, but players are not exclusively focused on the landscape as environment. They also show an interest in the landscape as image, as testified by the thousands of virtual game world screenshots uploaded to the Internet. Popular photo sharing sites such as *Photobucket* and *Flickr*, or specialised sites such as *Koinup*, reveal an abundance of images, many of which depict nothing but landscape itself,[309] i.e., "space freed from eventhood (e.g., war, expeditions, legends)" as Martin Lefebvre puts it.[310] Take for example the below *World of Warcraft* screenshot, found on *Photobucket*:

Figure 22: *World of Warcraft*. Holyevil says: "oh wow this view is awsome [sic]". From *Photobucket*

The screenshot not only contains the sunset as seen from a rocky vantage point by the sea but also (in the lower left corner) a bit of conversation between the player who took the picture and a fellow player. The "photographer" is playing an avatar with the dramatic name of Holyevil and is bragging to his friend about how he got kicked out of his guild for "harrassing [sic] another guild member". But, asks the friend, "didn't nightviper harras [sic] him too?" Holyevil replies: "not as much as i did lol". This player seems more interested in bullying other players than in enjoying

309. As a historical aside, it should be noted that landscape did not exist as an independent subject matter until the late fifteenth century. In the West, that is: "in other parts of the world (e.g., in China), landscape painting was an advanced art by the time of the Dark Ages in Europe" (Casey, 2002: 4).

310. Lefebvre, 2006: 22. Emphasis in the original removed. Following art historian Anne Cauquelin, Lefebvre contrasts landscape with *setting*, which is "the space of story and event" (p. 20). Having defined landscape in this way, Lefebvre goes on to analyse landscapes in cinema, focusing on films belonging to the canon of modernist cinema (e.g., films by Antonioni, Kurosawa and Pasolini). Lefebvre thus reinforces traditional film studies assumptions about action and straightforward storytelling being artistically inferior to the meditative, complex and unresolved. I aim at mapping out aesthetic possibilities without such prejudice.

the landscape-image, yet he suddenly says "oh wow this view is awsome [sic]", takes the screenshot and uploads it to Photobucket.

The making and publishing of such images (also by the bullies of hack 'n' slash fantasy worlds) suggests that gamers are not at all insensitive to the landscape as image. The table below has been produced to back up this claim. The table is based on a search for *Flickr* groups tagged with "world of warcraft" (on 8 January 2009), with the search results listed after number of group members and arbitrarily limited to the first page of results (which happened to be the top 14 results). The contents of the uploaded images have then been surveyed and summarised with a few keywords, listed in estimated order of importance.[311] The table provides a snapshot of some of the ways in which *World of Warcraft* is used and appreciated, as well as its connections with other parts of popular culture and with other parts of digital media; the *We Know & We No* group is based in two *World of Warcraft* guilds, and the *WowInsider* group is associated with the blog of the same name.

311. Some users post many almost identical images, e.g., to celebrate the achieving of a game goal (acquiring a mount, reaching a certain level, etc.). In such cases, all images have been recorded as one instance of marking a special event. Many images appear in more than one group.

Group name	Number of members	Number of images posted	Image content in estimated order of importance. Capitalised keywords denote categories which make up more than 5% (roughly) of the total number of images
World Of Warcraft (WOW)	562	3,541	Avatars,[312] landscapes, advertising, cosplay,[313] merchandise (including figurines), fan art, players
Warcraft[314]	284	1,371	Avatars, figurines, landscapes, launches,[315] cosplay, players
Game Screenshots	165	4,289	Avatars, landscapes; from Second Life, World of Warcraft[316]
Living in WoW	150	1,989	Avatars, landscapes, photoshop,[317] fan art, merchandise, players
World of Warcraft Screenshots	116	1,456	Avatars, landscapes
3pointD	101	3,248	AVATARS, landscapes, users; from Second Life[318]
WorldOfWarcraft	87	1,626	Avatars, landscapes
PORLAPUTA.COM	85	22	[No apparent connection to World of Warcraft]
WOW - World Of Warcraft Official Group	77	440	AVATARS, landscape, cosplay, figurines
World of Warcraft Costumes	64	158	COSPLAY
World of Warcraft Landscape Screenshots	58	199	LANDSCAPES, avatars
We Know & We No	56	224	AVATARS, players, cosplay, landscapes
Nargillah Sheesha hookah	48	83	[No apparent connection to World of Warcraft]
WowInsider	33	102	Avatars, landscapes

Table 3: *World of Warcraft* on *Flickr*

312. Including mounts.

313. Understood here as offline dressing up as a *World of Warcraft* character.

314. The group was created "[for] screengrabs and discussion of Blizzard's Warcraft series of games", but is dominated by *World of Warcraft* content.

315. The launch of a *World of Warcraft* expansion often turns into a festive fan event.

316. As well as other virtual worlds, e.g., *EVE*, *Silkroad Online*, and *Toontown Online*, as well as games which can be played offline, e.g., *Doom 3*, *Quake* and *The Witcher.*

317. Manipulated images, e.g., a player seemingly transported into the virtual world and an avatar's face meshed with a portrait painting of Elizabeth I.

318. As well as a few images from *Gaia Online, CyWorld*, and *Barbiegirls.com.*

Below, four typical screenshots from the *landscapes* categories, taken from the biggest group on the list, *World of Warcraft (WOW)* and shown as found on *Flickr* (no cropping or other alteration has taken place).

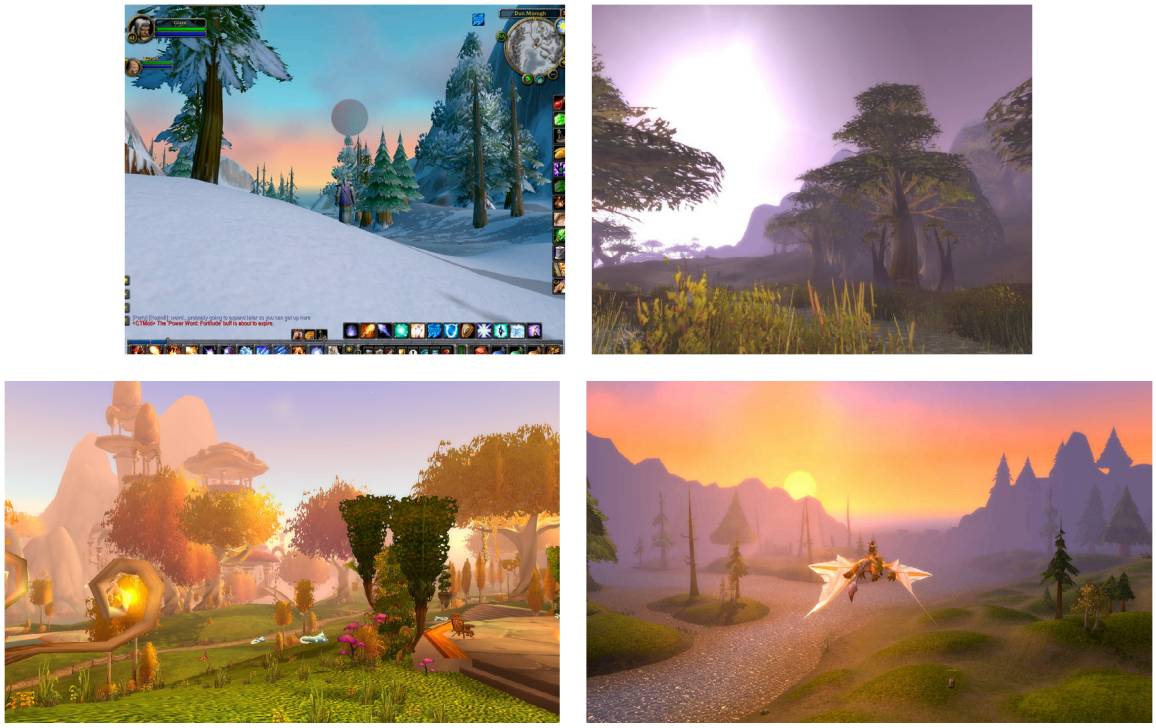

Figure 23: *World of Warcraft*. Landscape screenshots uploaded to *Flickr*

Players who make and upload screenshots such as these seem to appreciate the landscape-image. They are attracted to the landscapes in the first place, the naturalist would argue, by signs indicating heightened potential for survival such as the indirect prospect in the lower right image. But when the player begins to consider from which angle to take a screenshot he or she leaves the biological mode of landscape experience and enters the cultural mode. The rules of society start to make themselves felt as the player "freezes" the world into an image. The weight of society is quite obvious in *Second Life* as users operating in the cultural mode of landscape experience tap into the social significance of the landscape-image. As mentioned in the beginning of this chapter, huge landscape-images are raised to acts as "views" for homes, e.g., the coastal views seen in the screenshot below.

Figure 24: *Second Life* (left) and *Country Living* (right. Photo: Keith Scott Morton)

The houses in front of the giant landscape-billboards are intended to look like classic American beach houses such as the one seen in the photo on the right. The photo is from the American magazine *Country Living* and is one of several photos illustrating an article with the following premise: "Whether you live by the beach or just dream about ocean breezes, you can enhance the natural beauty of your home with crisp white, splashes of bold color, and sea-themed accents".[319] In order to achieve such a "naturally" beautiful home, the article suggests modest devices such as candles, cushion covers and clamshells. In a virtual world, huge landscape-images can be employed as well. All such devices are props in a game of social distinction, and players of this social game are experiencing landscape in the cultural mode.

A final note on the relationship between building and the landscape-image. As Edward Winters puts it,

> [a]rchitecture has the ability to provide us with experiences that do no hold our focus on the building itself, but that organize our experience as we look from or away from the building; rather in the way a frame might enhance a painting.[320]

Architecture's most commonplace device for organising experience is the window, framing and thus organising looking from the building. The window modulates the experience of the world towards one of landscape-image, as does the frame of the screen in the case of the virtual world. A

319. [http://www.countryliving.com/homes/beach-house-decorating-0409?click=main_sr. Accessed 20 June 2009].

320. Winters, 2007: 146.

protruding roof can have the same effect, as in the two examples below.

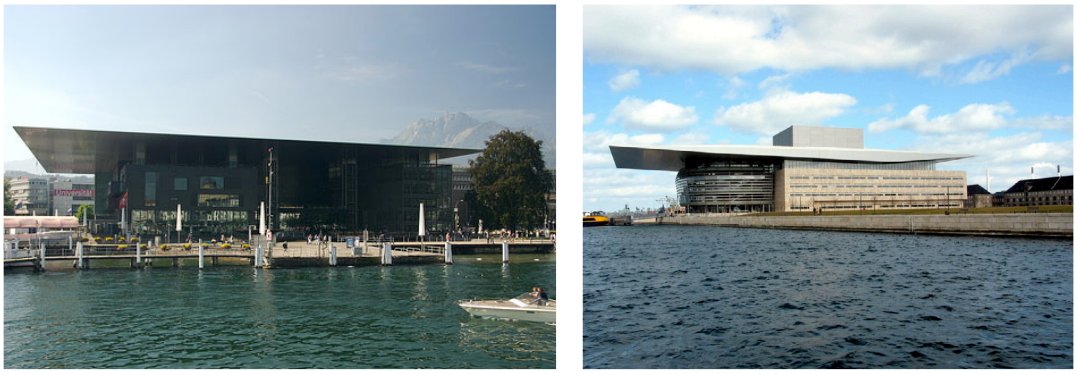

Figure 25: Left: Luzern Culture and Congress Center (Jean Nouvel, 1999. Photo: Philippe Ruault [?]). Right: Copenhagen Opera House (Henning Larsen, 2005. Photo: Mieke Vullings)[321]

Spectacularly exaggerated instances of a modern idea, these buildings are not so much meant to be looked at as to be looked from.[322] It evokes a strong sense of framing to look out from under the roofs, either from the balconies placed right under them or from ground level. Using a concept coined by Roland Castro and Jean-Pierre Le Danteccurité, Jean Nouvel (the architect behind the building shown to the left, Luzern Culture and Conress Center) likes to talk of such framing in terms of "urban acupuncture".[323] Framing can have a profound effect on one's outlook, not just on the most immediate environment but on the world as such. Like acupuncture, framing can have a seemingly local effect, eventually effecting the entire system. Windows and protruding roofs trigger a certain outlook, namely, to see the world as image, and are thus concrete examples of architecture furthering a specific kind of orientation in the world.

(6) Environment and image in a ludological perspective

The notion of the landscape observer oscillating between the biological and cultural modes of

321. The photo of the Luzern Culture and Congress Center is from [http://www.pritzkerprize.com/media/_downloads/2008_works05_lr.jpg. Accessed 26 March 2009] but is no longer available. The photo of the Copenhagen Opera house is available at [http://www.mimoa.eu/projects/Denmark/Copenhagen/Opera%20House. Accessed 25 August 2009].

322. Mohsen Mostafavi point outs Le Corubiser's *Petit Maison* and Ludwig Mies van der Rohe's *Farnsworth House* as examples of work "in which the house is a machine for viewing the outside" (Mostafavi, 2008: 8).

323. Dehan, 2004: 4.

experience (between the landscape as environment and as image) fits well with current ludology. Ludology has developed with the dual goal of becoming institutionalised into the Academy and of producing results (and graduates) of direct relevance to the game design industry. To get started, then, a quote from game designer Raph Koster: "gamers are very good at seeing past fiction. This is why gamers are dismissive of the ethical implications of games – they don't see 'get a blowjob from a hooker, then run her over'. They see a power-up".[324] (A power-up is "a bonus that a player can collect and that gives their character an advantage, such as more strength or" [the OED].) There is, it would seem, two modes of engaging with the computer, or two attitudes: a non-gamer attitude (focusing on the hooker) and a gamer attitude (focusing on the power-up). If taking literally, the quote does not make much sense. Saying that a player sees a power-up rather than a hooker amounts to saying that a footballer does not see a ball of a specific size and colour but simply sees "a ball". This is obviously not a truthful description of how human perception works (or how the perception of any animal works, for that matter). What Koster implies, though, is that gamers are trying to overcome the challenges of their games as efficiently as possible. Consequently, they dismiss any irrelevant information, such as fictional ornaments (the hooker, the blowjob etc.) or, more importantly in this context, landscape qualities in the sense of landscape-image. There might be a beautiful forest and a sunset in the background, but the player's focus is on the task at hand, e.g., avoiding the winged monster flying in for the kill.

Even when read in this sympathetic way, Koster's humorous and thought-provoking statement needs some adjustment which ludologist Jesper Juul provides. Juul considers computer games to be "half-real" (the title of his 2005 book) because components of the experience such as goals, challenges and the event of winning are real, whilst the world of the game is fictional.[325] Whereas Koster clearly holds rules (the power-up) to be more important than fiction (the hooker), Juul does admit fiction some functional merit. Fiction helps the player grasp what is expected of him or her. As an illustration of this, Juul points to the design process which gave birth to the game ultimately named *Amplitude*. At first, players were confronted with a rather abstract and therefore

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324. Koster, 2005: 81-85.

325. It can, however, be productive to distinguish between "game world" and "fictional world", rather than using "fictional world" in Juul's very general sense. Aarseth demonstrated this towards the end of *Landscape-environment*, pp. 106-112.

inaccessible game (named *Frequency*). Only after introducing a space ship and putting the player in charge of a ray gun did the designers get what they wanted: a game immediately understood by its player. The reaction changed from frustration to "Oh, I get it. I'm supposed to shoot things".[326] In other words, the fictional context strengthened the player's understanding of the actions he or she could take. In Juul's account, then, players do not "see past fiction" right away but rely on fiction to understand their options in the game.[327]

The player will, according to Juul, tend to focus either on the rules or the fiction, with "rules and fiction [competing] for the player's attention".[328] Fiction might help the player to understand the game, but when fiction has done its duty, fiction fades into the background of the player's consciousness. Therefore, argues Juul, experienced players will tend to dismiss the fictional world of the game, whilst inexperienced players will tend to focus on it. Seen from a ludological perspective, the landscape-image of virtual worlds plays a role similar to that of fiction. The landscape-image cues players to grasp goals, the role played by hookers and space guns in the examples above. When a player enters a new area of the world, e.g., *World of Warcraft's* Stranglethorn Vale (as seen in the screenshot at the very beginning of *Environment and image*, p. 104), the player thus tends to focus on the landscape-image, and in a manner similar to how fiction cues the understanding of goals, the landscape-image helps the player develop a general sense of the world's content and its distribution. In the Stranglethorn Vale example, images of exotic beaches and jungle ruins are suggestive of a certain content, e.g., pirates, voodoo and head-hunters. Additionally, the landscape images hint at a certain distribution of this suggested content, i.e., jungle images suggesting a tight and unpredictable distribution as opposed to the sparseness and regularity suggested by desert images. When the landscape-image has fulfilled its purpose it dutifully fades to the back of the player's consciousness, and the player switches from the cultural to the biological mode of landscape experience. The landscape is now understood as

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326. Greg Lopiccolo & Alex Rigopulos (2003): *Harmonix's Amplitude: The Sound and the Fury*, in *Game Developer Magazine*, August 2003 (pp. 40-45), p. 43. Quoted in Juul, 2005: 177.

327. Along similar lines, Rune Klevjer has argued for the usefulness of cutscenes: "[the cutscene] is a narrative of pre-telling, paving the way for the mimetic event, making it a part of a narrative act, which does not take place after, but before the event. The cutscene casts its meanings forward, strengthening the diegetic, rhetorical dimension of the event to come" (Klevjer, 2002: 200).

328. Juul, 2005: 121.

an landscape-environment consisting of various action and survival potentials.

If these ludological considerations are entered into Bourassa's framework, it produces the table below. The player's landscape experience oscillates between the biological and cultural modes, with the landscape-image cueing the player to understand the landscape-environment. In a ludological perspective, experiencing the landscape as image is typical of a beginner's mode of gaming whereas the more experienced player's gaming mode is characterised by a focus on the landscape as environment.

Mode of aesthetic experience	**Landscape function**	**Landscape experience**	**Gaming mode**	**Constraints and opportunities**
Biological		Environment	Experienced player	Laws
Cultural	Cues player to understand options in the environment	Image	Beginner	Rules
Personal		Voluntary (environment or image)	Personal	Strategies

Table 4: Vygotskyan landscape aesthetics meets ludology

Turning to the *strategies* of the third mode of aesthetic landscape experience, the *personal* mode, what interests Bourassa most about such strategies is their potential for cultural change. Through "transcendent behavior" the creative individual might create new "perceptual strategies",[329] thereby changing the way in which not only the individual him- or herself perceives a landscape, but eventually how entire social groups perceive the landscape. This might happen, for example, when a creative individual describes mountain scenery in poetry or in landscape painting, thereby influencing the general perception of mountains. The practice of certain *Quake* players can be used as an example. Juul uses the practice of *Quake* players to illustrate his point about the "fictional world" fading away in the gaming experience. In an attempt to sharpen their perception of the basic, spatial layout of the game, these *Quake* players alter the graphics settings of the game to tune out irrelevant information such as surface textures. This implies that to the experienced player (the real gamer) landscape is essentially an environment. Accordingly, preoccupation with

329. Bourassa, 1991: 110.

the landscape as image is typical of a beginner.

It should be noted, however, that the findings Juul refer to as findings on "Quake players" in general are pre-experimental information from a psychological study on presence done by Xavier Retaux. Retaux recruited his test subjects from an Internet forum that "brings together the best French players" and carried out experiments with a group of players including several with "a lot of knowledge of the virtual world".[330] By focusing on such expert players, Juul is in a sense trying to reveal the essence of bikeness by studying Tour de France winners, instead of studying the average bicycle rider. Incidentally, the experience of playing *Quake* on an expert level corresponds to how chess is experienced by grandmasters, according to a study by Herbert and Stuart Dreyfus:

> Chess grandmasters, engrossed in the game, can lose entirely the awareness that they are manipulating pieces on a board and see themselves rather as involved participants in a world of opportunities, threats, strengths, weaknesses, hopes, and fears.[331]

Since observations about expert players can not necessarily be extrapolated to players in general, the case of Retaux's *Quake* players should not be used to explain the experience of gaming in general. The behaviour of Retaux's expert players is, nevertheless, very illustrative from the viewpoint of landscape aesthetics. The expert players exhibit the transcendent behaviour typical of landscape experience in the personal mode: They pursue a certain, perceptual strategy, namely, to focus on the spatial layout of the landscape (the landscape-environment), and they are able to explicate and communicate this strategy.

Whilst the strategy of adjusting graphics settings is suggestive of one, distinct personal mode of landscape experience, the strategy of making landscape screenshots is suggestive of another. Again, a perceptual strategy, namely, to enjoy the view (the landscape-image) is pursued, explicated and communicated, cf. the sharing of screenshots and the extensive commentary accompanying it on Flickr. Whereas the ludological argument concerning the function of the landscape-image went like this: "You use the image to understand your options better, then

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330. Retaux, 2003: 300. The ludologist position on fiction, and by extrapolation on the image, is probably very useful for designing games and for teaching game design. In addition, it might have explanatory power when used for specific, analytical purposes. What I find counterproductive is the ambition of providing a super-model of how all games are played.

331. Hubert L. Dreyfus & Stuart E. Dreyfus (1986): "Mind over Machine". New York: Free Press, p. 30. Quoted in Shaffer, 2006: 25.

forget about the image and focus on the action (if you don't, you're not a real gamer!)", the argument for landscape connoisseurship as a personal mode of gaming goes quite differently: "In order to enjoy the landscape as image, you have to master the game, i.e., learn how to survive, i.e., *overcome* the landscape as environment". All in all exactly the opposite of what a ludologist would consider the normal way of relating to a game. The means, perversely, become a goal in itself. It might be countered that through effort the experience of any object can be twisted away from what must be consider normal, and that the position of landscape connoisseurship is a strange, non-gamer position for a *World of Warcraft* player. Perhaps it is a relatively marginal position, but explicating non-mainstream subject positions, i.e., personal modes of experience and their associated strategies, helps paint a fuller picture of how virtual worlds are engaged with.

(7) Summary

The issues considered under the headline of "architecture" widened considerably throughout the 20th century. It has been argued that it is the city, the "urban landscape", or simply the "landscape" which architects ought to concern themselves with, rather than the single, disconnected building. However, such calls for reorientation of the architectural profession do not escape the basic dichotomy of conceptualising the built in terms of space or image. The spatial layout of interconnected buildings might be said to constitute a "landscape" in the sense of an environment, but that landscape-environment can be seen (and enjoyed) as a landscape-image as well.

A vital strand of contemporary landscape aesthetics explain preference for a given landscape by focusing on the perceived potential for survival offered by that landscape. From this perspective, the essential material for landscape aesthetics is the signs denoting a particularly high potential for survival, e.g., a prospect-refuge.

The landscape-image is employed for its symbolic significance in a virtual world such as *Second Life* which is not primarily aimed at gaming. In game worlds, the landscape-image is particularly pertinent when it comes to two distinct player positions. Firstly, the beginner's position where the image is used as a tool to understand the environment. This position is taken by even the most experienced player when he or she reaches a new landscape, but the veteran player leaves the

landscape-image behind much faster than the beginner. Secondly, the player might enter into a personal mode of landscape experience, utilising the strategy of landscape connoisseurship. Another example of a personal mode of landscape experience would be the extreme focusing on environment exemplified by competitive players of first-person shooters such as *Quake.*

5. Building

(1) "A structure with a roof and walls"

This chapter is the most obviously architectural in its theme: It deals with *buildings* as well as the activity of *building*. It deals, in other words, with "structures" in a more straightforward or everyday sense than the one encountered in the chapter on the *Map*. There, "structure" was used in a recent and rather abstract sense, explained by Adrian Forty as follows: "A schema through which a drawn project, building, group of buildings, or entire city or region become intelligible" (see p. 87).[332] Structure in this schema-sense blurs the border between infrastructure and flows of communication, and it was a useful concept for explaining user-cartography as a practice aimed at explicating the structures of game worlds (the flows of communication, transportation, resources etc.). This advanced notion of structure had a more straightforward predecessor, namely, "any building in its entirety" (again: see p. 87),[333] cf. the OED in which a "building" is defined as "a structure with a roof and walls, such as a house, school, store, or factory". In virtual worlds, buildings abound in the old-fashioned, OED house sense of "structure with a roof and walls". Many virtual worlds, e.g., *EverQuest II,* offer their users the possibility of renting prefabricated buildings, and a market for such buildings quickly emerged in *Second Life*, as seen below.

Figure 26: *EverQuest II* and *Second Life*. Prefabricated buildings

Designers of game worlds can encourage the use of virtual houses by various means, e.g., by

332. Forty, 2000: 276.

333. Forty, 2000: 276. Originally quoted on p. 87.

giving them storage functionality (e.g., *EverQuest II*, *Star Wars Galaxies*, *Horizons* [name since 2008: *Istaria*]) or by letting the avatar recover faster from his wounds when "at home" (*Fallout 3* and *Fable II*, to name two offline examples). *World of Warcraft* does not offer its players individual houses, but inns such as those seen below are often used to anchor the player somewhat, both geographically and socially.

Figure 27: *World of Warcraft*, the Goldshire and Fort Wildervar Inns. Screenshots from *WoWWiki*

These screenshots of *World of Warcraft* inns are used to illustrate the entry *Inn* at the popular *Wikipedia* style site *WoWWiki*. The entry illustrates that some players attach emotional value to inns. Although the game mechanics do not encourage players to frequent inns, inns are valued for their homely qualities (qualities highlighted by the screenshots themselves, taken at dusk, with the light from the windows seeming warm and welcoming):

> In the original *WoW*, inns were comfortable, welcoming places. The inns in *The Burning Crusade* often seemed poorly equipped and bare in comparison [...] In *Wrath of the Lich King*, happily, there are some newly designed and large luxurious inns, a welcome return to the feel of the original game.[334]

Some virtual worlds allow their users not only to frequent buildings but also to engage in the activity of building. *Second Life* provides an extreme example of this. Every avatar in *Second Life* is another user. Every bird, mountain, skyscraper, shoe, space gun etc. is created by a user; there is truth, then, in the slogan of *Second Life*: "An online, 3D virtual world imagined and created by its

334. [http://www.wowwiki.com/Inn. Accessed 29 June 2009]. *The Burning Crusade* and *Wrath of the Lich King* are expansions to the original game, allowing players to explore added territories and progress further in terms of character level. I have talked to vey experienced players of *World of Warcraft* (players who have played the game for thousands of hours) who insist, without any evidence, on their avatars healing slightly faster at inns, compared to other areas of the game world.

Residents". Below, some *Second Life* examples of unique user-created buildings.

Figure 28: *Second Life*. User-created buildings

Linden, the makers of *Second Life*, has been very successful in manufacturing a positive image of user-generated freedom, if not anarchy.[335] This image has a basis in consistent design and business strategies aimed at providing users with useful tools whilst avoiding publisher interference until the very last moment.[336] Yet the image of freedom is also built up by the founders of *Second Life's* repeating over and over again how *Second Life* will allow users "to experience the collapse of geography, to build communities, groups, and businesses independent of location",[337] or other statements to that effect. Of course users are "independent of location" in the sense of being able to access their virtual world from any Internet-connected computer, but paradoxically, much online life is anchored in a few, virtual locations. The *Second Life* avatar is allowed to fly and even teleport around the virtual world. Thus a user could easily spend all his or her online time *doing* things: attend concerts and lectures, have virtual sex, play games, watch movies etc. Nevertheless, users are drawn to building for their avatars: *building* in the double sense of a "structure with a roof and wall" and the activity of building. Why is this so?

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335. To add a bit of historical context, the idea of the user-created virtual world is not new but goes back to the text-based predecessors of virtual worlds. From 1989, *TinyMUD* allowed its users to build their own rooms. *TinyMud* thus "eschewed game-like aspects and concentrated instead on the social side of things as well as world-building", as Richard Bartle explains (Bartle, 2007: 158).

336. As an example of the no interference-policy, Linden refused to crack down on make-believe, sexual age-play in *Second Life.* However, when Sky News started reporting on the subject on 31 October 2007, Linden publicly declared its willingness to deal with the issue and ultimately enforced restrictions on age-play.

337. Ondrejka, 2007: 27.

In the following section, I provide this question with a broad backdrop (*Space/place, landscape/ building*, pp. 128-130). I then take a micro-level, ethnographic look at a collective building project in *Second Life*. The section *Virtual ethnography, distant place* (pp. 131-133) sets up the ethnography and *Virtual dwelling* (pp. 133-136) reports it. Towards the end if the latter section, reporting is mixed with reflection as it is shown how user practices resonate with Heidegger's thoughts on dwelling. The remaining sections draw on the ethnography, as well as examples of related users practices, to engage in an informed discussion of three central devices used to obtain a sense dwelling in virtual worlds: Firstly, *Dwelling with avatars* (pp. 137-138) considers the role played by the avatar. Secondly, *Against boundaries* (pp. 139-142) considers the role of boundaries. Heidegger's philosophy on the matter is contrasted with the ambivalent attitude towards sense of place and dwelling shown by some contemporary media scholars. Thirdly, *Against images* (pp. 142-148) considers what Juhani Pallasmaa calls architectural images and how such images are employed by *Second Life* users in their attempts at obtaining a sense of virtual dwelling. *The pop vernacular* (pp. 148-151) considers the architectural image in connection with the collective nature of the building projects explored in the ethnography. *The machinic image* (pp. 151-153) is a final extension of the discussion of images in architecture and marks the conceptual border between "image" and "looking". The main function of this section is to create a bridge to the coming chapter on *Worldview*. The chapter is concluded with a *Summary* (pp. 153-154).

(2) Space/place, landscape/building

Building and landscape can usefully be conceptualised as complementary ideas in order to provide a theoretical backdrop for exploring how and why buildings are constructed in virtual worlds. As complementary ideas, building and landscape are instances of that much broader set of ideas, *Place and space* (see pp. 17-25). In humanistic geographer Yi-Fu Tuan's influential account (see *Researching place*, pp. 25-29), both place and space are defined by their relationship to human requirements:

> Enclosed and humanized space is place. Compared to space, place is a calm center of established values. Human being require both space and place. Human lives are a

dialectical movement between shelter and venture, attachment and freedom.[338]

Space is associated with human movement and if that movement is arrested long enough place might occur. To be in place is to come to a momentary standstill, but this does not entail that the humanistic geographer associates place with passivity. Edward S. Casey is in accord with Tuan when he says that "dwelling places offer not just bare shelter but the possibility of sojourns of upbringing, of education, of contemplation, of conviviality, lingerings of many kinds and duration".[339]

Building can be thought of as humanly encountered place, landscape as humanly encountered space. Landscape fulfils a basic, human requirement for outwardness by affording movement through space. Humans do not go out into abstract "space" as such, but encounter space as landscape. The outward impulse stands in a dialectical relationship to the inward impulse towards the enclosed "in here" of building. The experience of (ad-) venturing into space gains depth and clarity when contrasted to moments of pause in place. Very broadly speaking, then, the user's mindset towards the virtual world can be described as outward when focused on landscape and inward when focused on building.

Compared to non-interactive media products, the virtual world has unique capacity for simulating space/place as landscape/building. Because of that special way in which the virtual world is engaged with (as described in the chapter on the *Body*) the difference between space and place is experienced directly and bodily, rather than as the difference between described movement and described standstill. When I return to my "safe house" in *Grand Theft Auto IV*, to take an offline example, I not only experience a momentary standstill in a flow of events, I also experience locomotion when I reach my safe house by car, leave the car and enter the front door by avatar proper, go up the stairs and through the door to my flat. I experience directly, in my fingers, how fast movement by car through open space, i.e, the street-landscape of *Grand Theft Auto IV*'s Liberty City, is replaced by the slower and more precise, or even meticulous, movement into and inside my safe house-place. To sum it up with a quote from Casey: "Place is what takes place

338. Tuan, 1977: 54.

339. Casey, 1993: 112.

between body and landscape".[340] Importantly, this taking-place is repeated. My body remembers, as it were, the sequence of actions bringing me home, and the cognitive map of the place and its immediate surroundings is gradually extended, revised and refined (see *Cognitive mapping*, pp. 68-78). The virtual world's unique potential for simulating space/place as landscape/building thus stems from the possibility of embodied encounters and from the possibility of cognitive mapping.

The virtual world's capacity for place simulation does not, in itself, explain why users of *Second Life* are drawn to building. Tuan's humanistic geography can not answer the question, but gives the question a broad context in terms of fundamental, human needs for space and place, the outward and the inwards. Could the question of why *Second Life* users are attracted to building be attacked by the most anti-philosophical means imaginable: statistics? How many percent of users are actually interested in place? Or: How many users have what could be labelled "residential" motives for building or renting houses? Or: How many users actually use their house, or any other house, for "residential" purposes? Asking the right question is difficult (how should "residential" be understood?), and even if the perfect way to phrase the question was found, we would run into trouble trying to get the right sample of users. If it could be looked up how much land in *Second Life* is zoned for "residential" purposes the job would be easier, but zoning in *Second Life* is a bit more complicated than that. In lieu of zoning rules proper, *Second Life* land often come with *covenants*, i.e., restrictions on the way a piece of land can be used. The covenant is decided by the user who owns the land. Such restrictions might be technical and law-like (e.g., skyboxes [flying structures such as the flying castles seen in the screenshot at the very beginning of this chapter (figure 26)] can only be constructed at altitudes over 4.096 meters), but restrictions might also be rule-like and open for interpretation, (e.g., specifying a theme ["residential", a historic period etc.] or simply that designs have to be of a certain level). The land owner is the judge of whether or not a renter complies with the covenant.

Finding humanistic geography and philosophy of place and space to be good at providing context, but not so good at providing analytical tools, and statistics to be too rigid, I turn to ethnography to get a sense of why some *Second Life* users are drawn to building.

340. Casey, 1993: 29.

(3) Virtual ethnography, distant place

Anthropologist Tim Ingold has described ethnography as a field

> [thriving] on the art of its own perpetual deconstruction. [...] [receptive] to ideas springing from work in subjects far beyond its conventional boundaries, [it can] connect these ideas in ways that would not have occurred to their originators".[341]

Ethnography's cross-boundary way of connecting ideas is always grounded in persistent observation of people, earning ethnography the label of "philosophy with people in it" from Ingold.[342] In the remainders of this chapter, I will be trying my hands at this discipline, letting a discussion of place, space, boundaries, image and dwelling be informed by steady observation.

Ethnographic data is gathered through fieldwork rather than experiment and "a clear distinction between observation and interpretation, between the collection of data in the field and their placement within a theoretical framework, can not readily be sustained",[343] explains Ingold. The words are aimed at the etic work of the researcher but rings true for emic conceptualisations of virtual worlds as well (i.e., user-conceptualisations [see *Researching place*, pp. 25-29]). The user's experiencing a virtual world as, e.g., tool, place or social context, is not just a matter of observation ("oh! This seems to be a place!") but also of interpretational (conscious) and conceptual (conscious or unconscious) work. The virtual world user and the ethnographer alike are engaged in observing and interpreting, experiencing and conceptualising. In contrast, neither a moviegoer or a film scholar have trouble conceptualising their experiences as *film watching*. It is more likely for reflection on what exactly it is one is experiencing to occur when it comes to virtual worlds.

As for doing ethnography online, Christine Hine has worked through the various challenges arising from such an endeavour in her 2000 book, "Virtual Ethnography". These challenges include rethinking the notion of authenticity, challenged by the lack of face-to-face interaction, and rethinking the notion of the field site:

> If culture and community are not self-evidently located in place, then neither is ethnography. The object of ethnographic enquiry can usefully be reshaped by

341. Ingold, 1994: xvii.

342. Ingold, 1994: xvii.

343. Ingold, 1994: xvi.

> concentrating on flow and connectivity rather than location and boundary as the organizing principles.[344]

"Concentrating on flow and connectivity" is exactly what I did in the chapter on the *Map*. What I claim with this chapter is that the concept of place is still, *also*, important for understanding virtual worlds. We are not faced with an either-or and despite the words just quoted, Hine's own research does in fact not suggest this. Hine's ethnography shows how "location and boundaries" are indeed still important as "organising principles" for users' engagements with the Internet, something I will return to in the section *Against boundaries* (pp. 139-142). At this point I would like to examine Hine's basic assumption which is that the experience of place is weakened online and that ethnography therefore has to adapt into an accordingly "virtual" version, meaning a "not quite" or "not strictly the real thing" version.[345]

Firstly, the notion of a weakened sense of place has a higher degree of truth to it when it comes to the primarily text-based places Hine has been examining (newsgroups and web pages) but it seems much less obvious when it comes to modern-day virtual worlds, i.e., freely navigated, 3D worlds of increasingly impressive graphic prowess. A place experienced under textual conditions is not the same as a place experienced under spatial conditions, even if they are both labelled "virtual" and "online". As early as 1994, Marily Strathern warned anthropologists against "scaling up" when engaging with "cyberculture": "the neologism [cyberculture] is presented as an encompassing summary of concrete and heterogeneous events - a gathering together of everything that appears new. Hence the hortation: 'Anthropologists must venture into this world'".[346] Sound advice.

Secondly, consider Hine's wording in the following: "Ethnography has changed a lot since its origins as the method anthropologists used to develop an understanding of cultures in distance places".[347] When online, Hine has her identity as an ethnographer challenged by the apparent lack of "distant places" to be immersed in, but maybe that identity is challenged by "distant place" in a much more profound sense: How real or virtual is "place" anyway? As noticed earlier, the

344. Hine, 2000: 64.
345. Hine, 2000: 65.
346. Escobar et al., 1994: 226.
347. Hine, 2000: 41.

relationship between the twin concepts of place and space has been troublesome for most of the history of philosophy (see *Place and space*, pp. 17-25). Space has been the dominant concept since the Enlightenment and only recently did a philosophical "rediscovery of place" begin. Now, the difference between the user's conceptualisation of place and the more stringent conceptualisations, or even definitions, produced by ethnographers and philosophers must be observed. It is not known whether or not it is safe to extrapolate the historic return to place observable in philosophy and some parts of ethnography to user conceptualisations of virtual worlds. The broad notion of a rediscovery of place can, however, be a useful backdrop guiding virtual ethnography.

It must be time now to turn towards *Second Life* and ask a few, specific questions.

(4) Virtual dwelling

> Do *Second Life* users conceptualise their virtual world primarily in terms of space or place? Do they embrace a condition of placelessness? Or do they, on the contrary, develop attachments to virtual places? When it comes to *Second Life,* is boundary no longer an organising principle? And how does one go about gathering material illuminating such questions?

My own, initial reaction to *Second Life* (in 2004) was one of recognition. Maybe I was heady with spin and hype, but this felt like my days (and nights) in *The Palace* almost ten years earlier (in 1996), back in the day when the line "we just got on the Internet!" commanded respect and envy. The sense of potential, if not promise, the odd encounters, the overwhelming generosity of strangers, the amazement at how human feelings were, so it felt, able to travel through a digital communications medium: it was all there, complete with the technological glitches which only served to underline the fact that we were all on a great, futuristic adventure. Initial reactions soon gave way to a sneaking suspicion that *Second Life* was not about (cyber-) space but about places. Boundaries made themselves felt. I would glimpse an interesting, faraway building and fly towards it, only to hit a semi-invisible "glass wall" with a loud smack, left to peek into the forbidden land from a distance. If they did not secure their houses in this way, some users gained a degree of access control by building or renting houses floating high above ground level. What was going on?

To get a closer, micro-level look, I followed a handful of serious *Second Life* user groups for fourteenth months (April 2007 to August 2008). In this context, "serious users" can be loosely

translated into *builders*. A builder is a user with a certain expertise in wielding the rather cumbersome design tools of *Second Life*. Builders have thus gained recognition among their peers and are probably able to make money on their builder's skills. The self-assigned "builder" label was used explicitly, and not without pride, by most of the users I followed.[348]

I met one of these builders, whom I will call Vlad, in early June, 2007. At that time I was quite literally trying to get through the glass walls of private places to get a better sense of what was going on inside them. Incidentally, my curious attitude has never offended anybody or raised any questions as to my identity. As it happens, there is a socially acceptable subject position standing ready for people indulging in flânerie. Sometimes users explicitly label such persons "explorers". I have had the explorer label attached to me on a number of occasions, for example when "caught" taking screenshots of private homes. To me, this makes it possible and acceptable for the researcher to stay in explorer character, so to speak, until initial contact and trust have been established between observer and informant. None of the builders I am in contact with took any offence when I "came clean" as a researcher, possibly several months after first contact. On the contrary, it might have seemed out of place to break the special *Second Life* atmosphere by prematurely providing *first life* information.[349]

I chatted with Vlad in a *Second Life* gallery, and he told me he was "searchin [sic] for a home" for his "family" (June, 2007). The term "family" was recently agreed upon by him and a handful of other builders tied together by sexual orientation and an urge to establish an online "home". During the following months, several members of this chosen family used the terms "home" and "family" frequently as their home took shape as an intricate castle. The enterprise took continuous investments of time, money and creativity. All of these investments were undertaken collectively. Costs were shared and the time-consuming creative work done by all family members (according

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348. There is a list of "builders" in the official *Second Life* Wiki [http://wiki.secondlife.com/wiki/Category:Builder. Accessed 7 July 2008] but it only lists 183 builders, none of whom I am in contact with.

349. My approach is somewhat comparable to the one taken by Gary Allan Fine when he did his ethnography of a pen-and-paper role-playing club. When the club met, various more or less firmly established groups would be playing in the same, large room. Some players would be restlessly disloyal to their group, leaving the table their group was playing at to explore other options in the room. Hine would come clean as a researcher to the players he played with regularly but "[s]ome peripheral players never learn that I was studying them" (Fine: 245).

to talent). In the early phase of the project, one of the builders earned the humorous honorific *lagooneer* as he was the one in charge of shaping a coastal area; a superficial indication of how important building was to his identity as a *Second Life* user. In October, 2007, a neighbour was allowed to add a small structure in the same style as the main building, or as Vlad put it: "He linked it there because we both find it fitting", as if the places themselves had an inherent fit which both of the users happened to sense.

In late October, 2007, a rather well attended house warming party was held. According to the invitation's wording, oddly enough, or rather as a result of not having English as first language, the party's occasion was the "long time and hard but successfull [sic] work to build [the] Castle", rather than the castle itself. Conscious or not at the time, the wording proved appropriate in the following months as the family kept building and changing the castle. In April, 2008, the entire structure had to be taken down due to financial reasons out of the family's control, but the building just continued at an even grander scale on newly bought and much larger grounds. A new ambition has crept in: to build something "fitting with the landscape" (Vlad's words), a landscape which was much more elaborate than the landscape surrounding the old place. The new landscape included mountains and forests. Having mastered the art of constructing individual buildings, the builders now focused on the connection between house and landscape, something only tried out on a modest scale before (see the screenshots below).

Figure 29: *Second Life*. Integration of landscape and buildings in collective building project

In July 2008, Vlad told me something which I believe to be an apt summary of his building experience during the preceding 13 months: "a castle is never finished but it looks complete". The

building might be "done" as *thing*, something standing in the landscape providing material for a nice screenshot. The building understood as *activity* is never over. Vlad thereby unknowingly hinted at the core of Martin Heidegger's philosophy of building. Heidegger's thought these matters through at a time when Germany was in the middle of rebuilding herself after being reduced to rubbles in the Second World War.[350] Millions were rehoused in a fast and efficient way employing modern building technologies and this provoked Heidegger to consider the difference between being housed and to truly dwell. It ultimately made him question the basic assumption that building is an activity aimed at providing dwelling, an activity thereby creating something new. Quite the opposite is true of building, which should not only be understood as a *construction* but also as a *cultivation*; cultivation of something that grows on its own, but needs someone to "to cherish and protect [it], to preserve and care for [it]". Thus "building in the sense of preserving and nurturing is not making anything [...] such building only takes care – it tends the growth that ripens into its fruit of its own accord".[351] Cultivation-building is, however, only half of dwelling and must be complemented by construction-building:

> Building in the sense of preserving and nurturing is not making anything. Shipbuilding and temple-building, on the other hand, do in a certain way make their own works. Here building, in contrast with cultivating, is a constructing. Both modes of building - building as cultivating, Latin colere, *cultura*, and building as the raising up of edifices, *aedificare* - are comprised within genuine building, that is, dwelling.[352]

Not only did the builders I followed explicitly build to dwell, to be "at home", but in Hedeggerian eyes they seemed to on the right, although endless, track to get there.

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350. There is a curious parallel between Heidegger mulling over the existential implications of rebuilding and rehousing after World War II and Le Corbusier reflecting on the birth of modern architecture in the wake of World War I: "The first World War [...] covered the countries with ruins. Rebuilding had been done without rule or discipline. It was precisely in the years of mediocrity, between 1918 and 1939, that the art of building reawakened, in the face of harm already done, finding the right men and techniques to serve it" (Le Corbusier, 2000a: 114). Both men seem quite confident in using a World War as the rhetorical backdrop for the architectural matters they discuss. Both accounts allow their narrator to strike a heroic pose. But whereas Le Corbusier deplores the lack of planning Heidegger is warning against too much planning, too much construction and too little cultivation; elsewhere he was to describe this in terms of *Gestell*, see *Worlds of Junkspace* (pp. 184-190).

351. Heidegger, 1971.

352. Heidegger, 1971.

(5) Dwelling with avatars

With the mention of Heidegger, the ethnographic reporting clearly shifted towards reflection, illustrating Ingold's point of ethnography being "philosophy with people in it" (see p. 131). The remaining sections draw on the ethnography, as well as on additional examples, to explore in more detail how users attempt to obtain a sense of virtual dwelling. This section deals with the role played by the avatar, then follows sections on boundaries and on architectural images. I then return to Vlad and his family and consider the role of architectural images in the context of collective building, as well as the role of identity play. In other words, a wide range of subjects will be touched upon in the following sections in order to understand the devices used by users to obtain a sense of virtual dwelling.

Second Life users do not build entirely for themselves but build-care for their avatars as well (cf. the chapter on the *Body* in general and Klevjer on the "residing" avatar in particular [p. 51]). The castles of Vlad and his family had separate rooms for each avatar, most of these rooms equipped with beds. This is reminiscent of how *The Sims* is used. Doll's house game series *The Sims* is, importantly, the best selling series of PC games ever. *The Sims* allows for powerful integration of house construction and caring for avatars. The emotional state of "sim" dolls rely on how well their houses are designed, e.g., on how nice the beds are and how many windows the house has. In *Second Life*, however, no such game mechanics encourage the caring for avatars through building. The activity is entertaining in itself. Some *Second Life* builders I have come across build laboratories or workshops for their avatars. The user is doing all the actual building (building of smaller objects, that is) in objective perspective (on the various perspectives [objective, subjective and self-perspective], see pp. 45f). The avatar is not involved in any direct way but building is more enjoyable when it takes place as if the avatar was residing in a workshop, and when the user can shift to self-perspective now and then. One of the builders thus works inside a little, homemade moon situated high above ground level. The builder surrounds his avatar with half-finished projects, souvenirs such as drawings; with "stuff [...] that is just comforting in a way". "Sure, I could just have a big ugly box if I wanted to," the builder told me, "but well, I am a builder, it would be crazy to sit in a boring box :)".

Second Life users do not have to be builders to care for their avatars. A user can rent, rather than

build his or her place. In April, 2008, I interviewed some renters about their reasons for having a house. I met one interviewee by accident as he came home to his rented apartment in a high-rise building. When I expressed my interest in his home he invited me inside but immediately excused himself: I was most welcome to take a look around, but he would not be able to guide me as he had merely stopped by to change (his avatar's) clothes. As I always feel embarrassed changing clothes in *Second Life* I could easily sympathise with this way of using a virtual home. When I finally sneaked in the question I had come to ask (a polite version of "Why do you have this place?"), the renter answered: "[W]ell it really gives you a home base in SL [*Second Life*]... I love having a place..." When I asked his downstairs neighbour the same question, the answer was: "I need a place to live, I'd rather not spend my existence sleeping on peoples' couches?"

It might be impossible to fully explain the motives for having one's avatar sit in a moon, change clothes in the privacy of a home or simply "live" in a *Second Life* building but it can be explained how the virtual world make these sensations possible. The chapter on the *Body* focused on the bodily foundation for the encounter between user and virtual world. This focus on embodiment has its strategic purpose of distinguishing interactive media from other media. With dwelling in virtual worlds, it becomes time to stress the role played by the avatar, i.e, the figure functioning as a focus for the user's sense of agency. In objective perspective, the user might leave the avatar behind for a while as he or she focuses on camera control and no avatar-as-model-actions are implemented (cf. Klevjer on the avatar being "an extension that is also a model" [p. 49] and Gregersen on the user being in charge of "small sequences of animation" rather than actual actions [p. 51]), but the avatar still lingers in the user's consciousness. Possible actions are still considered through the capabilities of the avatar, e.g., by building something fitting the capabilities of the avatar. To have an avatar is, essentially, to constantly oscillate between looking at and acting through. As suggested earlier, to be in place with an avatar is to be in place "by proxy" (see p. 48). *Proxy* is a contraction of late Middle English *procuracy* which in turn stems from Latin *procurare* "take care of, manage", from *pro-* "on behalf of" and *curare*, "see to" (the OED). Proxy thus neatly sums up how the avatar acts on the user's behalf (pro-), yet is taken care of by the user (curare).

(6) Against boundaries

When Heidegger stresses the cultivation-part of building he puts the notion of "being inside" in new light. To feel inside is not simply to experience the difference between inside and outside but to experience freedom; freedom can only be true freedom if there are borders to be free *within.* Furthermore, Heidegger explains dwelling as engagement with things. In principle all things can be dwelt with but certain things, certain buildings, allow for dwelling in a more important way than other things. Not only do these special things gather human and thing but they also gather that which Heidegger calls *the fourfold*. The fourfold is comprised of earth, sky, mortals and immortals. This might sound unnervingly mystical, but Heidegger's point is that places remind us mortals of our boundaries: that we live on earth, under sky and in front of immortals (i.e., that we understand our mortality by turning our thought to that which is immortal). In short, humans can only be freely present in the world if they dwell and dwelling depends on experiencing boundaries.[353]

Heidegger's thoughts on dwelling resonate rather well with what I saw in *Second Life* and also with other scholarly descriptions of Internet-based communities. There is, however, crucial value-based and even political differences between Heideggger's view on boundaries and what we find in media studies. Based on her own ethnography, Christine Hine, observes that "bounded social space" is crucial for online communities but where Heidegger sees boundaries to be existentially free within, Hine sees "constraints":

> It is not aspatiality but the development of bounded social space which provides for [the possibility of] serious commercial venture, for fantasy and identity play [etc.]. The Internet in use [reasserts] the constraints of place.[354]

Places with boundaries certainly are a necessity for establishing the homes I am following in *Second Life*. On the few occasions on which I have entered private homes without permission (and been found out), I have been scolded with "doors are closed for a reason" or similar statements to that effect. I really did feel bad on these occasions, exactly like I would had I been caught trespassing in the real world. Fortunately, it feels correspondingly good and immediately generates a sense of togetherness to be invited into someone's private place. Ceremonies of reception and rejection,

353. Heidegger, 1971.

354. Hine, 2000: 153.

inclusion and exclusion, constantly happen on the boundaries of *Second Life* places. The above mentioned covenants (see p. 130) are often used to set up and to enforce boundaries, and it must be stressed that such covenants should not only be understood as a landlord's controlling the behaviour of the people renting his or her land. Users do wish to set up boundaries to shield themselves from outsiders who do not share their ideas about how to use *Second Life*. This is illustrated by a user who goes under the avatar name of Thessa (or Thessalicious Flanagan, to give the full name). On her blog, Thessa describes the pleasure she has taken in building a home and in sharing that home with friends but she also states very clearly that she finds it impossible to share the neighbourhood with users who do not share her aesthetic ideals:

> I built a home that I was proud of. I even posted photos of it on my Flickr page. I brought new friends home to see it, to relax in it, to play in it.
>
> It was fun while it lasted. I got a rude awakening a few weeks ago, when I took a good look outside my window and checked out the state of my neighborhood. All of a sudden, it seemed, my lovely green-laden view had turned into a veritable junkyard. Quite a few new neighbors had moved in, flooding their land with those ugly rotating advertising cubes, or huge advertising boards, or massive classless structures [...]

After describing the steps she took to deal with this state of affairs, Thessa continues:

> Such are the compromises we make when faced with urban blight, even in a virtual world such as SL [*Second Life*]. But I swear to you now that the next plot of land that I buy, if I decide to do so, will be in a sim [a plot of land. BL] that has a residential-only covenant with a high standard of home and garden design.[355]

The formulation "I took a good look outside my window" is, incidentally, quite interesting as an illustration of the relationship between user and avatar. Did Thessa really use her avatar in subjective perspective, moved it to the window and saw the surrounding neighbourhood from the exact point in space where the avatarial eyes were? It seems more likely that Thessa's imagination aided her in taking the viewpoint of the avatar and in writing the account from there.

Thessa wants to be inside a boundary separating people who share her taste in building from those who do not. Is Thessa "constrained" by place (Hine) or is she free within boundaries (Heidegger)? There are political undertones to the question. A focus on places and boundaries has a romantic or nostalgic ring to it which some humanities scholars are uncomfortable with, especially at a time

355. [http://tessaliciousflanagan.blogspot.com/2007/08/no-covenant-no-class.html. Accessed 11 February 2008].

when immigration from non-Western countries is a central theme in political discussion. People who consider themselves progressive or liberal find that they have to argue against a "close the borders, don't let in the foreigners", right-wing rhetoric. Linguist James Paul Gee provides a very clear example of this. Gee prefers to think of his own country, the United States, as a neutral "geographical space on a map", a space into which people may come and go without any feelings of connection of affection.[356] This is space in the non-place sense Casey warns against (see *Place and space*, pp. 17-25). When it comes to the use of new media, Gee wants to promote thinking in terms of space "to avoid the romantic notions that seem to accompany the word 'community'" (as in "community of practice").[357] It would seem that "romantic" is to be understood as quasi-nationalist. Gee suggests the use of his own *affinity space* concept to denote spaces in which peer-to-peer teaching can be sustained by an *affinity group*, "a group that is bonded primarily through shared endeavors, goals, and practices and not shared race, gender, nation, ethnicity, or culture".[358] This tolerant sentiment leads Gee to focus on the "portals" into affinity spaces,[359] rather than on the boundaries which logically must exist for an affinity space to exist.

Peer-to-peer learning of the kind Gee describes certainly takes place in *Second Life*, e.g., as show-and-tells where builders meet to show off their creations. The screenshots below are from such an event.

Figure 30: *Second Life*. Show-and-tell (17 February 2008)

356. Gee, 2004: 78. I have never met James Paul Gee and sincerely apologise if my deduction of his political views from his texts is incorrect.

357. Gee, 2003: 197. For an influential account of "communities of practice", see Lave and Wenger, 1991.

358. Gee, 2003: 197.

359. Gee, 2003: 83-85.

Some of us merely watch, applaud and make comments, but for the more experienced builders, small talk can lead into technical discussions, in other words into "peer-to-peer teaching" and situations in which each participant is allowed, in the words of Henry Jenkins who enthusiastically takes over the affinity space concept from Gee, "to feel like an expert while tapping into the expertise of others".[360] Opportunities for peer-to-peer teaching in *Second Life* are not limited to show-and-tells. Possibilities abound since builders do not need much encouragement before they start telling about their own building projects, and helping the newcomer use the design tools of the virtual world. This peer-to-peer teaching "takes place" somewhere. That somewhere could be called an affinity *place* but it is, strictly speaking, not affinity *space*, although some might prefer the latter because it sounds less "romantic" or nostalgic than the former. There is, in short, no need for the researcher to let the political ideal of a open, tolerant society distract him or her from paying close attention to how users engage with virtual worlds. Places have boundaries, and no matter how romantic it might ring, people build up attachment to them; Vlad and his fellow builders seem happy in their new place, but the subject of the old place which they had to abandon remains a rather sensitive one.

(7) Against images

In 1990s architectural theory, concern was voiced as to the possibilities of dwelling in the contemporary media environment. These concerns form a useful addition to the discussion build up so far. Juhani Pallasmaa was among those concerned with dwelling.[361] As expressed in a lecture originally held in 1992, Pallasmaa is troubled on two levels. Firstly, he is troubled over broader cultural trends, including changes in the media environment, working counter to dwelling. Secondly, he finds the architectural profession opposed to dwelling.

As for broader cultural trends, Pallasmaa talks of the architectural *images* necessary for establishing a sense of home, and of how these images have been diluted. Inspired by phenomenological

360. Jenkins, 2006: 177.

361. When it comes to the concept of dwelling, Pallasmaa is inspired by Heidegger but feels a certain need to distance himself from him; "the black Forest hut of Heidegger directs architecture backwards" (Pallasmaa, 2005a: 18).

philosopher Gaston Bachelard's "The Poetics of Space",[362] Pallasmaa understands an architectural "image" to resonate on a deeply personal and bodily level, rather than something to be perceived on exclusively visual terms. One of Pallasmaa's examples is the image of the *bed.* Surely beds are functional, i.e., they solve the problem of finding a comfortable place to sleep, but a bed used to be (and *ought to* be, it seems) "a miniature house within the house with physical and symbolic privacy". The contemporary bed, on the other hand, is often "a mere neutral horizontal plane, a stage of privacy".[363] As an illustration, the horizontally modern IKEA bed below is contrasted with a Chinese example of the bed as "miniature house". Traditional European box beds and sleeping alcoves could also have served as examples of the bed as architectural image.

Figure 31: The bed as "a mere neutral horizontal plane" (left) and as "miniature house [...] with physical and symbolic privacy" (right)[364]

Pallasmaa takes the "flattened" bed to be part of the poor dwelling conditions of modern homes. The hearth, or stove, is also used as an example of a flattened home image. Flattened from fireplace into a mere "[mantle] without the possibility of actual fire [...] The fireplace has turned from a

362. Bachelard, 1994.

363. Pallasmaa, 2005i: 122. Several authors have commented on the existential importance of sleeping-places. One of them is Peter Sloterdijk: "The natural transcendence of night is articulated most closely in the built environment offering designed rest environments. Here the skin-I expands into a bed-I— surrounded by a room-I in a house-I. The purest sleep is one in an acosmic onion" (Sloterdijk, 2008: 51).

364. The old-fashioned bed is an early 20th century heirloom belonging to a Beijing friend of the author. The modern bed is IKEA's Mandal model [http://www.ikea.com/dk/da/catalog/products/80121338. Accessed 13 February 2008].

device addressing the skin into a medium of visual pleasure".[365] In order to provide true dwelling, homes have to combine images (authentic images, not the flat ones) with a basic, spatial sense of insideness. The notion of image and space being of equal importance can be found articulated in various ways within architectural theory, both as a statement about architecture in general[366] and as a statement about dwelling in particular.[367]

This is where the mass media come into Pallasmaa's criticism of the modern home. The television screen is assigned symptomatic status in Pallasmaa's analysis. He acknowledges how the television has taken over the fireplace's role as focus for domestic sociality; and it can be added that the screens of gaming consoles and PCs might function as such foci as well.[368] But a screen and a fireplace allow for different kinds of domestic sociality. Pallasmaa generalises this to a distinction between "images [such as the fireplace, BL] that are deeply rooted in our common memory, that is, in the phenomenologically authentic ground of architecture" and "images [such as the "flat" screen images, BL] [that are] striking and fashionable perhaps [but do not] incorporate the personal identity, memories, and dreams of the inhabitants".[369]

Second Life actually abounds with Pallasmaa's images of home. It is exceedingly and perhaps surprisingly easy to find groves, huts, fireplaces and canopied beds. All of these small insides are flat, of course, as far as the screen goes, but these home images are less flat when the embodied and avatarial nature of user interaction is taken into account. A canopied bed, for example, is not just experienced on a screen but through and with an avatar, thus retaining some of its quality as "a

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365. Pallasmaa, 2005i: 122.

366. E.g., Frampton, 1975 and Krauss, 1972. Despite his being disgusted with postmodernism, Norberg-Schulz finds that: "[l]ife in space [...] remains a mere physical fact if it is not endowed with meaning through images" (Norberg-Schulz, 2000b: 50).

367. Charles Rice insists on the "doubleness" of physical space and (more or less imagined) image in the production of the interior (Rice, 2007: 2).

368. Among parents to American teens who play video games, "2% of parents say they always play video games with their teenaged children, compared with 29% who say they sometimes play games with their children, 26% who say they rarely play games with their children" (Lenhart et al., 2008: 38).

369. Pallasmaa, 2005i: 124. Not surprisingly, the "godparents" of postmodern architecture, Robert Venturi and Denise Scott Brown (see p. 12), finds the picture Pallasmaa paints exceedingly pessimistic. In a recent interview, Venturi expressed this opinion about doomsayers in genetal: "People who cry: 'The world is coming to an end! People are being oppressed by signs!' don't give human being credit for the strength they have". Scott Brown added on the same note of parody: "'The poor little people. The little people are being oppressed by the things I do not like'" (Proto, 2009: 73).

miniature house within the house with physical and symbolic privacy".[370] In a virtual world, a bed can be inhabited by proxy since the avatar is there on the user's behalf. It is not accurate, then, to make general statements such as "[i]n the virtual world the existence of a 'building' is purely symbolic".[371] The purity of the symbolic is contaminated, as it were, by the user's sense of agency. This situation does allow for some sense of dwelling, even though it is an interactive simulation of dwelling, not the authentic, offline thing.

Let me expand a little on the fireplace as an example of Pallasmaa's architectural images of home. In *Second Life*, a user with the avatar name of Juro Kothari makes good money designing and selling a range of prefabs which are, basically, boxes with fireplaces in them, as seen below.

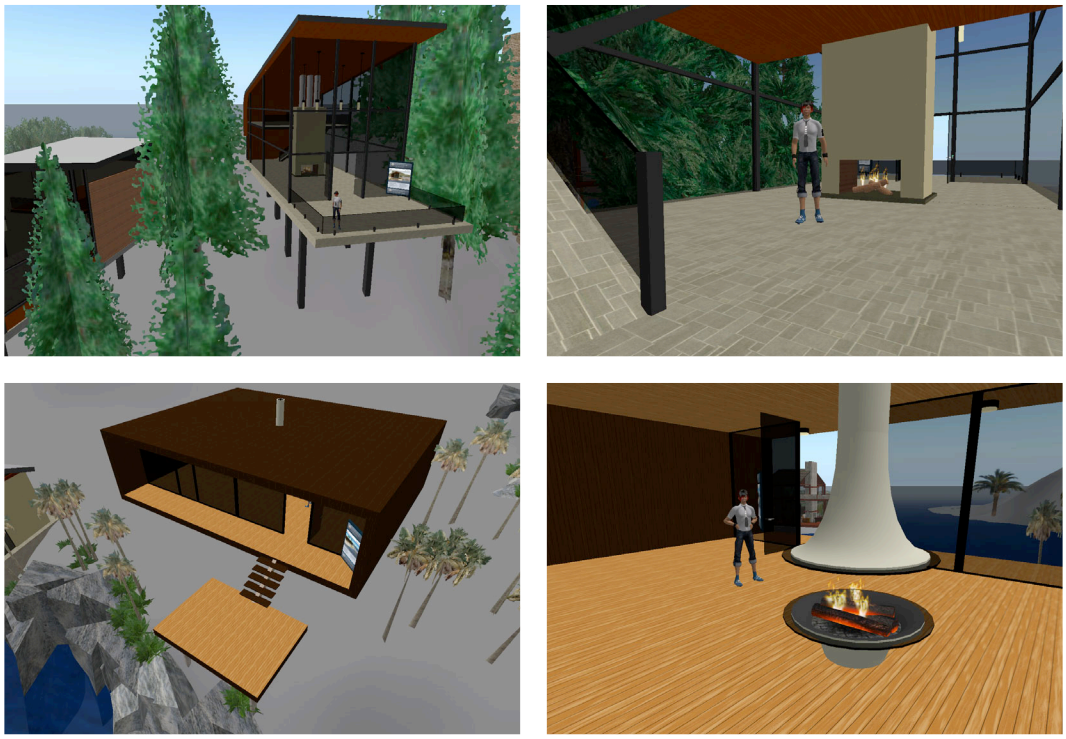

Figure 32: *Second Life*. Prefabs featuring fireplaces. Upper pictures: Exterior and interior of the *Malibu* model. Lower pictures: Exterior and interior of the *Montauk* model. From *Juro Kothari Homes*

I asked their creator why customers liked these houses. He answered by explaining the social function of the fireplace: "[I]ts a nice conversation point in the house [...] a place to gather, chat...

370. Pallasmaa, 2005i: 122.
371. Harry et al., 2008: 65.

especially at night". Apart from the social function, the fireplace also adds a certain atmosphere to the house: "from what my customers have said, they like the ambience it provides" (November, 2008).

Moving on from broader cultural trends (the "flattening") and to the dwelling-opposed attitude of architects, Pallasmaa finds architecture of the 1980s and 1990s to be a "purely retinal art form".[372] This art form is all about "the instant visual image" capable of "immediate persuasion",[373] and these images seem akin to television images: flat, inauthentic and counter-productive to dwelling. Also writing in the 1990s, architect and theorist Vittorio Gregotti made parallel observations, criticising how "the printed and transmitted photographic image [has been given] a decisive role in judgment".[374] Architecture and its representation are, as already noted, inherently intertwined (see *Walking and looking*, pp. 62-68), but Gregotti is careful in pointing out that it is not images as such he is concerned with, it is their misplaced primacy in the processes deciding which architectural projects are actually turned into built reality. By letting images play such an important role, "architects of the market image form an organic part of the present structure of social power", but "they are also completely outside the critical tradition of modernity".[375] Gregotti thus positions his criticism by taking the side of "traditional" modernism in its battle against (image-dependent) postmodernism in architecture (*Space and image*, pp. 10-17).

To sum up, I quote, once again, Jonathan Bell on the present state of modernist architecture:

> It is almost as if New Contemporary has evolved into the manufactured boy-band of the architecture world, an immaculately conceived glossy image that no one, at heart, takes terribly seriously. These houses are not the real world.[376]

What is left is a modernism stripped of its original ethos and reduced to brand, i.e., to a highly desirable, highly priced and highly visual image of consumerist lifestyle. When Bell writes that "these houses are not the real world", it echoes oddly with the houses of *Second Life*. Admittedly, many *Second Life* houses reflect the commodification of modernism into a mere amalgam of

372. Pallasmaa, 2005i: 125.

373. Pallasmaa, 2005b: 321.

374. Gregotti, 1996: 98.

375. Gregotti, 1996: 99. Gregotti finds the influence of the market image to be most acute in America, cf. Pallasmaa on the ""[t]he American cowboy classicism of Robert Venturi" (see p. 13, n. 27).

376. Bell, 2006: 15. Originally quoted on p. 67.

stylistic cues. Glass walls, high ceilings, a sleek, white, International Style finish etc., all of these cues are easily found. It must be remembered, however, that *Second Life* is a virtual world (for avatars) which is also an interface (for users), as the below screenshots of The Common Ground Art Gallery remind us.

Figure 33: *Second Life*, The Common Ground Art Gallery

The Common Ground Art Gallery demonstrates how *Second Life* is an interface, in this case used for what is essentially a 3D, navigable photo album, and at the same time a place for avatars, comfortably furnished and made more inviting for them through a mindful choice of "materials" (the brick flooring). *Second Life's* double role as world and interface furthers a diluted modernist, or neo-modernist, style. Glass walls are practical when the screen shows the avatar from a distance (when objective or self-perspectives is used). High ceilings and tall doors are practical for the very same reasons since they allow for the unhindered floating of the "camera" above the avatar's head.

It is, incidentally, quite easy to find buildings where users counter the light coldness of their modernist villas by inserting elements with a warm and solid quality to them, e.g., in the house shown below, where the warm and solid qualities of wood, brick and metal are used to counter the interface-friendly but cold, modernist glass.[377]

377. Glass played a special role for the early modernists architects, and contemporary commentators such as Walther Benjamin ascribed "emancipatory potential" to the material (Rice, 2007: 104). As Michael Pollan aptly puts it: "Far from being a mere building material, plate glass offered nothing less than the means for building a new man and a new society, one in which transparency would break down once and for all the barriers that divide us from one another" (Pollan, 1997: 249). However, as Pollan goes on to explain, it was soon realised that glass is only transparent under certain viewing conditions, and that it blocks flows of sound and movement. Incidentally, Robert Venturi and Denise Scott Brown criticises current neo-modernist architecture for mislabelling its historical revival of transparency

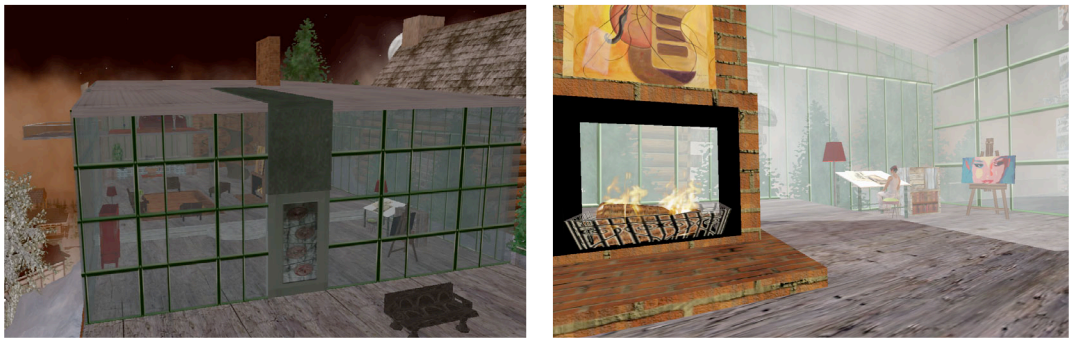

Figure 34: *Second Life*. Cold, modernist glass countered with warm materials

(8) The pop vernacular

Let me return to Vlad and his family. So far I have not discussed the collective nature of their *Second Life* building project but I will do so now with special attention to the role played by the device of the architectural image.

In Pallasmaa's account, a sense of dwelling stems from the incorporation of "the personal identity, memories, and dreams of the inhabitants" into architectural images.[378] Dwelling is a psychological (and therefore personal), existential matter. The online building projects I have been following certainly have an element of Pallasmaa's identity work and dreaming, especially in the case of Vlad and his family. Members of Vlad's group are all gay and use the term "family" in a way not uncommon among gays, cf. the term "chosen family". The family has an extremely tight, social structure, with one member playing the role of dominant in a sexual sense, the rest of the family being, nominally, his "slaves". In everyday life, however, the relations between the family members are much more relaxed than this description might lead to expect, but there is always a possibility of invoking the agreed upon roles. Besides from their being gay, I do not believe the users are involved, offline, in a BDSM lifestyle, or something to that effect. A former member of the group did report, though, to be sexually submissive, e.g., to have played the role of a dog during real-life sex games. To mix in yet another level of "personal identity, memories, and dreams", Vlad's family also employ a fictional setting of vampirism, with the dominant being the

"dematerialization" (Proto, 2009; Proto, 2009: 71).

378. Pallasmaa, 2005i: 124.

vampire, the slaves being his personal blood-banks, so to speak. Again, this fictional frame is not constantly present but stands ready to be invoked. All in all, the dwelling place forms the basis for a bewildering, often lighthearted, sometimes more serious, long-term play with roles and identities: the gay (understood as real life identity by the users), toying with BDSM lifestyle (lingering on the brink between earnest identity exploration and less committed play) and sometimes indulging in purely fictional role-playing (the vampire setting).

The family's building project is both the setting for and the focus for its play with roles and identities, so Pallasmaa's idea make senses in this case: "personal identity, memories, and dreams of the inhabitants" are indeed incorporated into the architectural images of the building. It is, however, also possible to account for the family's sense of dwelling in a more pragmatic way. Paul Oliver, who has studied dwellings in all corners of the real world, notes a "widespread desire to create and build one's own dwelling".[379] When this desire is realised, the self-made, architect-free, and often community-built dwelling is labelled a *vernacular* dwelling.

Oliver is in accord with Heidegger's cultivation/construction dichotomy when he describes dwelling as "both process and artifact: it is the experience of living at a specific location and it is the physical expression of doing so".[380] The concept of vernacular dwelling is in a sense what happens if Heidegger is read literately and dwelling and building understood as inherently intertwined. The most obvious and efficient way to obtain a feeling of being at home, then, would be for the dweller to dethrone the architect and build his own home, or at least have a substantial say in its building.[381]

Online dwelling is often vernacular dwelling. Several of the *Second Life* building projects I followed were very much community-based: The builder-dwellers taught each other to use the

379. Oliver, 2003: 260

380. Oliver, 2003: 15. Oliver would probably prefer *not* to be associated with Heidegger. He seems rather disdainful of the "Teutonic concept of *heim*/home, exploited in the imagery and media of northern Europe and America" (Oliver, 2003: 261. Emphasis in the original).

381. Pallasmaa actually considers whether architects should take the full consequence of their failure in providing dwellings, as opposed to mere shelters, and leave much more of the process to be controlled by the future inhabitants of building projects. After some soul-searching, Pallasmaa strongly reaffirms his conviction of the architect's unparalleled capability of steering the building process towards dwelling: "The uncritical acceptance of the client's brief only leads to kitsch" (Pallasmaa, 2005i: 124).

design tools of *Second Life*, and the users showed a high level of commitment to common tasks and goals. When online dwelling is vernacular it could be labelled a *pop vernacular,*[382] thus crediting Pop Art for pioneering the utilisation of bits and pieces of popular culture and established art alike as a resource for creative work; already Venturi stated that architecture owes a lot to Pop Art.[383] Another characteristic of Pop Art creating a conceptual link to online building projects, is the way Pop Art often engaged with then current, technological breakthroughs, e.g., breakthroughs in mass reproduction. *Second Life* builder-dwellers mix and match elements belonging to diverse and perhaps contrasting styles and historical epochs. The fictional and the real, as well as the highly personal and the prefabricated, are playfully combined.[384] Online pop vernacular is thus a kind of kitsch, and an architect leaning towards orientationalism, such as Pallasmaa, takes a bitterly unforgiving stance towards kitsch.[385] Along with many others, Pallasmaa were and is provoked to take that stance by the publication of "Learning from Las Vegas" (see *Space and image*, pp. 10-17). In that seminal book, Robert Venturi et al. documented their study of what they labelled the *commercial vernacular* of the Las Vegas casino landscape and polemically suggested the architectural profession to learn from that vernacular.[386] Much of the building taking place in *Second Life* is a kind of commercial vernacular, and the same methods are applied to the building of homes, hence "pop vernacular". Yet Pallasmaa's cosmic images of home (e.g., the fireplace) are thrown into the mix. This is not done at random by the users but with the explicit goal of attaining a sense of dwelling. Users do seem to have a sense of the power of Pallasmaa's images of home (even though he would probably laugh at the suggestion). Practitioners of pop vernacular dwelling in virtual worlds thus exhibit an eclecticism exceeding that of regular postmodernism: They include deeply resonating images of home in their kitsch

382. The "pop vernacular" coined by Sam Jacob (Jacob, 2004).

383. Venturi, 2002: 34 and 43f. As a good example of Venturi's reverence for Le Corbusier, he does not focus exclusively on Pop Art but includes Le Corbusier as another pioneering figure in this regard, one "who juxtaposed objets trovués and commonplace elements [etc.]" (Venturi, 2002: 43.

384. Media scholars have long been fascinated with the ways in which various combinations of media and technology afford user (co-) creation of media products. This has been examined across various media from which users find some of the bits and pieces of culture they employ. Such "source" media include the book (McLuhan and Fiore, 2005), television (Jenkins, 1992) and computer games (Jenkins, 2006.

385. Pallasmaa, 2005d, Pallasmaa, 2005c.

386. Venturi et al., 1977: 6.

building, and they do so sincerely, i.e., without the irony characteristic of postmodernists.

Note, however, that one can find two different trends in the writings on postmodern architecture. Firstly, the position of Charles Jencks which is the dominant position today.[387] According to this position "the use of historical forms and ornament" is always done in a "self-consciously ironic or playful" way, but according to a minority position held by Paolo Portoghesi, the category of postmodern architecture includes "any building that breaks the modern prohibition against historical reference, whether with ironic self-commentary or with vernacular earnestness".[388] The *Second Life* buildings I have been following fit the latter position of vernacular earnestness. They also fit the situation in present-day architecture. Jonathan Bell:

> By the 1990s, many architecture studios were capable of synthesizing the views of both Venturi and Le Corbusier, merging them with the dizzying imagery and spontaneity of multi-media based popular culture.[389]

Bell wants to call off the the 1980s and 1990s war between "traditional" modernists and postmodernists. If he is right in doing so, the activities of certain *Second Life* builders are emblematic of the current, architectural environment.

(9) The machinic image

I would like to end the discussion of the relationship between dwelling and architectural images with a brief exploration of what one could call the conceptual borderlands of the image: the territory where "image" turns into "looking". This will create a bridge to the next chapter on *Worldview*.

Gregotti's thoughts on the image in architecture run parallel to Pallasmaa's, in that he contrast a superficial "image" with a deeper or more authentic kind of "image". Where Pallasmaa draws on Bachelard to contrast "the instant visual image" with the "phenomenologically authentic" bodily

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387. Cf. Terry Smith: "Postmodern architecture was what Charles Jencks said it was" (Smith, 2008: 5).

388. Kolb, 1990: 89. In Hal Foster's version, the roots of postmodern architecture are traced in a more subtle way. Foster does not distinguish between ironic and non-ironic (earnest) practices. Instead, he distinguishes between an "ironism of affirmation" (practised by Pop Art) and a "affirmation of irony" (practised by postmodern architects). The latter became historically connected with the "neoconservative equation of political freedom with free markets also espoused in 'Learning from Las Vegas'" (Foster, 2008: 169).

389. Bell, 2006: 132.

and personally grounded images, Gregotti draws on Austrian writer Peter Handke to contrast the "market image" with "the interiozed image".[390] The interiorised image seems to be a mental construct akin to a cognitive map[391] and Gregotti expresses concerns which are the exact opposite of those expressed by Kevin Lynch earlier (see *Cognitive mapping*, pp. 68-78). Whereas Lynch was concerned about cities being too difficult to map, Gregotti is concerned about the environment being far too easy to map. In an environment of market images consumers will, lazily, not have to engage in the "necessary activity of compositional imagination, the thought that produces, corrects, transforms, interprets, and remembers".[392] Gregotti does not mention cognitive mapping directly and judging from his choice of references he is not likely to consult the literature on it; Gregotti's sources are far more critical and poetical than scientific in a strict sense. However, the "critical" perspective can be supported by the "cognitivist" perspective on this point. According to Presson and Hazelrigg, the cognitive map is more flexible when created from direct travelling, rather than from the study of fixed images, e.g., cartographic maps.[393] What these findings suggest is, in other words, that someone's view of the world is more flexible when imagination has been at work to form it.

Charles Rice takes the discussion of the image in architecture one step further, singling out not two but *three* different kinds of image: *representational*, *imaginal* and *machinic* image.[394] With the "machinic image" Rice moves into highly relevant territory, seen from a virtual worlds perspective. Rice also presses the category of "image" beyond its breaking point, thus setting a stage from which I can argue for the usefulness of the concept of *worldview.*

Rice's first two kinds of images are, very roughly speaking, the two kinds which have already been mentioned: the directly perceived image and the more imagination-dependent image. The third kind of image, the machinic image, is a concept Rice develops from Christopher Hight's Deleuze-

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390. Gregotti, 1996: 99, referring to Peter Handke (1987): "Aber ich lebe nur von den Zwischenräumen". Frankfurt: Suhrkamp.

391. See *Cognitive mapping*, pp. 68-78.

392. Gregotti, 1996: 99.

393. C.C. Presson & M.D. Hazelrigg (1984): *Building Spatial Representation Through Primary and Secondary Learning* in *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 10, pp. 716-722. According to Golledge and Stimson, 1997: 175.

394. Rice, 2007: 117-19.

inspired reading of TV series *24*. *24* plays out in "real time", i.e., in principle without omitting a second of the diegetic action as it unfolds. This is achieved by letting communication (e.g., via mobile phones) and transportation (e.g., driving an SUV whilst talking on a mobile phone) take up unusual amounts of screen time, and by relying heavily on the device of the split screen. On the use of split-screen in "24", Rice writes the following (ending with a quote from Hight):

> The effects of this montaging are claimed by Hight as machinic rather than representational. They do not reflect a given reality, but rather offer 'concepts of spacing and organization which engage the suburban metropolis'.[395]

The machinic "image" is neither perceived or imagined. Nor is it an "image" in the non-visual sense suggested by Boulder, i.e., a cognitive map (*Cognitive mapping*, pp. 68-78). It is closer to the image-suggestive devices considered in the discussion of the landscape-image, i.e., devices such as screens, windows and protruding roofs which cue the observer into seeing the world as images (see the end of *Landscape-image*, pp. 113-118). Yet the machinic image is not this either. The machinic image is not a *concrete effect* on the way in which the world is perceived and understood but, more abstractly, the *principles* governing these effects with machine-like regularity. A set of such principles constitute, I would argue, a way of looking at things. They constitute a "view" or an "outlook" rather than an "image". When it comes to virtual worlds, a set of principles governing looking and understanding can be described as a *virtual worldview* and this will be the subject of the next chapter.

(10) Summary

From a viewpoint combining humanist geography and phenomenological philosophy, landscape and building can be thought of as complementary ideas concretising a much broader set of idea: space and place. This was the conceptual starting point for an ethnography of collective building projects in *Second Life*.

Some *Second Life* users invest considerable amounts of money, time and creativity in buildings; "buildings" in the double sense of things and activities. They do so with the explicit goal of feeling at home. The builders' never-ending projects resonate with Heidegger's thoughts on true

395. Rice, 2007: 117, quoting Christopher Hight (2004): *Inertia and Interiority: 24 as a Case Study of the Televisual Metropolis* in *Journal of Architecture*, vol. 9, no. 3, p. 373.

dwelling being the result of both construction and cultivation. In virtual worlds, such cultivation, or caring, is done through, with and towards avatars. Having an avatar is, in other words, to constantly oscillate between looking at and acting through the avatar.

The ethnography informed discussions about the concepts boundary, image and the vernacular (as used in architectural discourse). Users relied very much on boundaries for generating a sense of dwelling. They also relied on architectural devices constituted by both space and image (such as the fireplace and the sleeping place). Their use of such devices was part of a pop vernacular building practice, characterised by eclecticism but not by irony.

6. Worldview

(1) Encounters and attunement

Before I outline this chapter, let me take stock of the preceding chapters with the following figure:

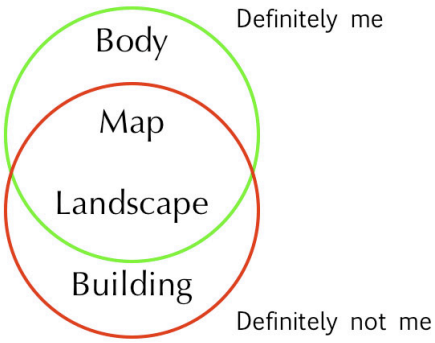

Figure 35: Encountering landscape and building with body and map

Space and place are useful concepts but virtual worlds are not encountered as these abstractions. Virtual worlds are encountered as landscape (i.e., humanly encountered space) and as building (i.e., humanly encountered place); see *Space/place, landscape/building*, pp. 128-130. I am borrowing the notion of "encounters" from Juhani Pallasmaa.[396] Inspired by phenomenology, "encounters" suggests the fundamentally embodied nature of experience. Whilst it is trivial to state that the world, in general, is experienced with a body rather than a disembodied spirit, the statement is relevant if it leads to a detailed explication of a specific variation of the person/world encounter. In the case of virtual worlds, landscape and building are encountered by way of body and map. In the chapters on the *Body* and the *Map*, it was described in detail how architectural encounters in virtual worlds play out

- by way of a bodily founded sense of agency, focused in an avatar and modulated in three

396. "Encounters" is the title of a collection of of lectures, essays, and articles by Pallasmaa (Pallasmaa, 2005h) and a theme which is explored in many of the texts contained in that book and indeed in all of Pallasmaa's theoretical work.

different perspectives (objective, subjective and self-perspectives).

- by the construction of external and internal maps. Pallsmaa, importantly, uses encounters in the plural, suggesting that it takes repeated, bodily interaction to experience architecture. It takes, in other words, the gradual process of cognitive mapping.

Whilst my body is definitely *me*, the building is definitely *not me* but belongs to the world. The exact position of the map is a bit more ambiguous. The cognitive map is by definition an internal, cognitive structure, hence it is mine, even part of me in a most literal, neurological sense. The cartographic map, on the other hand, is part of the world out there, the word it helps me handle. As described in the chapter on the *Map*, internal and external maps influence each other. Speaking of "maps" in a general sense, maps can be said to hover between person and virtual world, belonging to both and connecting them. The same connective intermediacy can be assigned to the concept of landscape. In a naturalist perspective, landscape is primarily understood as environment. Taken to its logical, Gibsonian extreme, this position entails the unity of world and person (or environment and agent; see *Landscape-environment*, pp. 106-112). In a culturalist perspective, landscape is primarily understood as image and belongs firmly to the virtual world, something outside of the subject, a possible object for contemplation or a prop in social games of distinction (see *Landscape-image*, pp. 113-118). Also the landscape, then, conceptually hover between person and virtual world, belonging to both and tying them together.

Encounters between users and virtual worlds happen in specific ways, and that specificity is the main theme of this chapter. *World of Warcraft* is used as the main example. The specific ways in which that virtual world is encountered have already been hinted at in the chapter on the *Map*, namely, with the description of players explicating structural flows with the intention of attuning their behaviour to them (see *Structured use*, pp. 89-93). Encountering building and landscape with body and map is thus flavoured, as it were, by *attunement*.[397] Such attunement is a global mind-

397. Attunement is closely related to what is discussed as "aesthetic attitude" in aesthetics, i.e., the "special attitude [...] involved in perceiving aesthetic objects or aesthetic properties" (Goldman, 2005: 263). The concept of aesthetic attitude has been subject to rich theoretical debate at least since Kant, e.g., over whether or not aesthetic attitude entails a focus on experience itself rather than the object triggering the experience. It is not necessary for the present purposes to delve into these rather complicated debates, therefore I avoid the word "aesthetic" altogether and use the term "attunement". Attunement has a holistic ring to it resonating with "virtual worldview".

setting, an overall framework for experiencing the cultural product. All cultural products require the subject to attune itself for an experience of some impact to occur. To repeat the examples already given (in *What is called "a virtual world"?*, pp. 31-34): to really appreciate a Beethoven symphony, the listener must combine emotional openness with attention to structure. A moviegoer must be in the mood for romantic comedy to enjoy a romantic comedy; these are rough examples of attunement. In the case of virtual worlds, attunement can be interpreted in terms of *virtual worldview*. To attune oneself to *World of Warcraft* is, in other words, to adopt the virtual worldview of *World of Warcraft*, something which is done freely, temporarily and without commitment to the truth value of that virtual worldview (hence the worldview is a "virtual" one in the sense of not quite real). Although the subject does not commit itself to the truth value of the temporarily adopted virtual worldview, such attunement might very well trigger reflection on real life issues and real life worldview. I touch on this in various ways in the three sections devoted to a detailed interpretation of the virtual worldview of *World of Warcraft*.

Virtual worldview is both a strong analytical tool and a concept which underscores the kinship between large-scale aesthetic objects such as virtual worlds and architecture. "Virtual worldview" is, then, not a label reserved for attunement to virtual worlds but can also be used in connection with attunement to architecture. Here is a suggestive passage from William J.R. Curtis's interpretation of the Villa Savoye. Curtis demonstrates how embodied encounter and the willingness to be intellectually attuned is fused in the taking on of a virtual worldview:

> The approach is by car and as one passes under the building (a demonstration of urban doctrine), and follows the curve of industrial glazing (of which the geometry was determined by the car's turning circle), it becomes clear that one is to be drawn into a machine-age ritual. The plan of the building is square (one of the "ideal" forms from "Vers une architecture"), curves, ramp and grid of structure providing the basic counterpoint to the perimeter. The section illustrates the basic divisions of a service and circulation zone below, a *piano nobile* above, and the celestial zone of the solarium on top: it's the section-type of Le Corbusier's ideal city but restated in microcosm.[398]

Curtis encounters the building with his body (passing under, following curves, sensing the division of zones) and with his knowledge ("drawn into a machine-age ritual" and "seeing a microcosm of the ideal city" is not something one would write without knowledge of modernism

398. Curtis, 1986: 95.

and of Le Corbusier). When Curtis writes that "it becomes clear that one is to be drawn into a machine-age ritual", this is evidence for Curtis's trying on the modern, machine-age worldview (much more on the modern worldview to come). For the purposes of the visit, Curtis is trying on a virtual version of the modern worldview. Does this experience change his everyday worldview as such? Le Corbusier certainly believed that there was a connection between someone's worldview and the built environment he or she lived in, but Le Corbusier also acknowledged that one building would not be enough to draw humankind into modern times overnight. There is much work to be done, as Le Corbusier realises when considering this issue in the 1920s: "Man" [sic.] finds himself "still inside the old hostile framework. This framework is his home", including "his city, his street, his house", and: "A great disaccord reigns between a modern state of mind that is an injunction and the suffocating stock of centuries-old detritus. This is a problem of adaptation".[399] Le Corbusier strives to solve this problem of adaptation to the bewildering, high-tech, modern reality through speeches, texts and houses. Some of these houses are suggestive prototypes of mass-produced houses,[400] others are houses for wealthy clients. The Villa Savoy belongs to the latter category, it is a house for a wealthy client but not just that. It is also an argument for truly modern living, its is a place where the modern worldview can be tried on. This trying on of a virtual worldview is not naively believed to have an immediate effect on the experiencer's everyday worldview. By triggering reflection on worldview, however, such temporary attunement might have an indirect effect through the power of example.

The section following immediately below provides additional background for the notion of attunement by considering how *Attunement to architecture and games* has been described by certain architectural theorists and game scholars respectively (pp. 159-162). Both are interested in attunement to cultural products but, broadly speaking, the orientationalist description tends towards the cosmically holistic whereas the description of attunement to games insists on the specificity of the computer game in a reductionist manner. The useful middle ground is to be found in anthropology, with Clifford Geertz's dual concept of *Worldview and ethos* (pp. 162-164). The usefulness of the worldview/ethos concept is first demonstrated for architecture (*Worldview/*

399. Le Corbusier, 2008: 307.

400. Le Corbusier devotes roughly 30 pages of "Toward and Architecture" to drawings of such prototypes (Le Corbusier, 2008: 256-88).

ethos in architecture, pp. 164-172). This demonstration highlights a feature of virtual worldview/ethos which have already been postulated, namely, that the taking on of a virtual worldview/ethos does not entail commitment to its truth value. The critical, political and pedagogical consequences of this lack of commitment is discussed in the section *For and against virtual worldviews* (pp. 172-175), in which it is concluded that although virtual worldview/ethos does not demand commitment to its truth, this does not bar us from critical interpretation. The virtual worldview/ethos concepts are in fact powerful tool for such critical interpretation, as demonstrated in the three separate sections dealing with worldview/ethos principles of *World of Warcraft*: *Unlimited good* (pp. 175-179), *Unlimited expansion* (pp. 179-181) and *Maximal efficiency* (pp. 181-184). The worldview/ethos interpretation of *World of Warcraft* makes it clear that there is a high degree of conceptual affinity between virtual worlds and philosophically inclined, critical debate regarding the built environment. This affinity and its limits are explored in *Worlds of Junkspace* (pp. 184-190) where the concepts of Gestell, Spectacle, non-place and Junkspace are considered. The concept of Junkspace is particularly useful, although the Junkspaces of virtual worlds are infused with the attachments and passions of their users, something unaccounted for by the original concept. The chapter is concluded with a *Summary* (pp. 190-191).

(2) Attunement to architecture and games

The orientationalist strand of architectural thought highlights and promotes architecture's potential for orienting humanity in the world (see Vocabulary, pp. 6-10). The use of phrases such as "[architecture] establish a man-made cosmos" and ""the house constitutes a 'microcosm'" (p. 8) exemplifies the orientationalist attitude. Moving about in, and living, in a built environment is understood to have a profound effect on the human being. When describing that profound effect, theorists leaning towards orientationalism find themselves in a truly architectural dilemma. They are deeply committed to the embodied nature of architectural experience yet when dealing with architecture's loftier goals their writings gain a holistic and almost spiritual tone which threatens to leave the body and the built behind. Game scholars, on the other hand, maintain a firm grip on concrete reality. They would seem to have good reason to, in the face of attempts to "colonise" the field of computer games by scholars from other fields, such as literature and film studies where

speculation is traditionally allowed to run rather freely (see pp. 29f).[401]

In an attempt, then, to rein in speculation but also in a search for features unique to computer games, game scholars turn their attention to that which is under the hood, so to speak. This attention takes many forms. I have already mentioned one of them, namely, Juul's distinction between the superficial layer of "fiction" guiding the player's attention to the "real", or underlying, "game" consisting of "rules" and open to description in formal terms (see *Environment and image in a ludological perspective*, pp. 118-123). Ted Friedman widens this kind of attention to include other "software products": "Learning and winning (or, in the case of a non-competitive 'software toy,' 'reaching one's goals at') a computer game is a process of demystification: one succeeds by discovering how the software is put together".[402] Friedman does not mean to say that a process of demystification will enable the player to read code but that the player's attention is focused on a level that lays under the surface of appearances. The game researcher's interests, then, are quite similar to how the player is assumed to be dealing with the game: both parties are, assumedly, focused on "the underlying formal structure",[403] to quote Klevjer's way of referring to the level Juul labels "rules" and Friedman "software".[404]

It makes intuitive sense that some of the joy of engaging with software products arises from a sense of understanding their inner workings. Klevjer puts it this way (talking about computer games specifically): "the player's mind is able to *tune in* to the workings of the underlying formal structure".[405] There is, however, a risk involved in this way of looking at things: the risk of reducing the game to the underlying structure and, consequently, to ignore aspects of gaming which can not be related directly to that underlying structure. Compare with Curtis'

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401. Game scholarship sometimes differ markedly from more traditional humanities approaches to culture (e.g., aesthetic or critical approaches) by aiming explicitly at being of relevance to the design business. E.g., Smith, 2006 and Järvinen, 2009.

402. Friedman, 2006.

403. Klevjer, 2006: 103.

404. Elsewhere, Friedman has in fact hinted at the attitude I find lacking in game studies by talking of the "distinct power of computer games to reorganize perception" and how they can teach one "to see life in new ways" (Friedman, 1999). The notion of perceptual reorganisation is reminiscent of Robert Venturi's point about the highway environment: "even off the highway our sensibilities remain attuned to its bold scale and detail" (Venturi et al., 1977: 139). However, the kind of attunement I am describing with "virtual worldview" goes beyond the perceptual.

405. Klevjer, 2006: 103. My emphasis.

interpretation of the Villa Savoy in the preceding section. To find the modern worldview expressed in the Villa Savoye is the result of interpretation, rather then deduction. The modern worldview can not be deduced from the blueprint of the Villa Savoy and there will, likewise, be aspects of the "tuning in" to a software product which we can not be deduced from code. David Williamson Shaffer makes a similar point, using the word "simulation" in more or less the same way "underlying formal structure" and "software" have been used in the above: "The game is always something more than the simulation by itself. The game provides the framework in which we make sense of what happens when we interact with the simulation".[406]

Shaffer's sentiment is very close to the one I want to promote. The central concept of Shaffer's work on games is the *epistemic frame*, i.e., "collections of skills, knowledge, identities, values, and epistemology" which can be embedded in games and tried on by learners.[407] A learner can, e.g., try on the epistemic frame of a historian by playing the role of a historian in a game designed for this specific, educational purpose, or the epistemic frame of a negotiator by trying that role on in a negotiation game.[408] The epistemic frame changes how a person looks at and thinks about the world and it is "a property of the *game*. Simulations do not have epistemic frames: games do".[409] Similarly, virtual worldviews emerge in an experiencer's encountering a large-scale cultural product, e.g., the Villa Savoy or *World of Warcraft*. Neither game or virtual world are reducible to "simulation" (or to "rules", or to "software", or to "underlying formal structure").

What I want to find then, is a way of talking about attunement to virtual worlds that sits somewhere in between the raging holism of certain architects and the reductionist tendency of

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406. Shaffer, 2006: 69. Being interested in how one can use games to enhance teaching, Shaffer does not delve further into the intricacies of what "simulation" means and how the word is used in game studies.

407. Shaffer, 2006: 12. Although Shaffer does not explore this further, it should be mentioned in passing that the notion of "epistemic frame" has significant resonance in social theory. John Gerard Ruggie finds that "German social theorists in a line from Max Weber to Jürgen Habermas [...] and in the French tradition, from Durkheim to Foucault" have been "social episteme" (Ruggie, 1993: 157). The notion of social episteme is Ruggie's way of bundling together all a wide range of social theory. Social epsiteme a loan from Foucault who writes of epistemes in a way reminiscent of worldview but insists that he is interested in a number of discourses, including philosophical discourse, rather than "[searching] for a *Weltanschauung*" (Foucault, 2002: x) when exploring the shift from "classical" to "modern" episteme.

408. Shaffer, 2006: 29 and 117.

409. Shaffer, 2006: 164. Emphasis in the original.

game studies. This middle way can be found in anthropology, with the dual concept of worldview and ethos.

(3) Worldview and ethos

Until the late 1930s, "anthropologists tended to use 'worldview' as a synonym for cosmology and the 'other' world", as noted by folklorist Alan Dundes.[410] An example of worldview in the cosmological sense would be the Christian, medieval worldview with the afterlife divided into three main parts: Hell, Purgatory and Heaven, which were themselves divided into several lesser parts, as described in Dante's early 14th century "Divine Comedy". As Europe advanced scientifically and technologically, it became increasingly difficult to "[coordinate] theory and practice, authority and experience", as geographer Denis Cosgrove puts it,[411] and by roughly 1600 it became impossible to maintain this balancing act. Cosmography, i.e., description of the cosmos, was no longer conceivable as science. Cosgrove singles out two figures who embody this watershed in the history of Western worldview at the beginning of the 17th century: physician and mystic Robert Fludd and architect Vincenzo Scamozzi. If cosmography could no longer be scientific this had revealed a flaw in reality rather than in cosmography, and architecture was assigned a role in mending that flaw:

> For Scamozzi and Fludd, architecture and cosmography are parallel material expressions of a totalizing cosmological science. In their writings and images, architecture and cosmography seem drawn towards the perfection of metaphysical space as consolation for a material world broken with strife.[412]

This passage resonates with the high hopes held for architecture by the early modernist and their self-appointed heirs. They too find themselves in a broken or "fractured" material world which humanity find it hard to connect to (see Place and space, pp. 17-25[413]). It is as if the architect can mend this fracture by operating on a surrogate body, namely, the built environment, rather than

410. Dundes, 1972: 92

411. Cosgrove, 2003: 37.

412. Cosgrove, 2003: 43.

413. Whereas Le Corbusier explains the fracture by pointing to rather recent, technological and social change, Giedion goes all the way back to Descartes and his perceived fracturing of body and soul. A more recent commentator such as Pallasmaa throws the mass media into the mix, accusing the mass media of furthering the disconnect between person and world (see *Against images*, pp. 142-148).

on the human spirit itself. As if virtual worldview is a tool in a process of cosmic healing; cf. Jean Nouvel's notion of "urban acupuncture" (p. 118).

Modern Westerners had to divorce their cosmological beliefs in Heaven and Hell from their increasingly rational worldview, but so-called primitive peoples had no such problems. Therefore, in the eyes of 19th century anthropologists, primitive peoples in far-away places offered insights into the premodern worldviews long left behind by the home-cultures of the anthropologists themselves. As already noted, this way of using the concept of "worldview" was widespread among anthropologists until the late 1930s. In the following decades, the air of otherworldliness lifted somewhat, and in 1957, American anthropologist Clifford Geertz suggests a rather straightforward way of using the word "worldview" on cultural rather than religious grounds. The ambition behind use of the word "worldview" is inherently holistic because it presupposes that it can be summed up how someone relates to the entire *world*. For analytical purposes, however, Geertz suggests that we split worldview into two, interrelated parts: *worldview* proper and *ethos*. Worldview is "the cognitive, existential aspects [of a given culture]",[414] in other words a general image of how the world is. A worldview corresponds to an *ethos*: "the moral (and aesthetic) aspects of a given culture, the evaluative elements", i.e., a persons response to how the world seems to be. Geertz provides examples of how his dual worldview/ethos concept can be used. In the French worldview, "reality is rationally structured [,] first principles are clear, precise, and unalterable". Corresponding to this worldview, Geertz finds an ethos of "logical legalism", with the French discerning, memorising and deductively applying first principles to concrete cases. The Navaho worldview, on the other hand, is "an image of nature as tremendously powerful, mechanically regular, and highly dangerous". Here, the complementing ethos is one of "calm deliberateness, untiring persistence, and dignified caution".[415]

In the eyes of some, Geertz's concepts are sound but must be clarified in order to provide useful, heuristic tools. Folklorist Alan Dundes agrees with Geertz's worldview/ethos distinction,[416] but grows more critical as he considers its explanatory power:

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414. Geertz, 1957.
415. Geertz, 1957.
416. Dundes, 1971: 102, n. 12.

> The notion of worldview, although admirably holistic and configurational, remains somewhat fuzzy and vague in its particulars. For this reason, the actual analysis of worldview seems to work better with pieces, elements, or features of specific worldview systems.[417]

Later in this chapter, I will takes Dundes advice and interpret the worldview/ethos *principles* of *World of Warcraft*. Dundes' own example of a worldview principle, the Principle of Unlimited Good, is of direct relevance to virtual worlds and will be applied below (see *Unlimited good*, pp. 175-179). But first, a section on worldview/ethos in architecture, focused on the broader notion of worldview and ethos rather than on principles.

(4) Worldview/ethos in architecture

Three sets of 20th century architectural worldview/ethos will be considered in this section: a modern, a postmodern and a deconstructivist set. Towards the end of the section, an important feature of the virtual worldview will be considered, namely, that the taking on of a virtual worldview is done without commitment to the truth value of that virtual worldview.

The modern worldview can be described negatively as the outcome of a process of secularisation gradually undermined a strong, Christian cosmology. The Renaissance is often described as the historical starting points of secularisation,[418] and it is tempting to draw a line from Renaissance humanism to Le Corbusier and the early modern movement. Like the renaissance humanist, Le Corbusier puts the rational, human being at the centre of his worldview and finds inspiration in pre-Christian, Greek antiquity.[419] To illustrate, here is Le Corbusier speculating on "man's" [sic.] first attempts at building: "all around him the forest is in disorder; its vines, bushes and tree trunks obstruct him and forestalls his efforts". In reaction to this disorderly situation, the human

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417. Dundes, 1972: 92. Elsewhere, Dundes describes these elements of world view as "unstated premises which underlie the thought and action of a given group of people", "cultural axioms" or "folk ideas" (Dundes, 1971: 96).

418. E.g., Frampton, 2007: 8. As for modernism in architecture, Frampton notes that its beginnings can also be traced to "the mid-18th century when a new view of history brought architects to question the Classical canons of Vitruvius" (ibid., p. 8).

419. Cf. Le Corbusier's admiration for Greek temple architecture, e.g., the Parthenon (Le Corbusier, 2008: 231-51). As for Renaissance architecture itself, Le Corbusier admired certain architects such as Michelangelo (Le Corbusier, 2008: 204-11) but criticised the Renaissance period in general for its promotion of large-scale planning focused on abstract beauty and leaving actual human beings out of account (see *Inhabitation of the plan*, pp. 78-83).

being must "build well and distribute his labor, to guarantee the solidity and utility of the work [by taking] measurements [, by introducing] order".[420] Le Corbusier warns against taking these early orderings of nature to be the actions of "primitive man": "There is no primitive man; there are primitive means. The idea [of ordering, BL] is a constant potential from the start".[421] It does not, in other words, make a difference whether one is considering the very first settlement in a wilderness (done by primitive means) or a 20th century building project. The ideal attitude towards building remain the same: a utilitarian attitude of measuring and ordering.[422]

The ordering "measurements" of raw nature are done according to human scale, not according to some inherent structure found in the world.[423] Le Corbusier's statement thus has some affinity with both Tuan, the humanist geographer, who talks of place as "humanized space" (originally quoted on p. 128) and with Casey, the phenomenologist philosopher, who talks of "the active and supple body", "[constituting and shaping] places" by "[projecting] a field of possible actions".[424] But Le Corbusier gives humanisation and bodily projection a distinctly modern slant. Measurements are to human scale but they are inherently rational and utilitarian and leads the human builder to rely on geometry: "he went instinctively for right angles, axes, rectangles, circles. [...] Geometry is the language of man".[425]

Let me apply Geertz' worldview/ethos concepts to Le Corbusier's modern, secular view of the world. As hinted at earlier, Le Corbusier's assessment of the modern world is rather ambiguous and not entirely positive; he talks of a modernity characterised by "tumult, disorder, revolutionary inventions" (originally quoted on p. 16). But as befits a heroic figure, Le Corbusier is stronger in ethos than in worldview. He shows an unwavering belief in humanity's capacity for meeting all

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420. Le Corbusier, 2008: 134.

421. Le Corbusier, 2008: 133.

422. Note, however, that Le Corbusier constantly stresses the need to "*go beyond*" the utilitarian starting point (Le Corbusier, 2008: 195. Emphasis in the original), if building is to become architecture rather than engineering (see .

423. This is a strong, recurrent theme in all of Le Corbusier's work and gets its clearest articulation after the Second World War with the Modulor system (as documented in Le Corbusier, 2000a and Le Corbusier, 2000b).

424. Casey, 1993: 45 and 48. Cf. the motives behind Casey's scholarship as laid out in *Place and space*, pp. 17-25.

425. Le Corbusier, 2008: 134 and 135.

challenges by turning them into rationally structured problems which can be solved by the construction of "machines". For example: Attempts at flying were doomed to failure as long as humans simply mimicked birds. Only after stating the ambition of flight as a rationally structured problem could a "machine for flying", the aeroplane, be imagined. In the same problem-solving manner, the Parthenon was built as a "machine for stirring emotion", and the modern house should be "a machine for living in" built in answer to a rationally posed question.[426]

In Le Corbusier's eyes, the rational, problem-solving attitude had already been adopted in fields such as industry, engineering and business, and he was impatiently pressing for the same "revision of values" to take place within architecture.[427] This is how David Kolb sums up the set of "values" or what I would like to label the *ethos* of modern architecture: "belief in [...] rationality, progress, [and] the promise of a uniform technological society".[428] Le Corbusier not only believed firmly in humanity, but also in architecture's capacity to change humanity's worldview. If one were to become the "man of today" with a "modern state of mind",[429] in other words, if one were to adopt a modern worldview, living conditions had to be correspondingly modern, both on the level of the individual dwelling and on the urban level. Villa Savoye is often used to suggest a single-dwelling blueprint of the principles after which Le Corbusier envisaged modern dwellings to be built after.[430] On a larger scale, we find the famous housing block Unité d'Habitation mentioned earlier and the city of Chandigarh, a provincial capital in Northern India (see below).

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426. Le Corbusier, 2008: 161, 241, and 151.

427. Le Corbusier, 2008: 305.

428. Kolb, 1990: 4. As Kolb points out in agreement with several others, modern architecture thus took a route different from those taken by other arts: "Given the enthusiasm of some of its founders for technology, and architecture's perennial need to make friends with those in power, architectural modernism tied itself to those very rationalizing tendencies that were opposed in avant-garde literature and painting" (ibid., p. 88).

429. Le Corbusier, 2008: 136 and 307.

430. The principles are summed up by Le Corbusier as the so-called "five points" of architecture: the pilotis, the free plan, the free facade, the long horizontal window and the roof garden (supposed to restore the ground area covered by the house).

Figure 36: Left: Villa Savoye (Le Corbusier. Photo: Valueyou). Right: Chandigarh, administrative building (Le Corbusier. Photo: diametrik)[431]

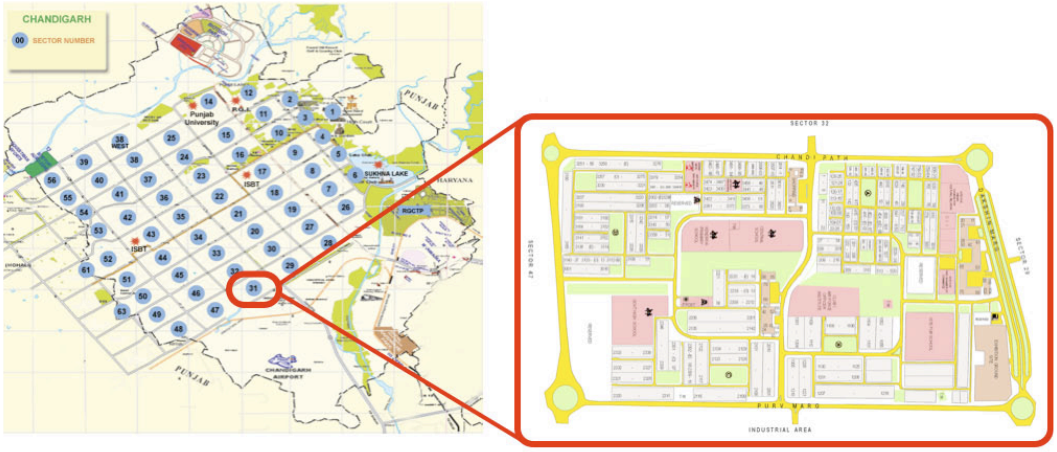

Figure 37: Chandigarh. Master plan of Chandigarh (left) and a close-up of sector 31 (right). Maps found on the official city website[432]

The modern worldview expressed in architecture, then, is one of a rapidly changing if not tumultuous world. It is a challenging worldview and the corresponding ethos describes how this challenge should be met, namely, with rational and technological framing of all problems, no matter how big. Even a sense of spiritual loss or disconnection with the world can be healed through rational and technological framing. During the latter half of the 20th century, this modern worldview/ethos in architecture was explicitly challenged by a postmodern worldview. The foundational text for this postmodern shift in architecture is often said to be Robert Venturi's

431. [http://en.wikipedia.org/wiki/File:VillaSavoye.jpg. Accessed 20 February 2009] and [http://flickr.com/photos/diametrik/354987723/in/set-72157594475362923/. Accessed 25 August 2009].

432. [http://chandigarh.gov.in/. Accessed 25 August 2009].

1966 book, "Complexity and Contradiction in Architecture"; Venturi and his partner, Denise Scott Brown, have thus been labelled the "godparents" of postmodern architecture (see p. 12). The architect, writes Venturi, "must be committed to his particular way of seeing the universe",[433] in other words to his or her worldview. Venturi finds himself in a "complex reality",[434] but he does not meet this complex reality as a problem to be solved. On the contrary, Venturi's postmodern ethos is one of jubilant embracing of the world's complexity: "I am for richness of meaning rather than clarity of meaning; for the implicit as well as the explicit function. I prefer 'both-and' to 'either-or', black and white, and sometimes grey, to black and white".[435]

Architectural theorist Charles Jencks expresses the postmodern ethos in the following: "Why, if one can afford to live in different ages and cultures, restrict oneself to the present, the locale? Eclecticism is the natural evolution of culture with choice".[436] Jencks's formulation is particularly noteworthy because it highlights an important feature of Geertz' twin worldview/ethos concept. "In itself," writes Geertz, "either side, the normative [ethos, BL] or the metaphysical [worldview, BL], is arbitrary, but taken together they form a gestalt with a peculiar kind of inevitability".[437] If the world is thought to have turned "self-consciously multiple" (David Kolb's way of summing up what I call the postmodern worldview), there is indeed something natural about architecture taking a turn towards an ethos of eclecticism, or more broadly speaking about "our civilization [advancing] to a vision of ironic plurality".[438]

The postmodern ethos of complexity-embracing, ironic plurality found expression in playful use of symbols. Whereas modern architects had established *space* as the unique material underpinning their profession, postmodern architects turned to the manipulation of *symbols* (see *Space and image*, pp. 10-17). Robert Venturi's 1962 house for his mother, the Vanna Venturi House, is often used as a single-dwelling example of postmodernist architecture (see below).

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433. Venturi, 2002: 17.

434. Venturi, 2002: 41.

435. Venturi, 2002: 16.

436. Jencks: "The language of Post-Modern Architecture" (1977: 127). Quoted in Kolb, 1990: 103. For the difference between Jenck's and Paolo Portoghesi's views on postmodernist architecture, see p. 151.

437. Geertz, 1957.

438. Kolb, 1990: 105.

Figure 38: Vanna Venturi House (Robert Venturi. Photo: D. Brownlee)[439]

Here is Venturi's own description of the house, stressing the use of symbolism:

> A layered composition accommodating juxtapositions of contrasting exterior and interior forms. Its outer layers, as a sign of the front, symbolizes via silhouette and ornament an iconic house, with its sloping rather than flat roof and its conventional windows rather than absences of walls.[440]

In the 1980s, postmodernism found new, intellectual nourishment in the notion of *deconstruction* as put forward by philosopher Jacques Derrida (some prefer to talk of deconstructivism and postmodernism as two separate trends in architecture,[441] some prefer to talk of postmodernism evolving into deconstructivism[442]). In deconstructionist architecture, worldview is of no importance but ethos is explicitly stated as a method of analysis heavily grounded in theory, namely, *deconstruction*. Deconstruction is aimed at exposing structured values but then subversively questioning the dominance of one value over another. Deconstruction is thus a variety or post-structuralism, an intellectual trend criticising structuralism for reinforcing the meanings it uncovers. There is a suggestion of this mode of thought in Venturi's writings: "In equivocal relationships one contradictory meaning usually dominates another, but in complex compositions

439. [http://www.american-architecture.info/USA/USA-Northeast/NT-017.htm. Accessed 25 August 2009].

440. Venturi and Scott Brown, 2004: 41.

441. E.g., Kolb, 1990: 6, Smith, 2008: 6 (who prefers the label "deconstructive" architecture), Leach, 2009: 34 (who calls deconstructivism a "more progressive movement" than postmodernism whilst maintaining that they both "privilege appearance over performance").

442. Norberg-Schulz, 2000b: 7.

the relationship is not always constant".[443]

Derrida collaborated with architect Bernard Tschumi on the Parc de la Vilette which is often used as an example of deconstructivism in architecture. Below is the master plan for the park, a map of it and one of it's 35 red *follies* (i.e., small buildings intended primarily as decoration).

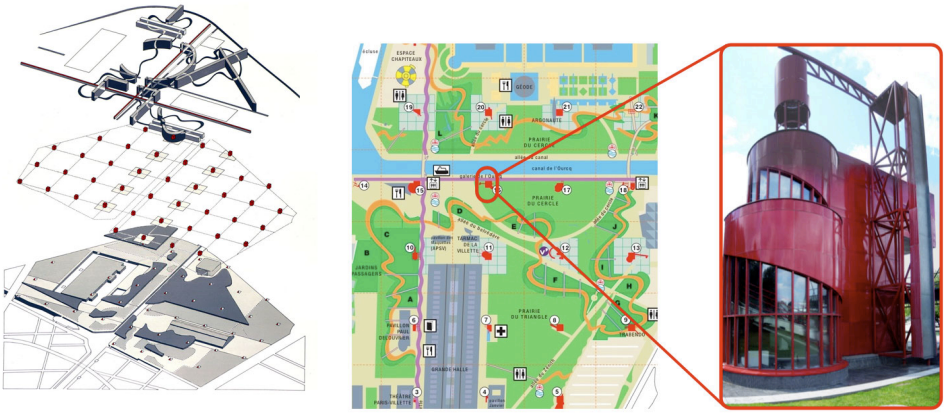

Figure 39: Parc de la Villette (Bernard Tschumi with Jacques Derrida). From left to right: Plan(s) (Bernard Tschumi), map (from the official park website) and folly (photo: zulunation)[444]

There are strong intellectual ambitions behind the Parc de la Villette. The master plan of the park consists of "three autonomous systems", superimposed but not related to each other and with no system dominating the other systems. The systems are: lines, points, and surfaces, as seen above. The points form a strict grid which determines the placement of *follies* (the playful structures, one of which is seen to the right). In Tschumi's own words, "[t]he strict repetition of the [...] folly is aimed at developing a clear *symbol* for the Park, as strong as the British telephone booth or the Paris Metro gates".[445] Whereas the points/follies form a "system of objects", the lines form a "system of movement" and the surfaces a "system of spaces". When superimposed, these three autonomous systems create conflict, as well as indifference ("when there is low intensity or proximity"), in unexpected ways.[446] In short, the park presents the deconstructivist ethos of

443. Venturi, 2002: 32.

444. Illustrations (from left to right): Tschumi, 1985: 202, [http://www.villette.com/link/dl?site=fr&objectId=847. Accessed 25 August 2009] and [http://www.panoramio.com/photo/10541472. Accessed 25 August 2009]

445. Tschumi, 1985: 201. Emphasis in the original.

446. Tschumi, 1985: 200f.

subversive attention to structured values. The moments of conflict and indifference, which might seem random at first, turn the experiencer's attention to the underlying systems generating those moments, and to their arbitrariness.

Now, all this might not be glaringly obvious if the park is visited unprepared. If, however, some background knowledge of deconstructivism is indeed in place, the impact of the park is much enhanced. On a similar note, architect and theorist Liz Diller talks of theory as a "parallel path" in the experience of architecture. "It's not," underscores Diller in an interview, "a prerequisite to understand the theory behind in order to have a great architectural experience", but the theory is available to those who want to enhance their experience with reflection: "One has to accept that there is more to architecture than space-making: architecture is event-making, it's always thinking about perception, and space, use, choreography, setting up relationships and so forth".[447]

Understanding the theory underlying architecture does not entail believing in that theory. It was probably necessary for Derrida and Tschumi to believe in deconstructivism to design the Parc de la Villette, and the visitor's experience is enhanced by understanding deconstructivism, but this does not entail that the visitor must believe the theory to be true, as Edward Winters points out.[448] Winters goes on to talk of "perspective" in a manner comparable to my use of "virtual worldview":

> [I]f the spectator regards the theory not as a commitment to truth, but rather as a necessary theoretical perspective the artist or architect has upon their work, he will be able to appreciate the work by including the theoretical perspective within his aesthetic appreciation, independently of any truth claim that the attendant theory might make.[449]

There is a sense of something "virtual" in this non-commitment to truth. Virtual worldviews in architecture can be enjoyed with the same seriousness but ultimate lack of commitment known from the experience of fiction proper.

The notion of non-commitment to virtual worldviews resonates in various ways (critically, politically and pedagogically) with both architectural and media studies discourse. I will outline

447. Kazi, 2009: 58f.

448. Winters, 2007: 55. Tschumi is used as example on p. 132.

449. Winters, 2007: 55.

this resonance in the following section after which I continue on to the interpretation of virtual worldview/ethos principles in *World of Warcraft*.

(5) For and against virtual worldviews

Postmodernism has been hugely influential in architectural discourse as a position to react against, if not vehemently oppose. The above deconstructivist example, the Parc de la Villete, can be seen as an attempt to go beyond superficial, postmodern play with surface appearances. Instead, playfulness is found on a deeper, structural level. Even some very recent suggestions as to how architecture should evolve have been framed as counter-attacks on postmodernism. This was seen earlier when the paradigm of digital morphogenesis was framed by Neil Leach as a way of "[overcoming] the scenography of Postmodernism"; advanced, digital simulation is to aid architects in turning architecture into a processual art, rather than an art *form* (see p. 23). Rather than embracing digital technology, however, the orientationalist mode of counterattack on postmodernism is to stay loyal to the original, modern ideals. Christian Norberg-Schulz provides a very clear example: "[A]bout 1980 post-modernism was a promising and vital current, [but] it soon faded away, or dissolved into superficial playfulness". Norberg-Schulz then continues by reaffirming his orientationalist allegiance to modernism: "At the turn of the century, therefore, [...] we have to reconsider the only valid current of the twentieth century: modernism".[450] On a similar note, and most pertinent for the notion of multiple, virtual worldviews, Juhani Pallasmaa bases his counterattacks on postmodernism in the existential function of hierarchy in life. The goal of architecture, and of art in general, should be to deepen human existence by letting us sense hierarchies, e.g., the difference between the upstairs attic and the downstairs cellar, celebrated by Gaston Bachelard, or more broadly the difference between mundane, everyday life and "the spiritual world" of art.[451] With a quote from Marcuse, Pallasmaa criticises postmodern

450. Norberg-Schulz, 2000b: 7. Norberg-Schulz's book provides a fascinating documentation of how architectural discourse dealt with the postmodern phenomenon. The quotes with the strong disassociation from postmodernism are from the introduction, written for the 2000 publication. The bulk of the book, however, was written in the 1980s and presents its reader with a much more nuanced critique of postmodernism on grounds of its capacity for providing dwelling (ibid., p. 50). Deep disappointment with postmodernism has been expressed at least since the first half of the 1990s, e.g., Schulze, 1994: vii.

451. Pallasmaa, 2005e: 53f.

architecture for making the experience of such hierarchical deepenings impossible:

> Today's novel feature is the flattening out of the antagonism between culture and social reality through the obliteration of the oppositional, alien and transcendent elements in the higher culture by virtue of which it constituted another dimension of reality.[452]

Pallasmaa sums up his criticism by distinguishing between "Utopia", e.g., the utopia presented by the early modern movement, and postmodern "science fiction [...] in which it is not necessary to believe".[453] Utopia belongs to daily life by deepening it, and thus fits the modern belief in a single reality. Science fiction merely presents "alternatives for everyday reality" fitting a postmodern worldview of multiple realities.[454] Pallasmaa never makes reference to virtual worlds, but they would fit nicely with his criticism, as a sign of our postmodern times. A time without any serious belief in anything, where worldviews can be entertained without commitment, as virtual worldviews.

Instead of interpreting non-committed shifts between virtual worldviews as a sign of postmodern times, the capability to perform such shifts can be interpreted as a hallmark of being modern, as suggested by philosopher Peter Sloterdijk. Like Le Corbusier, Sloterdijk denies that modernism has anything to do with revolution.[455] Modernisation is, rather, a process of explication:

> The contemporary age does not turn over objects or themes [i.e., there is no revolution, BL] - it turns them out. It unfolds them, it pulls them to the forefront, it lays them out on a plane, it forces them to become manifest.[456]

As a consequence of explication, the modern person no longer lives a life "anchored in an implicit background" but has to find a way of "settling in the explicit",[457] i.e., to make more or less conscious choices about how he or she sees the world (worldview) and the appropriate ways of handling such as world (ethos). All for the better, some would say. In media scholarship, games in

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452. Herbert Marcuse (1991): "One-Dimensional Man". Boston: Beacon Press. Quoted in Pallasmaa, 2005e: 53.

453. Pallasmaa, 2005c: 284.

454. Pallasmaa, 2005e: 53.

455. Cf. Le Corbusier famous end words of "Toward an Architecture": "Architecture or revolution. Revolution can be avoided" (Le Corbusier, 2008: 307). That is, if architecture can be taken seriously as that overall framework we live in, it can be developed into a modern framework fitting modern times, hence disjunction (and ultimately, revolution) can be avoided.

456. Sloterdijk, 2008: 42.

457. Sloterdijk, 2008: 44.

general and computer games in particular have been hailed for their potential to enhance young people's flexibility when it comes to choosing between worldviews. This is stated most clearly by Gee who was introduced earlier with his concept of the affinity group (see *Against boundaries*, pp. 139-142). Each affinity group is associated with a certain *semiotic domain*: "By a semiotic domain I mean any set of practices that recruits one or more modalities (e.g., oral or written language, images, equations, symbols, sounds, gestures, graphs, artifacts, etc.) to communicate distinctive types of meanings".[458]

It is emblematic of "modern" life, argues Gee, to master several such additional domains (hence be a potential member of affinity groups based in those domains). A non-modern person masters a very low number of domains compared to a modern person, as suggested by Gee's examples of semiotic domains: "cellular biology, postmodern literary criticism, first-person-shooter video games, high-fashion advertisements, Roman Catholic theology [etc.]".[459] If one does *not* master a high number of extra domains but merely the *lifeworld domain* associated with daily life, one is indeed "trapped in [one's] own culture", argues Gee, who acknowledges that this statement might "[comport] poorly with some versions of multiculturalism".[460]

A similar sentiment, but without the politically incorrect attack on non-modern life, underlies Shaffer's concept of *epistemic frame* (see p. 161). The epistemic frame changes how a person looks at and thinks about the world but "[t]he point is not to train young people to *be* professionals, but to train them to be the kind of people who can *think* like professionals when they want and need to".[461] Having a number of epistemic frames standing ready to be put on is useful if not empowering for young people.

It is broadly assumed that the contemporary age is characterised by plurality and rapid change, and the commentators I have quoted above see this as a challenge. Pallsmaa's answer to that challenge is to have "another [utopian] dimension of reality" re-insert in daily life in order to restore depth and balance. Could radical ecological thinking be an example of this? Gee and

458. Gee, 2003: 18.
459. Gee, 2003: 18.
460. Gee, 2003: 39.
461. Shaffer, 2006: 165

Shaffer offer a more explicit answer to the challenge of plurality and rapid change, as seen from a pedagogical perspective. Plurality of domains should be met with concrete training in the management of a plurality of domains, i.e., training in the obtaining and shifting between a number of different outlooks. In Gee's account, being an expert user of computer games represents in itself a widening of the young person's number of available semiotic domains. In Shaffer's account, specifically designed games can be of aid in the widening of possible outlooks. Underlying both suggestions is the idea that plurality and flexibility of outlooks is to be desired. Or at least that plurality and flexibility of outlooks provides a person with competitive edge is the contemporary job market. These suggestions and the concepts supporting them are strong and useful and have found their way from learning studies proper and into media studies; cf. Jenkins' taking over the concept of "semiotic domain" (see *Against boundaries*, pp. 139-142). This is all well and good, but celebration of the ability to choose from a wide worldview/ethos selection does not bar us from critical interpretation of specific instances of virtual worldview/ethos.[462] The next three sections provides such critical interpretation of the virtual worldview/ethos of *World of Warcraft*.

(6) Unlimited good

The virtual worldview/ethos principles I find particularly pertinent for *World of Warcraft* are those of Unlimited Good, Unlimited Expansion and Maximal Efficiency. A section has been assigned to each principle. On the most basic level, the pertinence of these principles can be traced to the basic game design, and to the kind of engagement this design specify for the *World of Warcraft* player. Although *World of Warcraft* has been designed to attract players who would never accept the gruellingly hard work demanded by earlier MMOs, it is still a product based on monthly subscriptions and thus designed to keep players busy for several years, no matter how many hours

462. Instead of exploring the notion of multiple worldviews, the scholar might take an interest in the notion of *change* in worldview. From a media studies perspective, the most thorough of these explorations are those undertaken within medium theory with Marshall McLuhan's work the most obvious example. The medium theorist is, in fact, only interested in worldview in so far it is transformed (a general point in Deibert, 1997), e.g., when a change in media environment allows for a change in people's way of thinking about the world, e.g., to a more "linear" mode of thought (McLuhan, 1962). As with theories of multiple worldviews, theories of worldview transformation do not, and are not intended to, equip an interpreter with any heuristic tools for critical interpretation of a singular cultural product.

the game is played per day. Therefore, typical engagement with *World of Warcraft* demands a significant amount of time, money and effort from its players.

Effort is critical for the taking on of a virtual worldview/ethos. This can be exemplified by adding onto the description of the Parc de la Villette. Even if the experiencer is not committed to deconstruction, and the deconstructionist worldview/ethos thus appears to be something of a fiction, a taking on of the deconstructionist virtual worldview/ethos of the Parc de la Villette requires both bodily and intellectual effort. As for bodily effort, the park must be explored on foot and a certain amount of time spent in it. As for intellectual effort, understanding deconstructivist theory will deepen the experience. If such an understanding can not be established, the experiencer has at the very least to make the effort of intellectual openness, i.e., to open him- or herself to the idea that worldview/ethos has gone into the design. An open-minded visitor to the park will most probably acknowledge a sense of planned chaos, of systems colliding with other systems, even if he or she has never heard of Derrida.

The parallel between the effort made to engage with virtual worlds and architecture (including parks) can be both strengthened and nuanced with Espen Aarseth's concept of *cybertext*. Cybertext is not a genre but a "function-oriented perspective" which is particularly useful on certain media products, especially software products.[463] *Nontrivial effort* is central to cybertext, as it is to architecture, and that effort is both an intellectual and a bodily one. Aarseth explains this by pointing out the contrast to how a reader engages with a traditional text:

> The performance of the reader takes places all in his head, while the user of cybertext also performs in an extranoematic sense. During the cybertextual process, the user will have effectuated a semiotic sequence, and this selective movement is a work of physical construction that the various concepts of "reading" do not account for. This phenomenon I call *ergodic*, using a term appropriated from physics that derives from the Greek words *ergon* and *hodos*, meaning "work" and "path".[464]

As opposed to a traditional, literary approach, Aarseth is focusing on "what [is] being read *from*" rather than "what [is] being read".[465] The approch is architectural in its focus on paths and the work it takes to walk them. Neither cybertext or architecture is to be *read* (unless metaphors such

463. Aarseth, 1997: 19.

464. Aarseth, 1997: 1.

465. Aarseth, 1997: 3. Emphasis in the original.

as "the language of architecture" are taken very literal[466]). They are *read from*, i.e., environments which in a significant way trigger production of meaning in those experiencing them.

A typical player's engagement with *World of Warcraft* certainly takes nontrivial effort. Not so much nontrivial effort in the original sense suggested by Aarseth, i.e., explosive feats of mental strength and skill (e.g., solving a puzzle through a burst of effort[467]) but a kind of effort which combines such strength and skill effort with a significant amount of long-term endurance. Virtual game worlds are typically used for more than 20 hours per week on average.[468] Time investments into a game world can in fact be so extensive that play becomes impossible to recognise as play and becomes more job-like.[469] Many recurrent activities in the world are consumptive, e.g., having armour repaired, drinking potions, buying arrows etc., hence income is constantly required. Luckily, *World of Warcraft* is a world of unlimited resources. A player typically spends much of his or her time harvesting the inexhaustible resources of the world. He or she mines ores, hunts animals and monsters, picks herbs, etc. *World of Warcraft* is buzzing with continuous exploitation of resources which always reappear in fixed patterns. Wait a while after the harvesting (the exact time varies somewhat) and the iron ore (or the eel, or the rare herb, or the griffin etc.) will appear again to be harvested. As shown in the chapter on the *Map*, players are well aware of these structures and sometimes explicate them through cartography (see *Player cartography*, pp. 83-89).

The resource structures, and the subsequent structures of resource gathering, are literal ergodic paths and constitute an important aspect of *World of Warcraft's* architecture. To engage with *World of Warcraft* in a typical way is to walk these paths of endless resources. In doing so, the

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466. Architectural discourse is sensitive to the twists of turn of academia. The structuralist and poststructuralist "linguistic turn" must have influenced Pallasmaa when he asks, in 1980: "Is architecture a language?" (Pallasmaa, 2005f: 26). After some discussion, Pallasmaa ultimately finds that there is little to be gained from understanding architecture through a linguistic lens. It is interesting in itself that Pallasmaa feels compelled to ask the question. 17 years later he asserts with much more certainty: "Architecture is fundamentally not a language" (Pallasmaa, 2005k: 173).

467. In Aarseth's account, *aporia* and *epiphany* are "master tropes" of ergodic literature (Aarseth, 1997: 181). An aporia is a roadblock, as it were, on the path traversed by the reader, e.g., a puzzle in a computer game. An epiphany "is the *sudden* revelation that replaces the aporia" (ibid., p. 91. My emphasis).

468. 22.71 hours per week on average, according to early findings from game worlds such as *EverQuest* and *Star Wars Galaxies* (Yee, 2006c: 316).

469. Yee, 2006b.

player accepts what Alan Dundes has called the *Principle of Unlimited Good*, i.e., the notion that the resources of the world are endless.[470] Dundes' point of access to this worldview principle is language, namely, traditional phrases such as "There is (plenty) more where that came from". According to Dundes, the use of this phrase among members of a given culture is indication of the Principle of Unlimited Good being part of that culture's worldview. The cartographic practices just mentioned is indication that the same principle is part of the virtual worldview of *World of Warcraft.* It is not quite something to be deduced from the underlying code (it does not specifically say "resources are endless" anywhere in the code). The individual herb, ell, griffin, etc. do reappear in a regular way but the overarching sense of Unlimited Good belongs to the virtual world as such, i.e., it grows from repeated encounters between player and virtual world. Gradually, the player comes to suspect that resources are endless and more or less consciously forms this opinion as a virtual worldview principle of Unlimited Good. The belief in a world of Unlimited Good is underscored in situations where players find themselves competing for the same resources, e.g., when two players are circling the same area in search of the same, ever-reoccurring herbs. That situation is considered unfortunate and unnecessary, underlining how strongly Unlimited Good is believed in. In this virtual world there is more than enough for everybody, thus players should not have to fight each other for anything.

What effect does it have on a player's real-life worldview, that he or she embraces the principle of Unlimited Good for several thousands of hour? If a strong carry-over effect took place, that player would stop believing in recycling. I put it bluntly, to mirror the assumptions of strong carry-over effect sometimes found in the debates over violent computer games leading to violent real-life behaviour.[471] But proving a strong carry-over effect is not the only way of being critical of a virtual world. As the analytical tool of virtual worldview/ethos allows us to focus on Unlimited Good it also allows us to ponder virtual worlds of *Limited* Good. What would it be like to spend time in a virtual world of Limited Good? Players would have to embrace an complementary ethos

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470. Dundes, 1971: 96. Dundes presents the Principle of Unlimited Good as a piece of the American worldview, but it must be reasonable enough to assume its existence in other consumerist societies. Also drawing on Dundes, Gary Alan Fine has made a similar observation regarding the worlds of pen and paper role-playing games: "The structure of dungeon and fantasy worlds reflects the American image of a potentially unlimited supply of treasure" (Fine: 76).

471. See Smith, 2002 and Malliet, 2007 for reviews of effect studies.

of sharing and co-operation, or face the consequences of not sharing resources. If only some reflection on resource distribution and co-operation took place, amongst only a fraction of players, the design would still have had a healthy, although indirect effect; as many cultural products can have, when they trigger us to reflect on the various themes of our lives. And a virtual world of Limited Good might actually make for an interesting gaming experience too.

(7) Unlimited expansion

What kind of ethos principle would be the natural reaction to a world of Unlimited Good? As Geertz stresses, their is something inevitable about the way in which worldview and ethos fit together. An ethos offers member of a given culture "the genuinely reasonable way to live [...] given the facts of life",[472] i.e., the facts of life according to the worldview. I will suggest that a Principle of Unlimited Expansion belongs to the *World of Warcraft* ethos as a seemingly inevitable response to Unlimited Good.

Looking for an ethos principle matching the worldview principle of Unlimited Good, help is found in the work of Lewis Mumford. According to Mumford, a Doctrine of Progress dominated the thinking of eighteenth century, educated Westerners.[473] Whereas it had formerly been possible to imagine Golden Ages of the past superior to the present, the new doctrine established history as a steady, linear improvement: Today is better than yesterday, and tomorrow will be better than today. This was definitely true when progress was measured in the numbers of scientific landmarks reached and commodities manufactured, but the Doctrine of Progress did not take into account the physical and mental health of actual, living men and women. There was no significant reflection on what "progress" meant. If the Doctrine of Progress were to be simplified into a slogan, it should be *More is more!* rather than *More is better!*

Mumford writes of "world-picture" in a very holistic manner without any explanatory commentary yet alone the finer, conceptual granularity offered by Geertz and Dundes.[474] Fortunately, the worldview/ethos distinction can be brought in to clarify Mumford's criticism of

472. Geertz, 1957.
473. Mumford, 1963: 182-85, Mumford, 1961: 52 and 74.
474. Mumford, 1963: 220.

the eighteenth century European world-picture. The Doctrine of Progress is a worldview, and the following passage is suggestive of the corresponding ethos:

> [Q]uantitative expansion became predominant. The merchant cannot be too rich; the state cannot possess too much territory; the city cannot become too big. Success in life was identical with expansion.[475]

The ethic response to the worldview of Progress is an ethos where success in life is equated with expansion. "Success = expansion" comes across as a rather feeble ethos, when compared to the examples of more sophisticated ethos provided by Geertz, i.e., the French ethos of "logical legalism" and the Navaho ethos valuing "calm deliberateness, untiring persistence, and dignified caution". Using Geertz' terminology, Mumford's criticism of eighteenth century can be summed up as follows: It was a time of strong worldview (the Doctrine of Progress) but of weak ethos. That same sense of weak ethos sometimes surfaces in *World of Warcraft.* As a game, *World of Warcraft* is known to have a strong, sometimes even addictive appeal. In the terminology applied here, that addictive appeal stems from an ethos Principle of Unlimited Expansion. The entire game is designed to allow the player indefinite expansion of his or her character's capabilities. Expansion happens as an increase in numerically stated character attributes (strength, intelligence, etc.), as the improvement of equipment such as weaponry and armour or in other quantitatively measured ways. The game has essentially no end-goals, only sub-goals. A player might enjoy improved strength or a newly acquired, rare and powerful sword, but the player will never reach *the* goal, never win the game. As Ducheneaut et al. tentatively conclude in an empirically based study: "The attractiveness of [*World of Warcraft*] could have a lot to do with its fine-tuned incentives and rewards structure, reminiscent of behavioral conditioning".[476] Mumford's merchant cannot be too rich, and neither can a *World of Warcraft* character. The character can never be too strong, too fast or too powerful either.

The pertinence of Unlimited Expansion is indicated by the strong, emotional reactions triggered by breakdown in the principle. In everyday language, changes in worldview/ethos are generally referred to in negative terms, e.g., "a threat to my worldview" or "an experience that shattered my

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475. Mumford, 1961: 361.

476. Ducheneaut et al., 2006b: 314. More assertively, Richard Bartle simply claims that "[s]ome [virtual worlds] use gambling-psychology feedback systems to drive their addictiveness" (Bartle, 2004: 683).

entire worldview". With the virtual world, ethos is correspondingly virtual (i.e., not the real thing), but breakdown in ethos is still an unpleasant experience. Going to the movies might be a frustrating experience if the moviegoer is incapable of sympathising with the characters of the movie, but when self-proclaimed *World of Warcraft* addicts share their experiences in online forums, their frustration goes far beyond that of a disgruntled moviegoer. These players suffer from a breakdown in virtual ethos. Here is an example from the *WoW Detox* site:

> I love that my husband keeps trying to tell me about things that he has "achieved" in WoW and expecting me to care. Now that I don't play anymore, I see how stupid and fruitless it all is.
>
> "I got to level X with X character!" [sub-goal, BL]
>
> "I got X item to put on that character!" [sub-goal, BL]
>
> "I farmed X amount of gold to get X mount for X character!" [sub-goal, BL]
>
> How pointless. It is a mindless grind that makes you think you have achieved something, when in reality all you have achieved is a bigger ass from sitting in front of a computer. [WoW Detox statement no. 25201][477]

Unlimited Expansion must be embraced if *World of Warcraft* is to be engaged with in the way a majority of users do. But some players find themselves abruptly dismissing the principle. Answering the question "How and why should I be in this virtual world" with "More expansion!" suddenly seems unsettlingly insufficient to these unhappy players. But is there a better or at least an alternative response to a virtual world of Unlimited Good? The real world with its uncertainties make room for many different outlooks on resources, from a relaxed "Drill, Baby, Drill!" attitude to a concerned attitude of ascetic modesty. In a virtual world such as *World of Warcraft* there is no uncertainty. Worldview principles are unarguably clear: this *is* a virtual world of Unlimited Good, and Unlimited Expansion *is* a reasonable response to Unlimited Good. The real possibility for an alternative virtual ethos thus starts with a different virtual worldview, e.g., Limited Good rather than Unlimited Good.

(8) Maximal efficiency

Another virtual ethos principle will be suggested: the Principle of Maximal Efficiency. According to that principle, a virtual world of Unlimited Good should be met with an attitude of careful calculation in order to get as much as possible out of the time spent in the virtual world. The

477. [Www.wowdetox.com. Accessed 23 February 2009].

behaviour known as *tweaking* is an indication of Maximal Efficiency. Tweaking originally referred to fine adjustments made to improve the performance of complex, typically mechanical, systems. That meaning of the word has been carried over into usage relating to both the hardware and software of computers. "Tweaking" has thus become almost synonymous with the original, 1970s use of the word hacking: to adjust the computer in a an explorative way often unintended by the original manufacturer, with the ultimate goal of squeezing higher performance out of the machine.[478] Tweaking, however, does not have the boundary breaking connotations of hacking (for more on hacking, see *Structured use*, pp. 89-93). When tweaking, the virtual world user "stays inside the box", as it were, in contrast to the hacker who is not afraid to damage, break or modify the box. But where are the sides of the proverbial box, in other words, when does the tweaker cross the line from explorative to subversive behaviour? This is a cultural question. It used to be considered subversively out of the box to modify the virtual world user interface through the writing and use of small programs, so-called add-ons. This was the case in the culture of *EverQuest*, the extremely successful virtual world game launched five years prior to *World of Warcraft*. Sony, the publisher of *EverQuest*, fought hard to remain in absolute control of their virtual world, hence the use of add-ons was outlawed and fought against.[479] Blizzard, the publisher of *World of Warcraft*, have had a very differently positive approach to add-ons. The incorporation of add-ods into the *World of Warcraft* user interface was facilitated from the outset and is now fully embraced (is considered "inside the box") by both players and distributors of game worlds. T.L Taylor notes how this not only indicates but also furthers "instrumental and (hyper) rationalized play".[480] The screen with its user interface is, in other words, a place where worldview/ethos can be influenced. The outlook of the player is modified in a most literal manner, e.g., when an add-on is installed to highlight where resources are to be found. By facilitating a "hyper-rationalised" style of engagement with the virtual world, such an add-on embodies and reinforces the principle of Maximal Efficiency.

The principle of Maximal Efficiency is also, embodied, and with striking clarity, by the

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478. On the history of hacking, see Gere, 2002.

479. On the early struggle between *EverQuest* users creating add-ons and *EverQuest* publishers demanding absolute control of their worlds, see Taylor, 2006.

480. Taylor, 2006: 195.

controversial figure of the *gold farmer*. Sometimes used interchangeably with grinding, *to farm* is to perform the same action repeatedly in a mundane, or un-playful way. Farming proper is to grind in order to make real-life money. Global difference in income makes it profitable for workers in third world countries with strong infrastructure, for instance, and in particular, China, to make a real-life living by harvesting monsters and other resources in virtual worlds. These virtual world resources are then sold on to gamers who can afford this shortcut to virtual world currency or good equipment. To many Western players, farmers or sellers of their goods are a threat to the atmosphere of the game world, and some consider it a kind of civil duty to harass them.[481] In the screenshot below, a mob of avatars has cornered an avatar used as vehicle for advertising farmed virtual world currency.

Figure 40: *World of Warcraft*. An avatar is mobbed for advertising virtual world currency. Surrounded by the avatars of hostile players, the gold seller continues to advertise the services of his employer

From a virtual worldview perspective, the gold farmer is merely acting in accord with the virtual worldview/ethos embraced by everyone. Why, then, are farmers harassed? Cultural factors weigh in. Western players tend to keep quiet about their buying gold from farmers, although many of them do so or there would not be a large Western market for farmed gold. I have only talked to a handful Chinese *World of Warcraft* players about the issues, but my initial impression is that of a fundamental cultural, difference. The Chinese players were baffled by the notion that their buying

481. In January 2009, the gold farming company MyMMOShop.com was bought by My MMO Inc. for 10 million USD [http://kotaku.com/5141892/gold-farming-website-sells-for-10-million. Accessed 2 April 2009]. That transaction goes someway in suggesting the size of the virtual goods industry. Yee, 2006a, although written in 2006, is the most thoughtful text produced on gold farming, tackling a wide range of issues: the tensions between players and farmers, racism, gold farming's impact on the economy of a virtual world etc. For a more recent essay touching on the issue of gold farming and racism, see Jennings, 2008: 101-04.

virtual gold with real-life money could be in any way wrong. Perhaps some Western players are uncomfortable with farmers *because* they act in accord with the implicit virtual worldview/ethos? Gold farming call attention to a virtual ethos principle which seem unattractive to Westerners when stated with such clarity. Roughly speaking, and at the risk of appealing to cultural stereotypes, business-minded Chinese players from a relatively more openly competitive culture are more willing to accept the principle of Maximal Efficiency than their Western counterparts.

(9) Worlds of Junkspace

Being inherently cross-disciplinary and polemical, architectural theory often deals with broader, cultural issues, not least the conditions of urban life. And outside of architectural theory proper, social theorists and philosophers often take an interest in the architectural qua the urban. There is, all in all, an architectural-philosophical discourse examining and criticising the urban. Certain affinities between that architectural-philosophical discourse and virtual worlds have emerged through the interpretation of worldview/ethos principles in *World of Warcraft*. In this section, those affinities are explored through four concepts: *Gestell* (Martin Heidegger), *Spectacle* (Guy Debord), *non-place* (Marc Augé) and *Junkspace* (Rem Koolhaas). All four concepts, and specially the concept of Junkspace, provide some insight into virtual worlds. They all rest, however, on a broad assumption of *placelessness*, i.e., "the weakening of distinct and diverse experiences and identities of places".[482] Since virtual world users often seek out, build and feel attached to places, that broad assumption must be dismissed.

As part of his philosophy of building, Heidegger spoke out against an ethos of Maximal Efficiency (using, of course, a very different vocabulary). As mentioned in the chapter on *Building*, Heidegger believed true dwelling to be possible only if building took place as both construction and cultivation. If the interdependency of construction and cultivation is forgotten, building perform as *Gestell*. Gestell, literally *framing*, occurs when a technology is implemented in a purely calculated way, all *techne* and no *logos*, so to speak.[483] Human activity as well as Nature, in fact all being, is reduced to that which can be measured, engineered and exploited as pure

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482. Relph, 1976: 6. Cf. Christian Norberg-Schulz: "The present condition has been described as that of a 'loss of place'" (Norberg-Schulz, 2000a: 31).

483. See chapter two of Barney, 2000.

undifferentiated *Bestand*, a standing-reserve of energy. If the route Heidegger lays out is followed, the overall interface of *World of Warcraft* could be called Gestell and the virtual world itself a Bestand. In a weird parody of Heideggerian "cultivation", the virtual world's essence of calculation is clarified by the practice of "farming".

The next three concepts are closely related (I am presenting them through the lens of the *Place and space* dichotomy, see pp. 17-25). Guy Debord's *Spectacle* was presented in the late 1960s.[484] Debord was a Marxist who framed his criticism of capitalism in an analysis of how places are homogenised into undifferentiated space, thereby laid open for capitalist exploitation. The same theme is central for anthropologist Marc Augé's concept of the *non-place*, presented in the early 1990s.[485] Augé contrasts non-place to "anthropological place", i.e., places with historical, geographical and personal connections to other places. Non-place has been stripped of such connections. As examples of non-place, Augé points to malls, supermarkets, highways and airports. Debord too writes critically about highways, as well as tourism, the mass media and the suburbs.

Architect Rem Koolhaas's 2001 concept of *Junkspace* is, in a sense, the latest conceptual incarnation of Spectacle and non-place, but without the critical intent underlying its predecessor. Decord, Augé and Koolhaas share a sense that in consumerist societies, something important happens to the conceptualisation of space. In order to find out more about this transformation, the three authors focus on built infrastructures intended for transportation, consumption and entertainment. I will consider virtual worlds part of these infrastructures in the following, focusing on Junkspace with occasional mention of non-place and Spectacle. As for specific virtual worlds, I will focus on *World of Warcraft* as just examined by way of worldview/ethos but make occasional reference to *Second Life*.

Being "additive, layered and lightweight",[486] Junkspace is expandable as demonstrated when an airport or mall is expanded by adding a new chunk of space to it. Virtual worlds are expandable too, e.g., with *World of Warcraft* gradually being expanded with new continents (Outland and

484. Debord, 1995.
485. Augé, 1995.
486. Koolhaas, 2001: 409.

Northrend) and *Second Life* growing at the pace of user demand for land to buy.

Junkspace is "the outcome of brilliant inventions, lucidly planned by infinite computation", and Koolhaas gives air conditioning a special place in the history of Junkspace: "Air conditioning has launched the endless building. If architecture separates buildings, air conditioning unites them".[487] Thanks to air conditioning, Junkspace of any size is possible and renders the difference between inside and outside unimportant: "There is no form, only proliferation". In other words, Junkspace works counter to the psychological formation of spatial units, or *places*. All of a virtual world is air conditioned, as it were, and should in principle work counter to the experience of place.

What Junkspace offers instead of places is a space where "[a]ll materialization is provisional: cutting, bending, tearing, coating: construction has acquired a new softness, like tailoring". This softness of construction is obvious in *Second Life*, where buildings are changed and morph as the builder goes along (Junkspace is a "kingdom of morphing"): "Restore, rearrange, reassemble, revamp, renovate, revise, recover, redesign [...] verbs that start with re- produce Junkspace",[488] states Koolhaas echoing Venturi's interest in renovation as a source of interesting tensions in architecture.[489] This not only rings true for individual construction projects in *Second Life* but also for virtual worlds as such. They stay in *alpha* and *beta* testing for years, giving the feeling that perfection is still to come; they are endlessly updated, *patched* (cf.: "construction has acquired a new softness, like *tailoring*").

"Junkspace is sealed, held together not by structure, but by skin, like a bubble".[490] Here, Koolhaas is using "structure" in the second sense identified by Forty ("the system of support of a building", see p. 87). The virtual world is obviously not held together by supportive structures in

487. Koolhaas, 2001: 408.

488. Koolhaas, 2001: 415.

489. Venturi, 2002: 57. More broadly, Venturi criticises modernism for preferring "to change the existing environment rather than enhance what there is" (Venturi et al., 1977: 3). Sympathetic to renovation, Koolhaas is not, however, sympathetic to postmodernist recycling of historical styles: "[it] is simply a way of doing architecture in less time with less sophistication. It's very expensive to invent. You need time and therefore you need money", hence lazy postmodernists takes to the recycling of older styles (Koolhaas interviewed in Gewerts, 1996).

490. Koolhaas, 2001: 408.

this sense either.

Then there is movement in Junkspace. It "is a special way of moving […] at the same time aimless and purposeful". Junkspace is "a space of collision, a container of atoms, busy, not dense". From a commercial viewpoint, Junkspace must be buzzing with movement, people on their way, shopping, looking but not dwelling. This movement has to follow unique trajectories rather than collective flows, otherwise disaster might occur:

> Junkspace is often described as a space of flows, but that is a misnomer; flows depend on disciplined movement, bodies that cohere. Junkspace is a web without spider; although it is an architecture of the masses, each trajectory is strictly unique.[491]

Whether they are games or not, virtual worlds are often described as "sandboxes" or "webs without spiders" as Koolhaas had it in the quote, i.e., spaces of activities with no fixed goals, or at least with mere sub-goals but no end-goals. This is true of virtual worlds to various degrees - *Second Life* is more of a sandbox than *Eve*, but *Eve* is more of sandbox than *World of Warcraft* - but broadly speaking, the user's sense of deciding his or her own "trajectory" is an important reason for using the term "world". From the user's perspective, the size of a virtual world is not just a question of square kilometres but also a question of freedom (cf. *What is called "a virtual world"?*, pp. 31-34). Collective movement in Junkspace has to be avoided because it might lead to "disaster", e.g., a fatal stampede of excited consumers let through the doors of a department store at the beginning of sales.[492] Collective movement must also be avoided in virtual worlds, where too many avatars being active in the same area at the same time can lead to flow disaster in the shape of *lag*, i.e., a user experience of impaired computer functionality.

All in all, the virtual world shares a number of characteristics with Junkspace. It is expandable and provisional. It relies on neither structure or the unity of places with their fundamental difference between inside and outside. Conceptually, then, the virtual world fits nicely into discussions of consumer society undertaken with special attention to the built environment. On a first tour of a virtual world, the concept of Junkspace resonate with the experience in a meaningful way. This is what I have outlined above, and the below screenshot is suggestive of the layered,

491. Koolhaas, 2001: 412.

492. Koolhaas, 2001: 412.

lightweight Junkspace of *Second Life*, dedicated to consumerism and opposed to places and their difference between inside and outside.

Figure 41: *Second Life* as Junkspace

The attractively tight conceptual fit can not sustain closer inspection. When the first few, unversed visits to a virtual world are done, and the virtual worldview/ethos is put on, the explicatory power of Junkspace fades: Virtual game worlds have their popular gathering places and homes and as for the relevance of place in a non-game virtual world, the ethnography reported in the previous chapter on *Building* is a close-up illustration of the importance of place. Many users of virtual worlds rely on boundaries, insides, places, homes, dwellings. Even the most subversively activist *Second Life* users I have encountered rely on a sense of place for their projects. As an example, artist Steve Millar experiment with *Second Life* as a platform for art projects, or artful activism, if you will. One of his projects was the *Super Fun Happy Club*, a flying cube housing various installations, which existed until the spring of 2007 (see the below screenshots). The name of the place was ironically aimed at the gay and lesbian community. The *Super Fun Happy Club* was meant to disturb a community which has, in the opinion of Millar, become too focused on celebrating itself using the perfect, hard, young body as an iconic focus for the celebration. The aim of the Club project was thus to raise awareness about the execution of gays and lesbians (for being gay or lesbian) taking place regularly all over the world, as well as hate crimes in the USA. The Club project rose to some fame, or notoriety, depending on your politics, when Linden stepped in to remove one of the images exhibited there.

Figure 42: *Second Life*, Super Fun Happy Club

What stroke me as a visitor to the place was the resemblance to domestic places. In his design Millar tried not only to provoke and enlighten but seemed to care for avatars in the manner noticed earlier (see *Dwelling with avatars*, pp. 137-138). The room was comfortably proportioned and furnished for avatars; my avatar can be seen relaxing in a sofa with a cup of coffee and a cuddly cat (upper right corner). Art installation Super Fun Happy Club seemed to be a place made for hanging out. As it turns out, this is exactly what was intended by its creator. In February 2009, I asked Arahan Claveau (Millar's virtual world alter ego) if the cosiness of the place was not in some discord with his disturbing message. His reply was, simply, that "having certain items [such as the cat, the coffee, and the furniture, BL] helped" towards making people "stay for a long enough period of time that they would find all the information that was there and consequently get the message I was trying to get across".[493] Here we have a creative and very politically aware (and not exactly pro-establishment) young artist exploring the possibilities of the virtual world, and what

493. Arahan Claveau, a.k.a., Steve Millar, interviewed via *Facebook*.

he decides to do is to create a place which will make people stay long enough for him to inform them about issues he finds important. Not exactly a good example of what Pallasmaa called "the quick, the forceful, and the overwhelming favoured in all other areas of communication and art"; Pallsmaa saw this contemporary trend in marked contrast to architecture offering "slow, low-efficiency communication" (originally quoted on p. 74). Users such as Millar or the builders I studied in the chapter on *Building* seem to put the slowness of architecture to good use. They are exploring the new possibilities of virtual worlds but they are appreciative of place and how places can be designed, in other words: they look at virtual worlds as a kind of architecture. Adding the Super Fun Happy Club to Edward S. Casey's category of "dwelling places", the Club "[offers] not just bare shelter but the possibility of sojourns of upbringing, of education, of contemplation, of conviviality, lingerings of many kinds and duration" (originally quoted on p. 129).

Heidegger's Gestell, Koolhaas' Junkspace, Augé's non-place and Debord's spectacle are useful for discussing broader, cultural issues (especially urban issues), but the concepts do not translate readily into tools for understanding how virtual worlds are engaged with. Such suggestive and productive concepts must be wielded with precision. Useful parts of them have to be singled out, useless parts of them discarded. It is enlightening to compare Hedeggerian cultivation with gold farming, to see Unlimited Expansion as an ethos response to both *World of Warcraft* and Junkspace, and to contemplate the many similarities between Junkspace and virtual worlds in general. So far so good, but the notion of a loss or disappearance of place is inherent in Junkspace and its conceptual predecessors. The notion of placelessness is a very poor starting point for understanding virtual worlds. The notion of children "embellishing [their imaginary worlds] with passion and frenzy" is a better starting point (see p. 96). A virtual world is a smooth, high-tech Junkspace contaminated by the passions and attachments of its users.

(10) Summary

To attune oneself to the structural flow of a virtual worlds is to voluntarily adopt a virtual worldview and its complementary virtual ethos without committing to their truth value. The situation is similar to how certain architectural works can be experienced, e.g., works which can be experienced in a deeper and more thorough manner by willingly adopting a modernist,

postmodernist or deconstructivist worldview.

Virtual worldview/ethos can be analysed into principles. A Principle of Unlimited Good, stating that the resources of the virtual world are endless, is part of the virtual worldview of *World of Warcraft* and many other, similar game worlds. Singling out Unlimited Good as a virtual worldview principle helps critical questioning as to how virtual worlds could be different (e.g., based on a Principle of Limited Good). Corresponding to Unlimited Good, a virtual ethos Principle of Unlimited Expansion guides the user on his or her endless path towards expansion in the sense of expanded, quantitatively measured capabilities. Some users experience a breakdown in virtual ethos when Unlimited Expansion is no longer seen as sufficient motivation for engagement with the virtual world. Additionally, a virtual ethos Principle of Maximal Efficiency states that the "natural" (i.e., self-evident according to the virtual worldview) way of handling the virtual world is to maximise the time spent in it. The practice of gold farming and of buying the products of gold farmers is a logical although extreme expression of the Principle of Maximal Efficiency, creating tensions amongst virtual world users from different cultural backgrounds.

Interpretation of *World of Warcraft* along the lines of virtual worldview/ethos brings out the affinity between virtual worlds and certain concepts used in philosophically inclined discussions of broad, cultural issues anchored in the built environment, namely, Heidegger's *Gestell* Guy Debord's *Spectacle*, Marc Augé's *non-place* and Rem Koolhaas's *Junkspace*. Ultimately, these concepts rest on a broad notion of placelessness. Users of virtual worlds contradict broad claims of placelessness as they explore, design and attach themselves to virtual places.

7. Conclusion

(1) Integrated summary

The conclusion falls in two sections. The next section sums up the preceding chapters in a broad fashion, evaluating the value and future value of an architectural perspective on virtual worlds. The present section provides an integrated summary of what has been found so far. Each of the preceding chapter have been dedicated to a keyword and concluded with an individual summary but here interconnectedness is highlighted by tracing each keyword across the entire text.

The body plays important and somewhat similar roles in the experience of virtual worlds and architecture. Both kinds of experience rely on repeated, embodied encounters. Additionally, both rely on a certain degree of freedom and sense of agency. In the virtual world, sense of agency is focused in a graphic representation called an avatar. Having an avatar means oscillating between three, basic perspectives on the virtual world. Subjective perspective (the "optical point of view" known from film studies) is supplemented by objective perspective and self-perspective, loosening but not breaking the user's connection with the avatar. The avatar functions not only as a focus for a sense of agency but also as a focus for a sense of dwelling. Since a sense of agency in the virtual world involves the constant oscillation between looking at and acting through the avatar, a building project is inevitably tied to (and done for) the avatar even though the activity of building might be done in objective perspective (akin to the perspective the animator works in when designing a virtual environment).

Maps guide and are part of the experience of both virtual worlds and architecture. In the virtual world, the map not only guides the experience of architecture but can be part of architecture itself. Self- and objective perspectives allow for heightened integration of cartographic maps and other imagery into the built environment. Furthermore, the virtual world allow its user to navigate the virtual world and its map simultaneously. In some instances of virtual world buildings, it can even be productive to think of the buildings in terms of 1:1 plans. Perhaps the most striking connection between mapping, architecture and virtual worlds is the cartography performed by players of game worlds. Players produce special-purpose maps in order to explicate *structure* in that extended sense of the word which emerged an important theme in 20th century,

architectural discourse. As players explicate the structural flows of transportation, communication and resources in game worlds, they attune their behaviour to those structures. This can be understood in terms of cognitive mapping. The cognitive map is a mental tool that aids its constructor in navigating the virtual world. At the same time, the cognitive map provides an overall sense of how the virtual world is structured and a sense of connectedness. Cognitive mapping depends on repeated, embodied encounters but such firsthand experience is supplemented by secondary sources. In comparison with cognitive mapping of the real world, cognitive mapping of virtual worlds is relatively more dependent on secondary sources such as texts and cartographic maps.

"Landscape" and "structure" occasionally play similar roles in current, architectural discourse, namely, to extend the meaning of "architecture" beyond the individual building. As a potential image, the landscape is constantly present in virtual worlds, framed by the screen and easily turned into a screenshot. Many users of virtual worlds, including game worlds, are aware of this and actively seek the landscape-image through the producing and sharing of screenshots; this is an example of a personal mode of landscape experience. Landscape can also be conceptualised as environment, i.e., as the way in which various objects and agents are organised in space. When the landscape is understood in environmental terms, the landscape-image is merely a cue guiding the user towards a rough classification of the landscape-environment in terms of its content and the principles distributing that content; this descriptions fits a ludological perspective on virtual worlds.

Despite the extended meanings of "architecture" (into "structure" or "landscape"), the individual building is still an important focus for architecture. The distinction between landscape and building is an instance of the wider dichotomy between space and place and that conceptual dichotomy provided the starting point for a 14 month virtual ethnography of collective building projects in *Second Life*. These complicated and costly long-term projects turned out to be explicitly and consistently aimed at providing a sense of home, or a sense of *dwelling*, a term used by architectural theorists in order to align themselves with philosophy. In their pursuit of dwelling, the virtual world users eclectically mixed various style elements but without the irony often associated with postmodernist eclecticism. The users seemed quite earnest in their projects,

relying on basic architectural devices such as boundaries and bodily encountered, architectural "images" (e.g., fireplaces and sleeping places).

Virtual worldview is a concept to be used in connection with large-scale cultural products such as virtual worlds and certain works of architecture (including parks). The experience of such large-scale cultural products is greatly enhanced, if not dependent on, taking on a virtual worldview; "virtual" because taking on a virtual worldview is done voluntarily, temporarily and without commitment to the truth value of the virtual worldview. In the case of architecture, a virtual worldview can, e.g., be modern, postmodern or deconstructivist. Worldview can be analysed by dividing it into worldview proper (addressing the question "what underlying principles structure the world?") and a complementary ethos (addressing the question "what principles should guide behaviour in such a world?"). In the case of virtual worlds, especially game worlds, pertinent principles are: Unlimited Good, Unlimited Expansion and Maximal Efficiency. These principles tie in neatly with certain concepts (Gestell, Spectacle, non-place and Junkspace) used in critical and philosophically inclined discussions of broad cultural issues hinging on the built environment. There are limits, however, to the conceptual affinity between virtual worlds and philosophical-architecture discourse. A broad notion of placelessness underlies the concepts just mentioned, and that notion can not be sustained when it comes to virtual worlds in general. Engagement with a virtual world is often grounded in virtual places, if not virtual dwellings.

(2) Perspectives

In order to shed new light on virtual worlds, the preceding chapters have engaged with significant strands of 20th century architectural discourse by way of certain themes or meta-keywords: the dichotomies of space/image and space/place, as well as the themes of dwelling and extended meanings of architecture (architecture in terms of structure and landscape). This engagement with architectural discourse has not been undertaken from a neutral vantage point but from within media studies. The result is not only an architectural perspective on virtual worlds but also a virtual worlds perspective on architectural discourse. Be that as it may, new knowledge about virtual worlds has been produced:

- The avatar is the central device for engagement with virtual worlds but more abstract concepts

have been dominant (e.g., immersion, simulation, interactivity). The importance of agency and avatar has been underscored through a focus on virtual dwelling.

- Based in a review of the relevant literature, cognitive mapping has been discussed in terms of repeated, embodied encounters providing a basis for navigation but also a sense of connectedness with virtual worlds. As hinted at with a couple of examples, the simple yet efficient methods used in the study of cognitive mapping (sketch mapping in combination with interviews) might prove to be efficient tools in the study of how virtual worlds are experienced.

- Overlooked player positions such as the landscape connoisseur has been teased out of game worlds. Since architecture has been the overarching concern, landscape has played a minor role here. Landscape aesthetics is, however, a rich theoretical resource which have only been skimmed. Writings on the history of gardens might, for instance, prove to enrich our understanding of virtual worlds.

- New examples of collective, user-driven ways of engaging with new media has been found: landscape connoisseurship, building projects aimed at dwelling and player cartography aimed at the explication of structure. The latter example reflects how such collective engagements go beyond the intention and control of the primary media producers yet are ultimately aimed not so much at subversion of the product as at the user's attuning him- or herself more thoroughly to it.

- Criticism of game worlds has been given a new option, namely, to focus on the virtual worldview/ethos principles underlying a virtual world. This kind of criticism aids in imagining virtual worlds built on other principles and highlights cultural differences in the reception of virtual worlds.

Attention to medium specificity has been observed throughout the preceding chapters. The differences between real world architecture and virtual worlds have been stressed at a number of points (e.g., the privileged position of imagery in self- and objective perspectives) as have the modified role of the body when extended with an avatar and the relatively high reliance on secondary sources when cognitive maps are constructed for virtual worlds. It is from the vantage

point of attention to medium specificity I ask whether media studies is not too exclusively fascinated with the digital and *the new*. Virtual worlds also call for fascination with *the old* in the sense of the pre-digital. The avatar has an aspect of doll-ness, and virtual world building projects are reminiscent of doll's houses (situating avatars and virtual worlds in the history of toys would thus be productive). Even players of hack 'n slash fantasy game worlds are fascinated with landscape imagery. Even young expert users of virtual worlds seek out ways to obtain a sense of dwelling. Attuning oneself to the structures of a virtual world might trigger a sense of something as old-fashioned as connectedness. The virtual world, then, offers renderings of very basic, human experiences in ways that are intriguingly new but based in something intriguingly old, namely, our relationship with places and spaces, buildings and landscapes.

Creative works mentioned

Large-scale creative works such as films, TV series and computer games are produced by teams. The director of a film is traditionally singled out in the manner of the author of a book but there is still some debate as to how computer game should be referenced. In the list below, I mention developers and publishers. In some cases of small-scale, early productions, where individuals are somewhat easier to identify and credit, I mention individuals as well.

Works identified as "virtual worlds" have PCs as their platform. Works identified as "computer games" have PCs as their original platform unless other platforms are mentioned.

24 (2001-). TV series. Produced by Real Time Productions and others. Originally broadcast by Fox

Amplitude (2003). Computer game for the PlayStation 2. Developed by Harmonix. Published by Sony

Conquer Online (2004-). Virtual world. Developed by TQ Digital Entertainment. Published by NetDragon Websoft

Cyworld (1999-). Virtual world. Developed and published by SK Communications

Doom (1993). Computer game. Developed by id Software. Published by id Software and others

Doom 3 (2004). Computer game. Developed by id Software. Published by Activision

Eve Online (2003). Virtual world. Developed and published by CCP. Several expansions

EverQuest (1999-). Virtual world. Developed and published by Sony. Several expansions

EverQuest II (2004-). Virtual world. Developed and published by Sony. Several expansions including The Shadow Odyssey (2008)

Fable II (2008). Computer game for the Xbox 360. Developed by Lionhead Studios. Published by Microsoft. Downloadable content (2009-)

Fallout 3 (2008). Computer game for the PC, Xbox 360 and PlayStation 3. Developed by Bethesda. Published by Bethesda and ZeniMax Media. Downloadable content (2009-)

Flower (2009). Computer game for the PlayStation 3. Developed by ThatGameCompany. Published by Sony

Frequency (2001). Computer game for the PlayStation 2. Developed by Harmonix. Published by Sony

Gaia Online (2003). Virtual world. Developed and published by Gaia Interactive

Grand Theft Auto III (2001). Computer game for the PlayStation 2 (later: PC and Xbox). Developed by DMA design. Published by Rockstar Games and others

Grand Theft Auto IV (2008). Computer game for the PlayStation 3 and Xbox 360 (later: PC).

Developed by Rockstar North. Published by Rockstar Games and others. Downloadable content (2009-)

HârnWorld: A Real Fantasy World (1986). Setting for pen-and-paper role-playing designed by N. Robin Crossby. Published by Columbia Games

Horizons: Empire of Istaria (2003-), since 2008 *Istaria: Chronicles of the Gifted*. Virtual world. Developed by Artifact Entertainment. Various publishers

Istaria: Chronicles of the Gifted, see *Horizons: Empire of Istaria*

The Legend of Zelda: Twilight Princess (2006). Computer game for the Wii and GameCube. Developed and published by Nintendo

The Lord of the Rings Online: Shadows of Angmar (2007). Developed by Turbine. Published by Codemasters and others. Expansion: *Mines of Moria* (2008)

MUD1 (1978-). Text-based virtual world designed and programmed by Richard Bartle and Roy Trubshaw

Myst (1993). Computer game designed by Robyn and Rand Miller. Developed by Cyan Worlds. Published by Brøderbund and others

Myst Online: URU Live (2007-2008). Virtual world. Developed by Cyan Worlds. Published by GameTap

No More Heroes (2007). Computer game for the Wii. Developed by Grasshopper Manufacture. Published by Rising Star Games and others

Pac-Man (1980). Arcade game designed by Tōru Iwatani. Developed by Namco. Published by Midway and others

The Palace (1995-). 2D virtual world. Developed by Time Warner Interactive. Various publishers

Quake (1996). Computer game. Developed by id Software. Various publishers

Pong (1972). Arcade game designed and built by Allan Alcorn. Developed and published by Atari

Resident Evil 4 (2005). Computer game for the GameCube and PlayStation 2 (later: PC, Wii and others). Developed by Capcom. Various publishers

Second Life (2003-). Virtual world. Developed and published by Linden

Silkroad Online (2004-). Virtual world. Developed by Joymax. Published by Joymax and others

The Sims (2000). Computer game. Developed by Maxis. Published by Electronic Arts. Several expansions and sequels

Star Wars Galaxies (2003-). Virtual world. Developed by Sony. Published by LucasArts. Several expansions

Super Fun Happy Club (2007). Art installation, *Second Life*, by Arahan Claveau

Super Mario 64 (1996). Computer game for the Nintendo 64. Developed and published by Nintendo

Tetris (1984). Computer game (various platforms). Original game designed and programmed by Alexey Pajitnov. Various publishers

TinyMUD (1989-1990). Text-based virtual world designed and programmed by James Aspnes

Toontown Online (2003-). Virtual world. Developed and published by Disney

The Witcher (2007). Computer game. Developed by CD Projekt. Published by Atari

World of Warcraft (2004-). Virtual world. Developed and published by Blizzard. Expansions: *The Burning Crusade* (2007) and *Wrath of the Lich King* (2008)

List of illustrations

All screenshots taken by the author, unless otherwise noted.

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Bjarke Liboriussen: "The Mechanics of Place: Landscape and Architecture in Virtual Worlds", ph.d.-afhandling

Resumé

Virtuelle verdenener, fx. *World of Warcraft* of *Second Life*, fremstår ikke som abstrakte rum for deres brugere, men som bygninger og landskaber. Hvordan vil det berige vores forståelse af virtuelle verdener at fokusere på deres teoretiske og oplevelsesmæssige affinitet med off-line arkitektur og landskaber? For at besvare dette spørgsmål fremsættes et vokabularium, dvs. et sæt af indbyrdes forbunde nøgleord hvorigennem berøringsflader og spændinger mellem arkitektonisk diskurs og medievidenskabelig diskurs udforskes. Disse nøgleord er: Sted, Rum, Billede, Krop, Kort, Landskab, Bygning og Verdensbillede. Arkitektonisk diskurs indrammes af en bestemt opfattelse af arkitektur: arkitektur som en måde at *orientere* mennesket i verden på i en dybere forstand som adskiller arkitektur fra ingeniørkunst. Denne opfattelse var særligt stærk hos Le Corbusier, men kan genfindes hos hans nutidige arvtagere, så som Juhani Pallsmaa. Postmoderne og dekonstruktionstendenser, samt arkitektonisk diskurs' nuværende fascination med digital teknologi, spiller også en rolle i afhandlingen. Teoretisering er afstemt med en 14 måneders virtuel etnografi af kollektive byggeprojekter i *Second Life*.

Selvom mange aspekter af virtuelle verdener stemmer overens med kritisk, arkitektur-filosofisk diskurs (Heidegger, Debord, Augé, Koolhaas) er en stor del af denne diskurs baseret på en bred, og i sidste ende uopholdelig, formodning om *stedløshed*. Brugere af virtuel verdenener danner stærke tilknytninger af en arkitektonisk natur, dvs. tilknytninger til landskaber og bygninger. Landskabsnydelse er udbredt og mange brugere investerer store mængder af tid, penge og kreativitet i langvarige projekter som har følelsen af at bo som deres erklærede mål. Kort sagt: virtuelle verdener er hvad Rem Koolhaas kalder *Junkspace*, men tilført brugernes tilknytninger og kreative passioner.

Abstract

Contemporary virtual worlds, such as *World of Warcraft* and *Second Life*, are encountered as buildings and landscapes rather than abstract spaces. How will it enrich our understanding of virtual worlds to focus on their experiential and theoretical affinity with off-line architecture and landscape? To answer this question, the thesis puts forth a vocabulary, i.e., set of inter-related keywords through which similarities and tensions between architectural discourse and media studies discourse are explored. The keywords, or foci, are: Place, Space, Image, Body, Map, Landscape, Building and Worldview. Architectural discourse is framed by a certain understanding of architecture, namely, that architecture *orients* humanity in the world in a profound sense setting architecture apart from engineering. This mode of thought is particularly strong in Le Corbusier and his contemporary heirs, e.g., Juhani Pallasmaa. Postmodern and deconstructivist tendencies, as well as architectural discourse's recent fascination with digital technology, also play parts in the thesis. Theorisation is informed by a 14 month, virtual ethnography of collective building projects in *Second Life.*

Although many aspects of virtual worlds fit nicely with critical, architectural-philosophical discourse (Heidegger, Debord, Augé, Koolhaas) much of that discourse rests on a broad, and ultimately unsustainable, notion of *placelessness.* Virtual world users form strong attachments of an architectural nature, i.e., attachments to landscapes and buildings. Landscape connoisseurship is widespread and many users invest considerable amounts of time, money and creativity in long-term projects with the explicit goal of obtaining a sense of home, or *dwelling*. In short, virtual worlds are what architect Rem Koolhaas labels *Junkspace*, but infused with the attachments and creative passions of their users.