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Exploration without boundaries: virtual
voyages into virtual landscapes

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Chapter 4

Navigation in the Virtual World

The previous chapter examined the differences and similarities in modifying land forms in the real and virtual worlds, providing Land Art as a useful basis for this comparison. Hence mapping and documentation was shown to be of prime importance in considering a virtual site, as much as locating place in the real world.

Therefore in this chapter I discuss mapping in general as well as examining both conceptual mapping and topographic mapping. Mapping is an intrinsic part of interactive multimedia projects that emulate navigation in the real world.

I present an historical overview of the development of navigational games and how this has been facilitated by multimedia authoring packages.

Finally, I discuss the navigational structure of *Exploration Without Boundaries* comparing it with Peter Gabriel's *Eve* (1996) and Laurie Anderson's *Puppet Motel* (1995), two interactive CD ROMs that have a similar navigational framework i.e. have spatial and geographical themes. I also discuss the relationship between the process of negotiating virtual environments, and the vicarious experience of the tourist in theme parks and museum simulations.

4.1. The Virtual Map as Simulacrum

The following quotes by Borges, Baudrillard and Gibson describe aspects of mapping which are relevant to the virtual realm, and by implication indicate the importance of the role that mapping plays in navigable virtual worlds.

"...In that Empire, the Art of Cartography attained such Perfection that the map of a single Province occupied the entirety of a City, and the map of the Empire, the entirety of a Province. In time, those Unconscionable Maps no longer satisfied, and the Cartographers Guilds struck a Map of the Empire whose size was that of the Empire, and which coincided point for point with it. ... In the deserts of the West, still today, there are the Tattered ruins of that Map ...in all the Land there is no other Relic of the Disciplines of Geography (Borges 225).

Baudrillard, in his opening chapter of *Simulacra and Simulation* introduces this Borges fable which evocatively describes an allegorical map which evolves to become a full-scale substitute object, or simulacrum of the land itself (1). This map having become hyperreal, has therefore become a redundant representation of the real.

The quote from this Borges fable “*On Exactitude in Science*” is an appropriate analogy for the process of creating terrains from digital elevation data (Figure 94).

So the virtual landscapes in *Exploration Without Boundaries* reflect the “precession of simulacra” as Baudrillard explains: “*Today abstraction is no longer that of the map, the double, the mirror or the concept. Simulation is no longer that of a territory, a referential being, or a substance. It is the generation by models of a real without origin or reality: a hyperreal. The territory no longer precedes the map, nor does it survive it. ... It is the real, and not the map, whose vestiges persist here and there in the deserts that are no longer of that of the Empire, but ours*” (1).

In *Exploration Without Boundaries I* obtained a DEM (Digital Elevation Map) to construct the South Coast National Park scene near Era beach, thus showing that DEMs can indeed ‘precede the territory’ because the converted greyscale maps are derived from numerical contour data of the real terrain (Figure 95). This could be described as virtual topography i.e. mapping that follows the actual terrain.

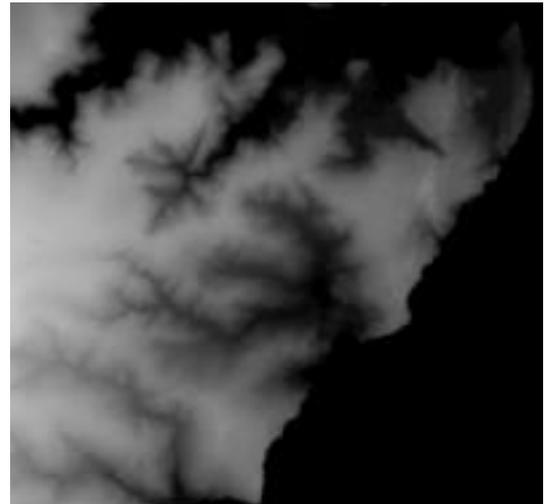


Figure 94. Part of a converted South Coast DEM (Digital Elevation Map) converted to a greyscale height map.

Source: Auslig, now Geoscience Australia.
<http://www.auslig.gov.au/products/digidat/dem.htm>
Conversion by John Marthick, School of Geosciences, UOW and Rhodes, H. 2002



Figure 95. H. Rhodes, *Kurnell from the Air in Colour*. “*The map precedes the territory.*” This virtual landform is generated from the greyscale map in Figure 94.

Source: Rhodes, H. 2002

4.2. Mapping in Virtual Domains and Spatial Paradigms

In this section I describe the two main ways of mapping virtual entities, both of which are present in *Exploration Without Boundaries*: one is the diagrammatic conceptual representation of communications networks whose maps describe connectivity and flows of information rather than actual distances and locations; the second entity is a virtual representation of 3-D navigable space.

4.2.1. Conceptual Spatial Mapping

Conceptual connectivity mapping of ICT (Information and Communication Technologies) is usually described by the first method i.e. symbols and diagrammatic layouts. Two examples that come to mind are the Marshall Island Navigation Map (Figure 96) (Biddle, Milne and Shortle 1) and the London Underground map, neither of which show orientation in space. The circular diagrammatic representation of the virtual worlds in *Exploration Without Boundaries* is yet another example of diagrammatic mapping.

Diagrammatic connection in cyberspace is clearly described in the following two novels that were particularly instrumental in popularising the ideas of virtual communities and the world of cyberspace, namely William Gibson's *Neuromancer* (1984) and Neil Stephenson's *Snow Crash* (1992), the former publication appearing before the Internet or even LANs (Local Area Networks) could share visible graphics in a web browser. Gibson presaged both the mapping of cyber sites, as well as possibilities of transportation or teleportation through these worlds.

Both novels are seen as the seminal descriptors of cyberworlds and cyberspace, whose abstract constructs are based on the interconnectedness of computer networks, the most well known being the Internet. In *Neuromancer*, Gibson describes another form of virtual spatialisation, referring particularly to diagrammatic mapping of networks (Figure 97): "*Cyberspace. A consensual*

Figure 96. Marshall Islands navigation map. Islands are represented by shells, palm leaves show direction of wave masses.

Source: Biddle 3

Figure 97. Cover of *Neuromancer* showing Case attached to the receding grid against the backdrop of a futuristic city.

Source: Gibson

hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts ... A graphic representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding" (Gibson 67).

The term cyberspace was coined by Gibson who describes the protagonist Case as being "...jacked into a custom cyberspace deck that projected his disembodied consciousness into the consensual hallucination that was the matrix" (12).

4.2.2. Topographic and Location Mapping

The 3-D virtual environment is a powerful medium for the spatialising of cyberspace. This second mode of visualisation of real or imaginary worlds is mediated by means of VR (Virtual Reality) systems, providing an interactive 'game space' that has the essential attributes of inclusivity, and real time interactivity (Dodge and Kitchin 5). Therefore, with the QTVR nodal framework, *Exploration Without Boundaries* is also representative of this form of cyberspace spatialisation.

Dodge describes the development of mapping online geographic space, illustrating how researchers represent cyberspace in its various forms and how similarly, the mapping of geographic space has been augmented by the addition of interactivity (76 – 79). GIS (Geographic Information Systems) was initiated to record all geodata and was central to the evolution of digital mapping technology. Many government and private companies now offer online maps to tourists and the USGS ((United States Geological Survey) provides free online DEMs (Digital Elevation Maps), useful for creating 3-D virtual representations of terrains that can be imported to a landscape imaging application like *Bryce*. The virtual scene of the Royal National Park in *Exploration Without Boundaries* has been generated by importing a DEM from the NSW Department of Lands (Figure 98).

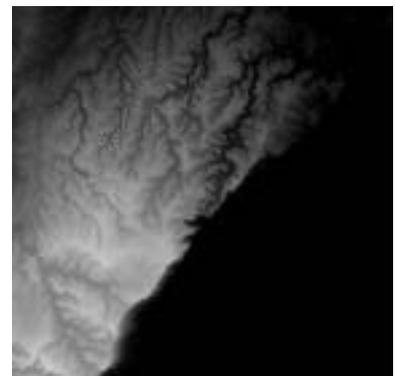


Figure 98. DEM (Digital Elevation Map) of the NSW Royal National Park converted to a greyscale height map.

Source: <http://www.auslig.gov.au/products/digidat/dem.htm>
Conversion by John Marthick, School of Geosciences, UOW and Rhodes, H. 2002

4.3. The habitation of Virtual Cities and Virtual Worlds

Mapping information in 3-D space plays an important role in the interactivity of gaming and provides a useful way of conceptualising information. *AlphaWorld*, a notable example of a VRML (Virtual Reality Markup Language) environment, is a simulated real life location in which participants can build whole communities, with hundreds of different domains, some being virtual versions of real places along with their attendant real life social problems (113, 57–61). Dodge suggests that *AlphaWorld* may have been an inspiration for the novel, *Snow Crash*² (Figure 99).

William Mitchell describes the online site, *Habitat*, where visitors build a persona or avatar, which can be moved around in a city called *Populopolis*, and converse by typing messages. Avatars, the name being derived from the Sanskrit meaning ‘the incarnate deity’, are ‘cyber’ puppets that are manifestations of the world’s occupants. Although *Habitat* did not last long, other online areas with a geographic metaphor replaced it, namely, *The Palace*, a growing collection of linked, independent sites, with pictures of rooms, namely, the Palace Gate, Harry’s Bar, the Spa, and other areas reflecting their real world counterparts (Figure 100).

When Mitchell describes the architects’ and planners’ ideal version of virtual space and virtual geography (Figure 101 overleaf), he believes that “culturally resonant urban settings, and local communities that hold special social meaning will increasingly reassert their power”. Mitchell also predicts the building of smaller, reprogrammable simulated theme park rides (104–05). Thus it can be seen that the video game parlour is a type of cyber theme park, with its world of flickering screens, some with automobile bodies in which the gamer drives around a simulated 3-D grand prix circuit in real time. Mitchell accurately anticipated that computer space would become as valuable as real estate, and that much human transaction would shift into cyberspace (107).

Figure 99. Map showing the habitation patterns of *AlphaWorld*.
Source: Dodge and Kitchen Plate 8

Figure 100. *Map.Net*'s 3D cityscape view of the world wide web: individual websites are represented by different buildings. The large skyscrapers represent the major search engines.
Source: Dodge and Kitchen *CyberGeography*
<http://www.cybergeography.org/atlas/atlas.html>

Ken Musgrave's application *MojoWorld* facilitates the sharing of complete virtual worlds in space across the Internet and is a form of virtual space travel and planet making, as participants build their own complete planets for other travellers to visit. *MojoWorld* features a virtual GPS (Global Positioning System) giving co-ordinates of latitude and longitude for each world (Musgrave).

4.4. The Map as a Virtual and Symbolic Landscape

Bob Hughes (3) introduces the concept of 'Cyberia', *the* (computer's) *landscape of possibilities* as the basis for his book on multimedia design, *Dust or Magic*. It is significant that he has chosen the fictional location of Cyberia as a metaphor for the process of interactive design and suggests that Cyberia is distinct from cyberspace (21).

Figure 101. *Two city maps: Noll's Rome and Apple's e•World.*

Source: Mitchell 107

The Language of Topographic Maps (1974) provides a detailed description of mapping, along with historical and ethnographic examples showing different ways of representing territory, military and trading information. Biddle et al describe a *topographic map as "...a detailed description of a portion of the earth's surface"* and believe that *"...film and photography describe a place through visual means"* and that in contrast, the topographic map informs by *"...means of other symbols called conventional signs which represent selected, observable features of the landscape."* (11–12).

A road sign or town name is a potent symbol of a place in real space, hence the map is a filtered form of political and tactical information (Biddle, Milne and Shortle 94–96). Dodge confirms this hypothesis with extensive references showing that maps can never be wholly objective and never merely descriptive (75). Real world topographical mapping may or may not be relevant in creating virtual landscapes, but it is used to envision cyber worlds, games and virtual environments, which in turn are reflections of cyber community hierarchies, personalities and shared philosophies.

The arbitrary adding of symbols to the real landscape, and their virtual combined representation, now blurs the boundaries between the real and the virtual; symbols and signs are placed in the real world just as they are in the the virtual world. As an example, a pylon and pipeline may exist in the real world as well as in a simulated hyperreal environment. The map with the symbols for the pylon and pipeline is draped on a wireframe generated from a DEM and rendered in a 3D world, thus facilitating the correct placement of imported 3-D models of the pylon and pipeline. So, we return to the Borges quote “*the Cartographers Guilds struck a Map of the Empire whose size was that of the Empire, and which coincided point for point with it*” (255), were the map becomes the territory and vice versa, and the virtual is interchangeable with the real (Figure 102).

4.5. The Development of Interactive Spatial Environments in Digital Games

The first graphical computer game *Spacewar!* (Figure 103) was written in 1961 as a research project at MIT (Massachusetts Institute of Technology) (Demaria 12-13) and the first text game, appropriately named *Adventure* became available in 1976. *Adventure* was a game inspired by *Lord of the Rings* and based on Gary Gygax’s role-playing game *Dungeons and Dragons* (1972).

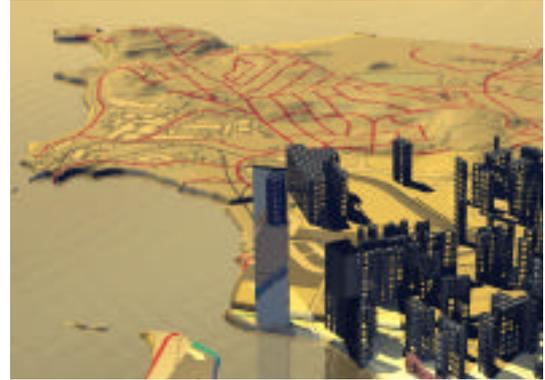


Figure 102. H. Rhodes, *Virtual Port Kembla Harbour*; 2001. Map as territory.

Source: Rhodes, H. 2002

Figure 103. *Spacewar!* the first interactive screen based computer game.

Source: Demaria 13

The *Lord of the Rings* (Figure 104) with its maps and landscapes,³ inspired an interactive role-playing fantasy board game *Dungeons and Dragons*. Roseanne Stone refers to the fact that the programmers in the SCA (Society for Creative Anachronism) community (Figure 105) who played *Dungeons and Dragons* started designing online versions of the game in 1970 even before it was published (66–70). Stephenson in *Cryptonomicon* also alludes to the participation of computer programmers and gamers in the SCA (*Cryptonomicon* 58–59, 81). Ideally suited to computer representation, *Dungeons and Dragons* is a most elaborate role-playing board game with intricate rules, complex fantasy locations, multi-level spaces and maps. All of these factors have had a profound influence on the development of interactive computer games.

Hughes quotes Tracy Kidder’s description of a text screen in *Adventure*. “*You are in a maze of twisty little passages, all alike. You have to find your way around this maze if you hope to begin to master Adventure, because this one contains the vending machine with the batteries for your indispensable flashlight...*” (Kidder 84; Hughes 47) (Figure 106).

4.6. Navigation Structure and Multimedia Authoring Packages

The next stage in interactive navigational game design was brought about by the advent of increasingly sophisticated authoring software packages, enabling designers to easily create visually based games.

In 1985, Bill Appleton created one of the first multimedia authoring applications, *WorldBuilder* for the Macintosh, enabling adventure game developers to incorporate simple graphics and animations along with the text. At the same time Mark Canter of MacroMind (now MacroMedia) released *VideoWorks*, the

Figure 104. Part of *Lord of the Rings* locality map.

Source: J. R. R. Tolkien



Figure 105. Changing persona at an SCA (Society of Creative Anachronism) feast.

Source: Rhodes, H. 2000

Figure 106. *Caverns of Zen* text adventure game.

Source: MUGS (Macintosh Users Group of Sydney) PD (Public Domain software) on a CD, 1995

predecessor to Macromedia *Director* (Hughes 61-62). Bill Atkinson in 1987 produced, a stackable database system called *HyperCard* (still available), which was bundled with early Macintosh computers (Cotton and Oliver 34-35).

With *HyperCard* and *WorldBuilder*, graphics, text and sounds may be combined to create multimedia products like graphical adventure games where gamers imagine their position in geographical space, are offered textual choices of orientation, and prompted to pick up objects such as keys which 'unlock' different areas (Dodge and Kitchin 11). Available from user groups via online bulletin boards or floppy disk, these games were the precursors of sophisticated CD ROM productions e.g. *Myst* by Robin and Rand Miller using *HyperCard* (Hughes 63). During the late 1980s, I reviewed a number of this genre of game for MUGS (Macintosh Users Group of Sydney), and became interested in these games' spatial and geographic attributes.

With *HyperCard* Brian Thomas produced an educational interactive, *If Monks Had Macs*,⁴ "a library of interactive essays, games, art and literature" located in a virtual monastery: "As the cloister fountain gently splashes, relax to the unearthly beauty of a Gregorian chant and enjoy our library's view of the Columbia River Gorge ... Or browse, on our 4-sided revolving bookcase, the library's four collections."

Authoring packages invariably create a buffer between designer and programmer, exemplifying yet another level of collaboration between the two professions, a significant factor often overlooked (Heller and Drennan 51-52). The underlying structure of a multimedia production depends to a considerable degree on the authoring package: Macromedia *Director* is score based with a narrative time-line, whereas the paradigm of *HyperCard* is rhizomatic being a card index system with more flexibility regarding navigational choices, conversely Web HTML documents tend to be page based. The rhizome is a botanical term describing the root structure of certain plants e.g. ginger and most orchids, and has become an organic metaphor for a type of mapping and interconnectivity where each point may join to any other to produce spontaneous and apparently random interconnectivity as described by the French theorists Gilles Deleuze and Félix Guattari (6 - 7).

Many scenes in *Legacy of Time* (1998) (Figure 107 overleaf) and *Myst III - Exile* (2001) contain truly immersive scenes providing 360° spherical views. (Kripalani; Irish, Uhler and DeMarle). I found the technology employed in these particular products to be most successful in creating a real feeling of navigating through multiple contiguous scenes. Apple Computer's QTVR (QuickTime Virtual Reality) 360° cubic software gives uninterrupted views creating an impression of real time location, and

orientation. The separate scenes generated in QTVR can be arranged to form a journey with rhizomatic nodal entry and exit points, giving an impression of progress when travelling forward or retracing steps. I chose QTVR technology as the navigation framework for *Exploration Without Boundaries* as, unlike the linear score-like navigation in Macromedia *Director* or the tree structure of *Hypercard*, the *Quicktime* nodal method of spatial navigation lends itself to the rhizomatic interconnected structure.

Figure 107. Kripalani, *Legacy of Time*, 1998. Himalayan scene.
Source: Kripalani, *Legacy of Time* CD ROM, 1998

4.7. The Structure of the *Exploration Without Boundaries* Interactive CD ROM

Exploration Without Boundaries comprises two structures as described by the theorists Deleuze and Guattari, the rhizome and the segment. The rhizome model is seen as non-destructive, non-hierarchic and lateral, namely that its ramifications can lead to other parts and types of communities (11). Segmentarity can be either circular or linear: circular segmentarity may be depicted by ever wider disks or coronas denoting territoriality based on overlapping divisions, while linear segmentarity is represented by linear direction in space and time (208-09).

These types of structures are present in *Exploration Without Boundaries*, for instance the lands are contained within a circular diagrammatic structure representing eras or times. This was achieved by imbuing the regions with virtual directional attributes by assigning them to the cardinal points of the compass. In the related diagram (Figure 108 overleaf), each concentric circle is an era, and this represents circular segmentarity. The branching structure of the rhizome is evident in the connectivity of the lands through metaphoric location and temporality (de Certeau 115). An example of linear segmentarity in *Exploration Without Boundaries* is found in the structure of the billboard scene entitled *On the Road*, with its linear (time based) metamovie, the movie that provides access to all the other sixteen linear movies.

Structure of *Exploration Without Boundaries*

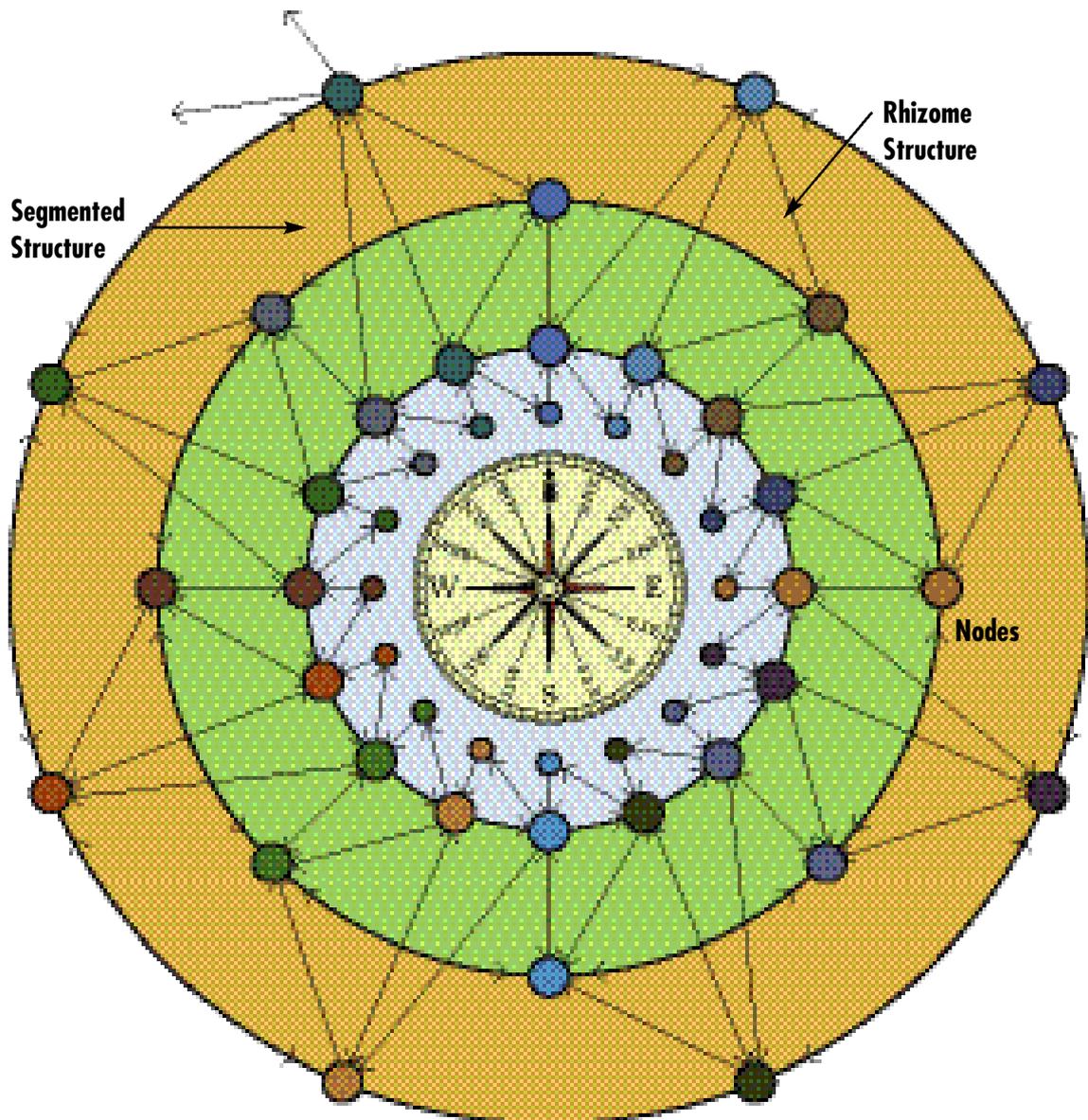


Figure 108. Diagram showing segmented and rhizome structures.
Source: Rhodes, H. 2002

4.8. Games and the Imagined Environment

Brenda Laurel proposes that computer screen interfaces should be experienced as theatre, exhorting software developers to keep in mind the tenets of drama. The computer operator now becomes a member of an audience proceeding on an imaginative journey with the help of visual props, words, signs as well as machinery (Figure 109). I see the virtual landscapes that I create as neither photographic nor filmic, but more akin to stage sets as

described by Laurel, ready for something to happen that is implied, rather than acted out. Laurel states: *“a piece of computer software is a collaborative exercise of the imaginations of the creator(s) of the program and people who use it.”* Laurel also states that the computer is a comparatively recent manifestation of the desire to make real that which we imagine, and most importantly, she exhorts us to think about the computer and its applications *“not as a tool, but as a medium”* (30). Laurel’s statements are corroborated by Peter Anders (Ascott 132) who would most probably describe my work as located in the VR domain, in that it is theatrical and conveys mystic and philosophical connotations by the appearance and juxtaposition of objects within the scenes.

It is in the imagination that the creation of alternate spaces begins, and this is vital for certain genres of computer generated art as well as Land Art projects. This is no more evident than in one of the most successful environmental computer games ever, namely the *Myst* series that captivated audiences and became a best seller within months. It was the fully immersive nature and almost photorealistic accuracy of the images that enthralled the player, also the strange beauty of the pristine simulated 3-D environments which provided exciting new virtual worlds that had been clearly and significantly designed by artists (Carroll 69). Even though *Bryce* and *Myst* both entered the software market in 1994 the developers of *Myst* did not make their virtual worlds in a landscape imaging program, but rather applied photographic mattes for textures, building the scenes in a proprietary modelling program *Strata Studio*, and later post-processing them in *Photoshop*. *Bryce* therefore came to fulfil the need for a software application that could create such immersive hyperrealistic virtual worlds.

Figure 109. *Riven (Myst II)*, 1997. Ride to the gas island. *“To make real what we imagine.”*

Source: Miller and Miller, *Ages of Myst*, 1997 CD ROM

There are very few computer based digital games that actually focus on the landscape and immersivity of virtual worlds – but for the notable exceptions of *Myst*, *Legacy of Time* and *Eve*, the backdrops or environments do not seem to be of much importance, being purely incidental to the action. The reasons for this have more to do with the direction in which the culture of game play has proceeded, the imperatives of an already saturated and targeted market, and a lack of appreciation and fostering of imaginative aesthetically pleasing work since many products are instigated by investors after quick financial returns (Pearce 234-38). Yet another reason is that many games are rendered in real time, and even now with increased computing power available, the final result is always visually less than satisfying.

A problem that does exist in the making of pre-rendered products, is that all the possible outcomes of the game must be calculated and pre-programmed – as described in the CD ROM video “*The making of Myst Exile III*” (Irish, Uhler and DeMarle). On the other hand, pre-rendering makes it possible to create ‘weak’ virtual worlds with considerably less financial outlay, and produce environments that are even more engaging and effective in their own way than those produced in ‘strong’ virtual reality, and with less constraints.

4.9. Mapping Narratives in Virtual Environments

Celia Pearce describes graphical interactive games as ‘faux virtual reality’ where players know ‘intuitively’ what to do and how to interact in a simulated ‘narrative environment’ (326).

However, it is more complex than this, because the overriding impression of the experience is that of journeying through place, and having a sense of relative geographical position (Figure 110).

While reading a book this awareness of orientation is not vital, because one can choose to continue reading even if feeling lost, whereas in multimedia productions that simulate place in space, it is definitely possible to get lost in the game to the point of being unable to continue. Playing these games involves constant map making and it is common for game strategy guides to include maps to help frustrated players

**Figure 110. Map of *Myst Island* as a navigational aid for a virtual journey.
Source: Barba**

work their way around the game. The original *Myst* strategy guide contained a full colour poster sized map of the virtual island (Barba and DeMaria), likewise the *Myst III Exile* guide includes sketch maps for each world (Barba 10) (Figure 111). This confirms that it is often impossible to navigate through a game without plotting position and mapping the conceptual space.

There is no global location map for *Exploration Without Boundaries* showing the latitude and longitude of each region as the different terrains represent imaginary localised areas, therefore such a map would not make any useful contribution. Each region is named after its assigned compass bearing solely to provide a conceptual idea of its relative position.

Figure 111. 3-D map of *Edanna* in *Myst III Exile*.

Source: Barba 116

Although there is a non-intrusive proto-historical narrative present, *Exploration Without Boundaries* focuses on the location rather than any interpersonal activity, and is more like *Myst* where the narrative is subsidiary to the fantasy environments. The salient similarity between these three works resides in the navigability of fantasy environments.

4.10. Metaphors of Travel and Locality in Interactive Productions

In 1993, performance artist Peter Gabriel produced *Explora* in which the metaphor for travel and experience is a suitcase. Players search for souvenir passes and keys to reserved areas. Gabriel creates some impression of location by means of a walk through the Real World Music Studios as well as by a diagrammatic map of a Womad Festival concert (Gabriel, *Explora: Peter Gabriel's Secret World*). In Gabriel's sequel, *Eve*, the metaphor of space and place is taken much further. (*Eve*) Rachael Armstrong describes *Eve* as "a parallel universe" and that "The player is displaced into a fourth dimension in the vastness of cyberspace, linked to their immediate reality through the computer interface." and how Gabriel "...invites the player to rethink perspectives on human relationships and to imagine and build a new world from scratch." The visual material recalls an imagined utopia or paradise lost, and revisits the story of Adam and Eve as the archetypal man and woman (46).

Gabriel's *Eve* is based on his own personal experiences and perceptions of his environment, featuring comments and works by visual artists, Yayoi Kusama, Helen Chadwick, Cathy de Monchaux and Nils Udo. The worlds are depicted as ages, or

stages of western human development and endeavour (Figures 112–115).

These eras are:

Figure 112. *Mud*: the elemental or raw state of the untouched.

Source: Peter Gabriel, *EVE* CD ROM, 1996

Figure 113. *The Garden*: an idyllic place in the present world, with lush green countryside, flower gardens, follies, topiary hedges and a stone church.

Source: Peter Gabriel, *EVE* CD ROM, 1996

Figure 114. *Profit*: a decaying and polluted industrial landscape set around a decrepit nuclear power plant.

Source: Peter Gabriel, *EVE* CD ROM, 1996

Figure 115. *Paradise or Art and Nature*: a serene space embodying rebirth and renewal; Nils Udo's flames, floating candles, plant sculptures and a young boy curled up asleep in a nest floating in a stream, all combine to engender a transcendental atmosphere. Real Land Art repurposed for a multimedia CD ROM.

Source: Peter Gabriel, *EVE* CD ROM, 1996

Ruin: is an optional scene which is the apocalyptic outcome of a nuclear accident; a devastated grey landscape of ash and smouldering fire, and Phoenix-like from the ashes, a child and a tree appear and when they eventually merge, the tree is revitalised and becomes a portal to the paradise world, possibly symbolising both renewal and reconciliation with the natural environment.

Figure 116. Laurie Anderson, *Puppet Motel*, 1995.
Main screen, showing the infinite passage and portals.
Source: Anderson, L. *Puppet Motel* CD ROM

Laurie Anderson's *Puppet Motel* provides a visual discourse concerning time, space, language and communication. The start-up screen reveals a 1950s style flashing neon motel sign and as a distant coyote howls, the participant is invited to "sign in". A striking visualisation of infinity follows, revealing two parallel red girders receding into a dark endless tunnel (Figure 116). The panelled left wall moves forward relentlessly with a series of icons, portals leading into rooms that reflect a theme or concept: the phone booth, stage, aquarium, anechoic chamber etc. The right wall is an infinite grey cloud plane or ocean. A cube with a graphic of a runner on one of its facets rotates on the left girder: on the right girder, is seen a window frame with curtains blowing in the breeze. Between the girders a vertical row of smaller icons, duplicates of those on the wall, appear out of the darkness below and fade upwards. At the base of the girders, two timepiece dials slowly revolve in contrary motion as a computer generated voice states: "*This is the time, and this is the record of the time.*"

The rooms (Figure 117), whose entry is via the icons, contain spoken thoughts, written text and images full of symbolic meaning yet there is no representational geographic space, just memories of location, travel and time. Within the rooms are 'wormholes', represented by power points, portals to other rooms.

Figure 117. Laurie Anderson, *Puppet Motel*, 1995. Hotel bedroom scene.
Source: Anderson, L. *Puppet Motel*, 1995 CD ROM



Figure 118. H. Rhodes, North-east *Primaval Era* panorama from *Exploration Without Boundaries*, 2002.
Source: Rhodes, H. 2002

4.11. A comparison Between the Environments in *Exploration Without Boundaries*, *Eve* and *Puppet Motel*

Even though they are both extremely different pieces, *Exploration Without Boundaries* comes closest to *Eve* in many of the philosophical aspects. They both contain a narrative of the environment over time and both are concerned with destruction and the abuse of energy. However, there are a number of important differences between the two works: firstly *Eve* is set in a smaller site, in a virtual area not more than a few square kilometres, whereas *Exploration Without Boundaries* is set in vast, mainly inhospitable and desolate terrains (Figure 118). *Eve* is created with photographic material rather than with 3-D models and terrains, thus in most of it there is no real sense of depth and space.

Eve is mostly concerned with people, their philosophies, attitudes and relationships, whereas *Exploration Without Boundaries* is so impersonal and remote that some viewers feel alienated, very much alone in these dominating landscapes, as if a voyeur in strange, somewhat hostile and sublime worlds. *Eve* is a sociable environment, in which real people meet, discussions take place and co-operation is implied, interactivity

forming a major part of the work. By contrast, *Exploration Without Boundaries* is more of a meditation, a consideration of environment, with abstruse and remote symbolism, relying on memory of place, space and objects. It is sparse and spare, relatively simple in its interactivity, but complex and multilayered in its content.

Finally it is interesting to note the sense of scale in *Exploration Without Boundaries*, *Eve* and *Puppet Motel*: *Exploration Without Boundaries* is almost without bounds and the lands appear to be immense, *Eve* is contained in a localised area that appears to have boundaries, and *Puppet Motel* is set in a rather enclosed space, infinity being represented by an endless tunnel and the different locations contained in rooms with very little reference to an outside world. However, one similarity *Puppet Motel* has with *Exploration Without Boundaries* is the inclusion of key objects or talismans that also become metaphoric symbols that also serve as navigational nodes.

4.12. Simulated Space and Place

There are concerns about the blurring of boundaries between the real and the virtual. Our memories are suffused with recollections of vicarious experiences through the visual media. Everything then tends to become a represented world, a future or retro world where architecture no longer represents geographic space but simulated place; what was real is now only a shadow of the real (Dodge and Kitchin 21) reinforcing Baudrillard's concepts of the simulated and inauthentic (Baudrillard 12).

Lucy Lippard poignantly describes how even a visit to a national park can become suffused with simulacra and second-hand experience by way of photography, the scenic viewpoint, visitor centre information and interpretation. "*Hyperreality, someone said, is when constructs become places.*" Lippard describes how some national parks now appear to resemble television shows with static displays of scenery and dioramas, and now it seems the only way tourists can see and remember the locations visited is with visual aids. The irony is that although photography has opened up these experiences of exotic places, the ever-increasing availability of these photographic records creates the situation where people may choose to avoid the very experiences they initially sought (136).

The virtual reconstruction of real space is represented in the *Exploration Without Boundaries* billboard scene, the billboards themselves representing ironic constructs of the different locations. As in the real world, billboards encountered on the open road advertise places such as resorts or real estate rather than products, hence their function as navigational portals to the scenic movies in *Exploration Without Boundaries*.

4.13. Conclusion

This chapter has demonstrated the importance of mapping in digital games and environments. It is the map, the symbol, the real and the virtual that forms the basis for *Exploration Without Boundaries* in that all the information is a simulation of real space. It is a self-reflexive work, and the virtual objects in turn quote their reality.

Topographic maps and 3-D spatial representation of information on screen, all play an important role in navigational gaming, and also provide a useful way of conceptualising information. In addition, authoring software has a profound effect on structure and narrative.

Exploration Without Boundaries certainly comes within the genre of adventure environment multimedia projects like *Myst*, *Eve*, *Puppet Motel* and *Legacy of Time*, all invoking scrollable panoramic scenes, giving a very definite sense of geographical place. Conceptually, *Exploration Without Boundaries* bears greatest similarity to *Eve* in its concern for the degradation of the environment over time.

Since the major parameters in traditional cartography, namely direction, scale and distance, all underpin the construction of virtual landscape, there is a strong relationship between navigating in the real world and the simulated world. Likewise, the simulated tour through theme park and museum-like environments parallels the act of navigating through immersive worlds in cyberspace.

In the next chapter I discuss the experiential aspects of *Exploration Without Boundaries* in an autobiographical context, and how colonial and some post-colonial reflections have played an important part in its visualisation and conception.

Endnotes

1. *Cyber*, computer mediated originating from the Greek, Kubernetes: the scientific study of those methods of control and communication which are common to living organisms and machines, especially as applied to the analysis of the operations of machines such as computers. [Greek kybernétes helmsman + -ICS].
2. Neal Stephenson, *Snow Crash* (London: Roc (Penguin Group), 1992).
3. J. R. R. Tolkien, *The Lord of the Rings* (London: Allen and Unwin, 1968).
4. *If Monks had Macs* <http://rivertext.com/monks.html> and <http://members.aol.com/hcheaven/interviews/thomas/thomas3.html>