

THE ARCHITECTURE OF SPACE
AND TRANSFORMATION IN
MASSIVELY MULTIPLAYER
ONLINE ROLE-PLAYING GAMES

by

Eric Jarost Gertzbein

A thesis
presented to the University of Waterloo
in fulfilment of the
thesis requirement for the degree of
Master of Architecture

Waterloo, Ontario, Canada, 2008

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

This thesis examines the architecture and space simulated in massively multiplayer online role-playing games (MMORPGs) and argues that the hand which guides the design of virtual architecture and space in these games originates from the same primogenitor of traditional mythology. The simulation of the game-world and the performance of in-game elements which include, avatars, player characters, non-player characters (NPCs), and artifacts, is regulated by the semantics of an in-game narrative that maintains a core structure of hierarchical spaces and traditional and modified architectural paradigms. Hierarchical spaces and architectural interventions are used to curate a mythologically derived model of personal transformation known as the 'Hero Cycle' that is based on hermeneutic principles whereby the identity of the collective is required to understand the identity of the individual. As a result, this cycle of personal transformation relies on the integration of the individual with the collective and is a revitalizing process within society. While it is believed that contemporary (computer) role-playing games (RPGs) are built on the shoulders of early pen and paper (PNP) role-playing games, both the early PNP and later RPGs are in fact founded on principles of ritual movement through space, developed by traditional mythology to enact Hero Cycles and by ritualized religious worship, to symbolically enact mythology. Role-playing games can bring forth the benefits of the experience of mythological progenitors of cultural narratives and religious theology. In-game, a narrative is presented to players as the face of the collective identity of the game-world and incorporates many traditional (and modified) iconographic and architectonic typologies that support the semantics of game-play and the theology that ties the game-mechanics to the narrative.

Acknowledgements

I would like to extend sincere and heartfelt thanks to my cousins and brothers who introduced me to role-playing games. In particular, I'd like to thank my cousin Josh who rightly advised me to consider my studies away at school as 'an adventure'; advice which turned out to be of inestimable value during my academic career.

I need to also thank my mother, brothers, friends and professors who forwarded me links to the websites, articles, and the references that became an integral part of my research.

Lastly, I need to acknowledge and thank my grandmother Iliia, who was a constant and ever-present motivator during this thesis. The poetic nuance with which her speech was naturally graced inspired my own interests in philology and in the translation paper which launched this thesis. Her high regard for architecture and cultural history was a reminder that I was indeed doing worthwhile work, and a motivation which helped push me to do good work.

Dedication

This thesis is dedicated to role-play gamers who are passionate about the genre, but for whom there exists no vocabulary with which to express the appreciation for the veracity of their experiences. For the author, role-playing games have been a source of entertainment and pleasure but more importantly, a resource for emotional wellbeing and transcendental social encounters.

CONTENTS

Author's Declaration	ii		
Abstract	iii		
Acknowledgements	iv		
Dedication	v		
Contents	vi - vii		
List of Figures	viii - xiii		
INTRODUCTION	1 - 3		
Literature review	3 - 6		
Thesis Structure	6 - 8		
1. EARLY RPGs			
Early Role Playing Games	9 - 10		
Counterculture & Mythology	10 - 13		
Locations For Game-Play	13 - 14		
Player Characters	14 - 18		
Non Player Characters	18 - 19		
Character Sheet Templates	20 - 23		
The Dungeon Master	24 - 26		
Early Computer RPGs	26 - 29		
Narratives	30 - 33		
2. THE HERO CYCLE			
Making a Hero	36		
Stage One	36 - 38		
Stage Two	38		
Stage Three	39 - 40		
Stage Four	40		
Mini-Cycles	41 - 45		
3. THE AVATAR			
Definition & Etymology	48		
Disembodiment	49 - 50		
Image and Identity	50 - 59		
Dressing & Equipping	60		
Mounts	60 -73		
Avatar as a Symbol	74 - 77		
4. SPACE IN ROLE-PLAYING GAMES			
Simulating Space with Text	80 - 83		
Space with Surfaces	84		
Creative Interioration	84 - 87		
Instanced Space	88 - 93		
Hierarchy and Movement	94 - 101		
5. RITUAL PLACE SPACE TIME			
Surfaces and Thresholds	104 - 106		
Hebrew World	106		
Hebrew Vessels	106		
H.Paradigm Illustration	107 - 108		
Catholic World	108		
Catholic Vessels	108		
C.Paradigm, Illustration	108 - 110		
Readiness	110		

6.	ARCHITECTURAL INGREDIENTS	
	Space and Access	118 - 120
	Access, Movement & the HC	120 - 122
	City of Heroes	122 - 124
	Form and Function	125 - 129
	Image & Credibility	130 - 131
	City Hall in Paragon City	132 - 135
	Historicity, Permanences &	
	Wilderness	136 - 139
	Contextualization	140 - 142
7.	THEORY AND PRACTICE	
	Game-Play	144
	Architectural Type	144 - 148
	Architectural Patterns	148 - 150
	Major Volumes	150 - 151
	Fostering Fidelity	151 - 152
	The Zones	152 - 157
	The Barrens	158
	Two Big Cities	159 - 163
	Inspecting Artifacts	164 - 168
	Plans	169
	Waiting	170
	Outside the Game-World	176
	Experience	176 - 183
8.	SUMMARY	
	The Role-Playing Game	186
	The Simulation	187
	The Architecture	187 - 189
9.	CONCLUSION PART ONE	
	Discussion	192 - 194
	CONCLUSION PART TWO	
	Introduction	196 - 197
	Graphic Narrative	198 - 217
10.	LEXICON	219 - 224
	APPENDICES	
	Spreadsheet	226
	Hebrew Translation Paper	227 - 273
	BIBLIOGRAPHY	275 - 280

List of Figures

- 1 Collage of screenshots and concept art from various MMORPGs.
- 1.1 Modified painting by Larry Elmore, title unknown.
- 1.2 Box art of Dungeons and Dragons 1977-78
- 1.3 Picture of gamers playing a table top war game during the day.
- 1.4 Picture of gamers playing a table top war game at night.
- 1.5 Picture of disruption during game-play.
- 1.6 Rendering of a Warrior from Guild Wars. www.Guildwars.com
- 1.7 Picture of a medicine man. www.corbis.com
- 1.8a Rendering of a Monk from Guild Wars. www.Guildwars.com
- 1.8b Screenshot from City of Heroes.
- 1.9 Dungeons and Dragons character sheet template 1of4.
- 1.10 Dungeons and Dragons character sheet template 2of4.
- 1.11 Dungeons and Dragons character sheet template 3of4.
- 1.12 Dungeons and Dragons character sheet template 4of4.
- 1.13 Rendering of 'Statesman' from City of Heroes. www.cityofheroes.com
- 1.14 Rendering of 'Ghost Widow' from City of Villains. www.cityofvillains.com
- 1.15 Concept art of villain group type from city of villains. www.cityofvillains.com
- 1.16 Concept art from Blizzard Entertainment's Diablo 2. www.blizzard.com

- 2.1 Concept art from Blizzard Entertainment's Starcraft 2. www.blizzard.com
- 2.2 Diagram of the Hero Cycle.
- 2.3 'Prophet Jonah Escapes Capture in Nineveh', by JC Bohenehr, late 17th century.
- 2.4 'Moses Brings Forth Water', by Follower of Filippino Lippi, 1500.
- 2.5 Diagram of mini-Hero Cycle.
- 2.6 'Moses Undergoing Trial by Fire', Galleria Degli Uffizi, Florence.
- 2.7 'The Finding of Moses', by Edwin Long.
- 2.8 'The Annunciation', by Fra Angelico, 1430-32.

- 3.1 Modified concept art from Blizzard Entertainment's Diablo 2. www.blizzard.com
- 3.2 Orthographic screenshot of the player character 'Sanguine Warrior' from City of Heroes, 1of2.
- 3.3 Orthographic screenshot of the player character 'Sanguine Warrior' from City of Heroes, 2of2.
- 3.4 Screenshot of the 'Sanguine Warrior' flying in Paragon City, 1of2.
- 3.5 Screenshot of the 'Sanguine Warrior' flying in Paragon City, 2of2.
- 3.6 'Elizabeth I in Coronation Robes', 1559.
- 3.7 'The Pelican Portrait', Nicholas Hillard, 1575.
- 3.8 'The Phoenix Portrait', Nicholas Hillard, 1575.
- 3.9 'The Ermine Portrait', Nicholas Hillard, 1585.
- 3.10 'The Armada Portrait', artist unknown, 1588.
- 3.11 'The Ditchley Portrait', Marcus Gheeraerts the Younger, 1592.
- 3.12 'The Hardwick Portrait', Nicholas Hillard, 1599.
- 3.13 'The Rainbow Portrait', Isaac Oliver, 1600.
- 3.14a Depiction of an Orc Shaman from the World of Warcraft. www.worldofwarcraft.com

- 3.14b Depiction of the player character Blademaster, by Kim Bum.
- 3.15 Concept art depicting a ritualist from the MMORPG Guild Wars. www.Guildwars.com
- 3.16 Screenshot from Elderscroll's Oblivion. www.elderscrolls.com
- 3.17 Screenshot of a horse mount. www.worldofwarcraft.com
- 3.18 Screenshot of a horse mount. www.worldofwarcraft.com
- 3.19 Screenshot of a horse mount. www.worldofwarcraft.com
- 3.20 Screenshot of an unhead horse mount. www.worldofwarcraft.com
- 3.21 Screenshot of an unhead horse mount. www.worldofwarcraft.com
- 3.22 Screenshot of an unhead horse mount. www.worldofwarcraft.com
- 3.23 Screenshot of a kodo mount. www.worldofwarcraft.com
- 3.24 Screenshot of a kodo mount. www.worldofwarcraft.com
- 3.25 Screenshot of a kodo mount. www.worldofwarcraft.com
- 3.26 Screenshot of a mechano-strider mount. www.worldofwarcraft.com
- 3.27 Screenshot of a mechano-strider mount. www.worldofwarcraft.com
- 3.28 Screenshot of a mechano-strider mount. www.worldofwarcraft.com
- 3.29 Screenshot of a mechano-strider mount. www.worldofwarcraft.com
- 3.30 Screenshot of a mechano-strider mount. www.worldofwarcraft.com
- 3.31 Screenshot of a warhorse mount. www.worldofwarcraft.com
- 3.32 Screenshot of a warhorse mount. www.worldofwarcraft.com
- 3.33 Screenshot of a warhorse mount. www.worldofwarcraft.com
- 3.34 Screenshot of a felsteed mount. www.worldofwarcraft.com
- 3.35 Screenshot of a felsteed mount. www.worldofwarcraft.com
- 3.36 Screenshot of a death charger mount. www.worldofwarcraft.com
- 3.37 Screenshot of a fiery warhorse mount. www.worldofwarcraft.com
- 3.38 Screenshot of a phoenix mount. www.worldofwarcraft.com
- 3.39 Screenshot of a raven lord mount. www.worldofwarcraft.com
- 3.40 Screenshot of a swift zulian tiger mount. www.worldofwarcraft.com
- 3.41 Screenshot of an amani war bear mount. www.worldofwarcraft.com
- 3.42 Screenshot of a swift razzashi raptor mount. www.worldofwarcraft.com
- 3.43 Depiction of the Hebrew High Priest in his garments, by an unknown Dutch artist, 1705.
- 3.44 Depiction of a Blood Elf priest named 'Blissfullily' from World of Warcraft, by Windforge.
- 3.45 Rendering of a Blood Elf magic user from World of Warcraft by Ziv Qual, 2007. www.zivcg.com
- 3.46 Photograph of Pope John Paul II, by Beltmann on May30th 1982.
- 3.47 Screenshot taken on Peregrine Island, in City of Heroes.
- 3.48 Screenshot taken on Peregrine Island, in City of Heroes.
- 3.49 Screenshot taken on Peregrine Island, in City of Heroes.
- 3.50 Screenshot taken on Peregrine Island, in City of Heroes.
- 3.51 'The Four and Twenty Elders' by Henry John Stock, 1911.
- 3.52 Screenshot from Guild Wars. www.Guildwars.com
- 3.53 Depiction of a paladin from the World of Warcraft. www.worldofwarcraft.com

- 4.1 Screenshot from Talos Island in City of Heroes.
- 4.2 Image of adjacency model, Anders 1998.
- 4.3 Image of adjacency model, Anders 1998.
- 4.4 Screenshot of American Apparel in Second Life.

- 4.5a Photograph of 'Ophelia' Installation at the University of Waterloo School of Architecture.
- 4.5b Photograph of 'Ophelia' Installation at the University of Waterloo School of Architecture.
- 4.6 Conceptual illustration of space in role-playing games.
- 4.7 Conceptual illustration of volumes in role-playing games.
- 4.8 Screenshot from Lineage II. www.lineage2.com
- 4.9 Depiction of Marvel Comics' Captain America, artist unknown.
- 4.10 Depiction of a Crusader Knight, by Mark Churms
- 4.11 Conceptual illustration of instanced space.
- 4.12 Conceptual illustration of instanced space access points' locations.
- 4.13 Screenshot from City of Heroes.
- 4.14 Screenshot from City of Heroes.
- 4.15a Screenshot from City of Heroes.
- 4.15b Screenshot from City of Heroes.
- 4.15c Screenshot from City of Heroes.
- 4.15d Screenshot from City of Heroes.
- 4.16a Map of World of Warcraft. www.worldofwarcraft.com
- 4.16b Map of World of Warcraft www.worldofwarcraft.com
- 4.17a Map of World of Warcraft with Horde flight paths shown.
- 4.17b Map of World of Warcraft with Alliance flight paths shown.
- 4.18 Map of City of Heroes.
- 4.19 Map of City of Heroes.
- 4.20 Horde flight paths in Kalimdor in World of Warcraft.
- 4.21 Alliance flight paths in the Eastern Kingdoms in World of Warcraft.
- 4.22 Labeled map of the Eastern Kingdoms, with borders, in World of Warcraft.
- 4.23a Zooming in on Ironforge in World of Warcraft. www.worldofwarcraft.com
- 4.23b Zooming in on Ironforge in World of Warcraft. www.worldofwarcraft.com
- 4.23c Zooming in on Ironforge in World of Warcraft. www.worldofwarcraft.com
- 4.24 Picture of orange paint on wall at the University of Waterloo School of Architecture.
- 4.25 Diagram of Orange Square experiment.
- 4.26 Picture of orange square at the University of Waterloo School of Architecture.

- 5.1 Modified screenshot from the basement of the Portal Corp in City of Heroes.
- 5.2 'The Annunciation' Van Der Weyden, 1455.
- 5.3 'Presentation at the Temple', Van Der Weyden, 1455.
- 5.4 Diagram of the Hebrew world.
- 5.5 Plan of the temple of Solomon.
- 5.6 Plan of the Tent of the Tabernacle.
- 5.7 Conceptual diagram of Hebrew architectural space-time.
- 5.8 Photograph of the Dome of the Rock in Jerusalem.
- 5.9 Photograph of the Western Wall in Jerusalem.
- 5.10 Plan of the Temple Mount in Jerusalem from the Jerusalem Temple Foundation.
- 5.11 Illustration of the world, 15th century.
- 5.12 Plan of Troyes Cathedral.
- 5.13 Ceiling detail, Sant'Ignazio, Rome.
- 5.14 Photograph in St. Peters Basilica in Rome.

- 5.15 Conceptual diagram of Catholic architectural space-time.
- 6.1 Depiction of the Tower of Babel beginning to collapse, by Ziv Qual. www.zivcg.com
- 6.2 Map of Stormwind city in the World of Warcraft, labeled.
- 6.3 Detail of Nolli's plan of Rome.
- 6.4 Panoramic screenshot in Atlas Park in City of Heroes.
- 6.5a Screenshot in Atlas Park in City of Heroes.
- 6.5b Screenshot in Atlas Park in City of Heroes.
- 6.5c Screenshot in Atlas Park in City of Heroes.
- 6.5d Screenshot in Atlas Park in City of Heroes.
- 6.5e Screenshot in Atlas Park in City of Heroes.
- 6.6 Map of Paragon City. www.cityofheroes.com
- 6.7 Diagram of spatial volumes in City of Heroes.
- 6.8 Screenshot from Steel Canyon in City of Heroes.
- 6.9 Graph of ritual access points distribution in City of Heroes.
- 6.10 Graph of directional adjacency distribution in City of Heroes.
- 6.11 Graph of all access distribution in City of Heroes.
- 6.12 Graph of the relative percent distribution of access points in City of Heroes.
- 6.13 Illustration of Hero Cycle and spatial distribution curve in City of Heroes.
- 6.14 Depiction of the Tower of Babel by Pieter Brueghel the Elder.
- 6.15 Screenshot from Atlas Park in City of Heroes.
- 6.16a Screenshot from Talos Island in City of Heroes.
- 6.16b Screenshot from Talos Island in City of Heroes.
- 6.17a Screenshot from Peregrine Island in City of Heroes.
- 6.17b Screenshot from Peregrine Island in City of Heroes.
- 6.17c Screenshot from Peregrine Island in City of Heroes.
- 6.17d Screenshot from Peregrine Island in City of Heroes.
- 6.17e Screenshot from Peregrine Island in City of Heroes.
- 6.17f Screenshot from Peregrine Island in City of Heroes.
- 6.18 Screenshot from Atlas Park in City of Heroes.
- 6.19 Picture of Manhattan, by Franz-Marc Frei.
- 6.20 Conceptual diagram of elements in role-playing games.
- 6.21 'Washington' poster by Eggleston, 1935.
- 6.22 Modified 'Washington' poster.
- 6.23 Picture of Villa Rotunda, Palladio.
- 6.24 Screenshot from Atlas Park in City of Heroes.
- 6.25 Screenshot from Atlas Park in City of Heroes.
- 6.26a Screenshot from Atlas Park in City of Heroes.
- 6.26b Screenshot from Atlas Park in City of Heroes.
- 6.27 Picture of the Oval Office.
- 6.28a Screenshot in the city hall of City of Heroes.
- 6.28b Screenshot in the city hall of City of Heroes.
- 6.28c Screenshot in the city hall of City of Heroes.
- 6.29 Picture of the interior of the Pantheon in Rome.
- 6.30 Modified 6.31, with text.

- 6.31 Modified 6.32.
- 6.32 'La Chateau Des Pyranees', Magritte, 1959.
- 6.33 Screenshot from Faultline in City of Heroes.
- 6.34 Screenshot from Boomtown in City of Heroes.
- 6.35 Screenshot from The Hollows in City of Heroes.
- 6.36 Map of the World of Warcraft, post 'Wrath of the Lich King' expansion. www.worldofwarcraft.com
- 6.37a Screenshot from Firebase Zulu in City of Heroes.
- 6.37b Screenshot from Firebase Zulu in City of Heroes.
- 6.37c Screenshot from Firebase Zulu in City of Heroes.
- 6.37d Screenshot from Firebase Zulu in City of Heroes.
- 6.37e Screenshot from Firebase Zulu in City of Heroes.
- 6.37f Screenshot from Firebase Zulu in City of Heroes.
- 6.37g Screenshot from The Chantry in City of Heroes.
- 6.38 Conceptual diagram of architectural and narrative 'elements' in role-playing game simulations.
-
- 7.1 Photograph of the Roman Forum.
- 7.2 Concept art from Guild Wars. www.Guildwars.com
- 7.3 Screenshot from Atlas Park in City of Heroes.
- 7.4a Screenshot from World of Warcraft.
- 7.4b Screenshot from World of Warcraft.
- 7.5 Paragon Times
- 7.6 Concept art from Guild Wars. www.Guildwars.com
- 7.7 Cosmic diagram of the World of Warcraft. www.worldofwarcraft.com
- 7.8 Screenshot from the World of Warcraft. www.worldofwarcraft.com
- 7.9 Concept art of Pandarens, from World of Warcraft. www.worldofwarcraft.com
- 7.10 Concept art of Pandarens, from World of Warcraft. www.worldofwarcraft.com
- 7.11 Photograph of a 'Pandaren Express' delivery person in costume.
- 7.12a Illustration, Ljungstrom, 2005.
- 7.12b Illustration, Ljungstrom, 2005.
- 7.13a Illustration, Ljungstrom, 2005.
- 7.13b Illustration, Ljungstrom, 2005.
- 7.14a Map of Kalimdor. www.worldofwarcraft.com
- 7.14b Map of the Eastern Kingdoms. www.worldofwarcraft.com
- 7.15a Map of Orgrimmar. www.worldofwarcraft.com
- 7.15b Map of Orgrimmar, Ljungstrom, 2005.
- 7.16a Map of Ironforge. www.worldofwarcraft.com
- 7.16b Map of Ironforge, Ljungstrom, 2005.
- 7.17 Screenshot from Ironforge in the World of Warcraft, Ljungstrom, 2005.
- 7.18 Screenshot from Orgrimmar in the World of Warcraft, Ljungstrom, 2005.
- 7.19 Screenshot from Atlas Park in City of Heroes.
- 7.20 Screenshot from Atlas Park in City of Heroes.
- 7.21 Screenshot from Atlas Park in City of Heroes.
- 7.22 Screenshot from Orgrimmar in the World of Warcraft, Ljungstrom, 2005.
- 7.23 Screenshot from Orgrimmar in the World of Warcraft, Ljungstrom, 2005.
- 7.24 Screenshot from Orgrimmar in the World of Warcraft, Ljungstrom, 2005.

- 7.25a Screenshot from Orgrimmar in the World of Warcraft, Ljungstrom, 2005.
- 7.25b Screenshot from Orgrimmar in the World of Warcraft, Ljungstrom, 2005.
- 7.26 Screenshot from inside city hall in City of Heroes.
- 7.27 Screenshot from Atlas Park in City of Heroes.
- 7.28 Screenshot from Atlas Park in City of Heroes.
- 7.29 Illustration from A Pattern Language, pg587.
- 7.30 Screenshot of Thunder Bluff in World of Warcraft. www.worldofwarcraft.com
- 7.31 Map of Thunder Bluff in World of Warcraft. www.worldofwarcraft.com
- 7.32 Map of the Undercity in World of Warcraft. www.worldofwarcraft.com
- 7.33 Map of Darnassus in World of Warcraft. www.worldofwarcraft.com
- 7.34 Map of Stormwind in World of Warcraft. www.worldofwarcraft.com
- 7.35 Image of partial wireframe from Elderscrolls Morrowind. www.elderscrolls.com
- 7.36 Image of partial wireframe of the exterior of the city of Vivec. www.elderscrolls.com
- 7.37 Conceptual diagram of a 'Star Trek' 'Holodeck' simulation room.
- 7.38a Photograph of the interior of a Holodeck on the Star Trek Enterprise.
- 7.38b Photograph of the interior of a Holodeck on the Star Trek Enterprise.
- 7.39 'Building the Tower of Babel', unknown artist, 1210.
- 7.40 Orc from the World of Warcraft.
- 7.41 Photograph of a player's tattoo.

- 9.1 Collage of author's installatoin 'Consecrated Site'.

INTRODUCTION



Fig1.

Introduction

This architectural thesis proposes that the simulation of space and architecture in computer role-playing games is today's iteration of a set of forms and relationships derived from traditional mythology and like its historical antecedents, provides an experience of personal transformation and collective revitalization. A role-playing game can transform a player's consciousness and help to educate them in better negotiating their personal wants with the realities of social order and natural law, as is the typical function of mythology. The more rewarding a game becomes, the more players will enjoy playing it, and will want to play it. Developers do not have to limit their designs to creating 'fun' games, and instead, could be designing games that are not only fun, but are also highly rewarding and personally gratifying for players both during and after game-play. The collocation of architectural elements used in the game to simulate space, time, and place, can ensure that games function in accordance with their mythological teachings and give players the chance to experience the adventure, transformation, and life affirming education that comes of being a mythic hero.

Role-playing games' association with 'real-world' architecture occurs with its appropriation of that architecture as a proxy; the game's architectural simulation being used to support the principal concern of role-playing games, which is game-play and the narrative which guides a player's experience. Game-play is the term which describes the functional mechanics of ritualised operations that govern how and with what intensity a player is required or able to perform in-game, and originates from the mechanics of game-play developed in pen and paper role-playing games from the early 1960's. These original pen and paper role-playing games drew heavily upon the iconography of Western and pagan mythology, as well as medieval architectural paradigms, to construct an imagined world that would thrust players into an adventure. This world and its interactive events with other players would then lead to the transformation of the hero figure, who was also the player's character and agent in the game-world. Pen and paper role-playing has long been superseded by the popularity and demand for graphic based computer role-playing games, of which there are several types which may be considered as part of the role-playing genre due to the similarity in content, if not game-play mechanics. These types include: first person shooters¹, real-time strategy², puzzle games or adventure games,³ single player role-playing games, and the increasingly popular massively multiplayer online role-playing game, the latest evolution of the games.

1. "A first-person shooter (Commonly called FPS) is an action video game from the shooter game sub-genre. Like all shooters, they involve "an avatar, one or more ranged weapons, and a varying number of enemies". But FPSs are distinguished by a first person perspective, that renders the game-world from the visual perspective of the player character. In the modern era of video games, FPS was one of the first genres to use key technologies such as 3D graphics, online play, and modding [user modifications to software]. Enhanced realism combined with graphic violence has also made FPS a common topic in ongoing controversies over video games."

- http://www.reference.com/browse/wiki/First-person_shooter (accessed: March 10, 2008).

2. "A real-time strategy (RTS) video game is a strategic game that is distinctly not turn-based. The phrase real-time is used to distinguish such games within the broader genre of strategic wargames, which has a longer history both inside and outside of video gaming. Some important concepts related to real-time strategy include tactical combat and twitch-based action [a form a game-play which tests a player's reaction time, such as a first person shooter]. Other RTS game-play mechanics implied by popular opinion, but not in the definition of the game itself, include resource gathering, base building and technological development, as well as abstract unit control. Generally, the player is given a top-down perspective of the battlefield, though some 3D RTS games allow total freedom of camera movement. Additionally, the in-game user interface is much like a computer desktop: the player can manipulate controls and in-game units with techniques such as clicking and dragging. Each player in an RTS may interact with the game independently of other players, so that no player has to wait for someone else to finish a turn. This lends the genre well to multiplayer gaming, especially in online play, compared to turn-based games. City-building games, economic simulators, grand strategy games, and games of the real-time tactics variety are generally not considered to be "real-time strategy", though their game-play involves some overlapping concepts."

- http://www.reference.com/browse/wiki/Real-time_strategy (accessed: March 10, 2008).

3. Puzzle and adventure games assign a pre-generated avatar or character to a player and are stylized to appear (graphically) like a role-playing game, yet do not focus on character development, nor do they relate game-play mechanics to the iconographic topography or architectural morphology. These games are highly linear and extremely confining. There is little character development that occurs outside of the scope of a main quest or narrative, as well, these types of games are absolutely inflexible to game-play styles that they have not been explicitly programmed to support.

This thesis is specifically focused on the massively multiplayer online role-playing game. This game type is unlike the single player games, and current first person shooters, or real-time strategy games. It is the only type which strongly develops a concordance between its iconographic topology and game-play mechanics to support its narrative, while emphasizing the development of a single character for the player. Massively multiplayer online role-playing games are complex simulations which involve thousands of players in a structured social environment, played over the Internet, that allows for a high level of interaction and sharing of information between players. Such an interaction and social environment is critical to fulfilling the mythological model of transformation which structures game design and game-play, one that in mythological studies like those of scholar Joseph Campbell has been called the Hero Cycle. This coincidence of iconographic symbology and architectural type in massively multiplayer online role-playing games establishes credibility for the simulation of space as a place that can structure the ongoing series of events that transform a player's character into a hero, and allows the player to participate in experiencing that transformation through a vicarious shared consciousness with their character.

This thesis further parses the content of the in-game simulation to tease out the phenomenology of its architectural parts to generate a first schematic of a hermeneutic model for understanding the role of the game parts, as individual components, and also as elements which make up a whole. Interestingly enough, players are themselves participating unconsciously as parts of the simulation and are contributing to the social and collective consciousness of the whole. The thesis proposes four pairs of architectural aspects that support the simulation of a narrative, namely, context/memory, form/access, space/place, and material/image. These elements support the narrative which is itself created by simulating relationships of time, objects, events, and symbols. These elements are the backbone of the in-game narrative and are used to catalyse and guide a hero's adventure. The narrative also provides clues that can be directly or indirectly related to a source or founding mythology that validates an in-game ethos and theology behind the more basic mechanics of game-play. The game mythology also controls the kind of integration a player can have with the game-world, and sets the tone for the social and cultural identity of the game.

The architectural and narrative parts of role-playing games outlined above are drawn from 'real-world' paradigms that can fashion game-play to naturally stimulate the tradition of adventure according to the traditional mythologies of the Hero Cycle. To do this, games rely on their ability to recontextualize the iconographic symbology of the appropriated 'real-world' sources into the in-game mythology. Applying the thesis's proposed hermeneutic model for understanding the efficacious function of architecture in the game narratives and the over-arching experience playing role-playing games will retroactively provide insight into the nature and possible functionality of virtual and 'real' architecture in our daily lives.

Literature Review

Study of any of the dimensions of role-playing games namely, game-play, narrative, and the game-world (architecture, objects and space), requires an intimate understanding of how the dimensions are interrelated to each other and how they relate as a system to a fourth dimension, the player. Moreover, any study must recognise that these games are new cultural artifacts for which there does not exist a fixed, or tested method for analysis.

“Instead of treating the new phenomena [of digital simulations, and of role-playing games] carefully, and as objects of a study for which no methodology yet exists, [they] are analyzed willy-nilly, with tools that happen to be at hand, such as film theory or narratology”.⁴

Espen J. Aarseth, a professor and prominent scholar on the emerging field of game studies, and Principal Researcher at the Centre of Computer Games Research at the IT University of Copenhagen, wrote a seminal paper in 2003 on research methodology for game studies entitled, 'Playing Research: Methodological Approaches to Game Analysis'. Aarseth stresses the need for analysts to research the published documentation of the rules, design and mechanics of the game, and to observe other players during game-play, but believes the "best" way to distil useful insight is by playing the game oneself. While documentation and third party sources can help to enrich insight drawn from one's personal experience 'in-game', it cannot substitute for the insight that comes from playing the game oneself. It is important to note that study of role-playing games is unlike the study of other media, as no other media operates in the deeply interactive manner of role-playing games, nor do they possess the level of sophistication or complexity of the role-playing game. For example Aarseth's paper comments that "reading a book or viewing a film does not provide direct feedback, in the sense that our performance is evaluated in real time. As Markku Eskelinen (2001) has pointed out, 'in art we might have to configure in order to be able to interpret whereas in games we have to interpret in order to be able to configure'."⁵ The content of this thesis has been distilled from my own years of role-play gaming, as well as numerous online role-play gaming forum discussions, media articles, novels, movies, and research on theories of space-time, religious and ritual worship space, on virtuality and on hermeneutics.

The work of Joseph Campbell, professor and scholar of world mythology, and one of the most widely-read authors on the subject, has been extremely instructive in determining a form and a name for the sequence of events and triggers that are typically enacted in-game. Events and their sequencing drive much of the game-play in a typical game and are the source of a deeply structured organisation of space in most games. Campbell's 'Hero Cycle'⁶ is a model that outlines the deeply imprinted psychic conditions necessary for personal (heroic) transformation, and is the source that this thesis proposes as a fundamental organising paradigm for the hierarchical spaces of game-worlds. Analysts without adequate in-game experience may believe that the spaces in-game reflect only the narrative and visible iconography, and would miss the invisible structure which limits freedoms and grants powers for players. This structure is paralleled in the hierarchical organisation of space, and uses architectural clues to guide and support game players on their personal Hero Cycles. Campbell formulated the 'Hero Cycle' based on his study of countless mythological tales from cultures around the globe. His thesis of a consistent narrative hero substructure underlying the myths of widely varying cultures is with its unifying generality the perfect model for understanding the role of game adventure. The contemporary form of the 'Hero Cycle' found in typical game-play guides without restricting the ability and necessity for players to solve problems, to be creative, or even reject the rituals of any given cycle of integration in favour of another option. Game heroes can even begin new cycles that have not been explicitly outlined by the game narrative. Finally, the intentionality of game developers in using the Hero Cycle is besides the point. According to Campbell, this Hero Cycle is deeply embedded in our psyches, individual and collective, and is part of the human mythic narrative. Ultimately, whether intentional or not developing adventure or heroic games will be calling on this mythic narrative to structure the design of their games.

Author and novelist Neal Stephenson was another major source of inspiration for this thesis. His novel 'Snow Crash' describes a dystopic future and incorporates a 3D internet based mirror of the 'real-world'. Its narrative portrays a relationship that links the cultural identity of the 'real-world' in the novel to the narrative of events that are transpiring in the online spaces of the novel. The narrative in 'Snow Crash' introduces the reader to a sophisticated online environment that reveals a relationship between historical mythology and contemporary reality. This book reveals the influence of narratives on architectural morphology and on the ability for architecture to enrich experience and guide movement

4. Aarseth 2003, pg5.

5. Aarseth 2003, pg1.

6. Campbell 1949, Part 1: The Adventure of the Hero.

in online spaces. Stephenson's book is the exemplar to the interrelationship of game-play, narrative, and the game-world in contemporary role-playing games, and strongly emphasises the ancient models of transformation and revitalisation that resonate through the experience of players online and into the 'real-world'.

'The Matrix', 'Russian Ark', and 'Tron' are three films in which architecture and space is used as a medium to read and make sense of narrative events, and they also contain inconspicuous mythological pathologies of the Hero Cycle that are exhibited in their architecture. It is important to note that in 'The Matrix', virtuality is explained in a scene (which teaches us what the matrix is) without the use of the word 'virtual'. Like 'Snow Crash', the movie enlists the assistance of architecture and image to convey meaning and to contextualize digital simulations.

In Alexander Sokurov's 2003 film 'Russian Ark', a strong correlation between the use of architecture and in the perception of time and place is established, whereby architectural space works like a time capsule to trap and contain events and memories, and to trigger those events and memories like a type of memory palace. This function of architecture is very similar to the ancient Hebrew conceptualization of place and time that could be described as vessels which hold events and essences in the interior of their material form.⁷ It is for this reason that I have included my paper on Biblical Hebrew translation and architecture as an appendix. My philological study of ancient Hebrew passages on architecture and time revealed a conception of Hebrew and traditional Western space-time that is rooted in the practice of interiorization of space through architectural intervention and the construction of volumes.

The pioneer 1982 cyberspace film, 'Tron' articulated its spaces as a function of the relationship of surfaces to one another. In Tron, space is constructed and dismantled by making surfaces visible, and invisible and by increasing and decreasing the distance between surfaces. Tron's surfaces are austere and spare of significant ornamentation or detail and allows the space to function as a symbol of hierarchical presence, identity and collective consciousness. The scale, form, and potentialities of the spaces in Tron describe a position of practical and spiritual hierarchy without which the narrative and the adventure of the heroes would be incomprehensible and could not take place.

The three films are significant starting points for this thesis because they are all strong exemplars of the ability of architecture to create and connect space while maintaining a hierarchy or place-like distinction between spaces. Most importantly, they suggest that the credibility and cross-narrative legibility of architectural type justifies an individual and groups' experience and knowledge by assigning individual and collective memory to place. Symbols which are not traditionally architectonic can also project the same credibility of place as architecture, providing underpinning and justification to one's experience.

In framing the ontological issues of place, space and experience, St. Ignatius Loyola's writing on spiritual meditation also helped guide my design for cognition models for understanding the benefits of the incorporation of historicity and context in environmental simulations (or visualisations). I further came across, much by chance, Martin Luther's letter to Pope Leo X Medici (1520) on the value of religious images and icons. Luther's letter very clearly argues that an image can be representative of an action that is intended to be meaningful in other, invisible ways. He does not believe that there is intrinsic value in the image, because while it might represent an act that is thought to be the source of a virtue, virtue and the desire of the soul can be ignored or circumvented while performing an otherwise seemingly virtuous act. This letter was the perfect anti-thesis that helped in writing on the integrity of the image as a carrier of symbolic (and iconographic) value and moderated my assigning 'actual' value of game spaces.

Aareth cautions readers who have no firsthand experience playing role-playing games, and I

7. Appendix pg 243 - 244.

would like to forward this caution for the reader of this thesis. “If [they] have not experienced the game personally, [they] are liable to commit severe misunderstandings, even if [they] study the mechanics and try [their] best to guess at their workings. Unlike studies of films and literature, merely observing the action will not put [one] in the role of the audience. When others play, what takes place on the screen is only partly representative of what the player experiences. The other, perhaps more important part is the mental interpretation and exploration of the rules, which of course is invisible to the non-informed non-player. As non-players we don’t know how to distinguish between functional and decorative sign elements in the game.”⁸ Further, “While the interpretation of a literary or filmatic work will require certain analytical skills, the game requires analysis practiced as performance, with direct feedback from the system. This is a dynamic, real-time hermeneutics that lacks a corresponding structure in film or literature”.⁹

Lastly, as a useful source of iconography and as extensive illustration of game and mythic spaces and forms, this thesis also incorporates historical paintings and contemporary screenshots as ‘snapshots’ of both historical and game narratives. Both are examined solely to reveal commonalities between the hermeneutics of role-playing games and traditional mythology. They are treated as fractions to which a common denominator of transformation, and image based credibility becomes clear, and are not incorporated for any purposes of art criticism or historical analysis. They are, instead, the iconographic detritus of our collective memory and are regularly and often appropriated and transformed. It is that process of appropriation and transformation that should be the focus of this thesis.

This thesis will include primary analysis from a variety of games, but will focus on the MMORPGs ‘City of Heroes’ (CoH) and ‘World of Warcraft’ (WoW). This is due to the contrast in iconography, game-mechanics, and narrative theology that both games coordinate with the parts of their graphic simulations.

Thesis Structure

This thesis is organised into seven chapters and a two part conclusion that exposes the elements of role-playing games which trigger anamnesis of mythological lessons and a transformation of personal and collective consciousness. The first chapter introduces the role-playing game, what it is, and how it is played. The mechanics of game-play in computer role-playing games are explained by reviewing the elements of game-play in its predecessor, the traditional pen and paper role-playing game. This chapter also discusses the themes and preoccupations in role-playing games that are drawn from mythological typology and exposes the counterculturalist undertones that coincide with the tradition of adventure and transformation in mythology.

The second chapter discusses Joseph Campbell’s Hero Cycle, the mythic form this thesis suggests is a useful paradigm for analysing and examining the invisible sub-structure of game narratives which supports game-play and the organisation of in-game space. The Hero Cycle is offered as a descriptive model of the events that occur before, during, and after an adventure. This model is used as a method for transformation and its psychic presence is evidenced in traditional mythology and contemporary hero stories.

The third chapter is an in-depth look at the player’s character avatar, and on the etymology of the word avatar and its implications in-game. In this chapter, a distinction is made between the graphic representation of the avatar as a functional object and as an iconographic symbol. Distinguishing between the value of an object as material form, from an image that may or may not be symptomatic of the material object it represents, is important in role-playing games where images are, in general, representative

8. Aarseth, pg3.

9. Aarseth, pg5.

of real objects and forms that carry recontextualized symbolic value that may be discordant to their primary iconography without a modification to the form of their image. This chapter also includes a brief overview on the images of Queen Elizabeth I as a historical iconographic mode for legitimizing national identity. A role-playing game also uses images and the image of the avatar for purposes of legitimizing its own identity and, like the avatar of Elizabeth, does so by adorning the environment and avatars with recontextualized iconographic symbols.

The fourth chapter exposes the nature of space in the simulation of role-playing games as being constructed of the relationship of surfaces to one another. It also argues that the nature of the simulated space is borne from an interior to which there exists no exterior, and is termed an 'interiorated' space. The characteristics of 'interiorated' spaces are discussed, of which hierarchical organisation is most important, and 'real-world' examples are given in the following chapter.

The fifth chapter parses two existing architectural paradigms to reveal that their treatment of space, time, and place is similar to the treatment of space, time, and place in the simulation of role-playing games. The idiosyncrasies of the physical architectural forms in Hebrew and Catholic architectural paradigms are ignored in this chapter, in order that the similarities in their conception of space-time can clearly emerge. Like spaces in role-playing games, these paradigms are exemplars of 'interiorated' space, and unquestionably link movement in space with time, event, and personal and collective identity.

The sixth chapter argues that the structure of architectural space in the game-world is used to moderate game players' Hero Cycles by assisting with their exploration of the game-world. This chapter also discusses the relationship that binds architectural form and function with its meaning and credibility. The credibility of an architectural type is shown to provide integral context to the in-game environment and must include memory traces of the permanences that exist in the 'real-world'.

The seventh chapter reviews commonalities in architectural theory, and in the practice of designing the simulations in role-playing games. The theory behind the organisation of space and the practical design of architectural form in a game must naturally support the cycle of events in an adventure. As well, this chapter will comment on the indisputable impact of architectural typology on the tone of the in-game environment as it relates to the development of the identity of the individual and the collective, both in and out of game.

The eighth chapter is a summary of the previous seven and precedes a two part conclusion to cogently refresh the reader on all the salient points made in this thesis.

The first part of the conclusion critically assesses the relativity of space and architecture in virtual reality simulations. Specifically, it questions the integrity of reality and virtual reality of role-playing games according to the mandates of social interaction, and personal and collective transformation established in this thesis.

The second part of the conclusion is a graphic narrative based on the destruction of the city of Jericho from the book of Joshua in the Hebrew Torah (Christian Old Testament), but is retold as an experience of online role-playing. This conclusion incorporates just enough images of architectural and spatial phenomenology to suggest a coherent and legitimate paradigm that will carry the credibility of the narrative in the absence of historical context and actual corporeal senses, thereby referencing the discussion in Part One of the conclusion. Part Two of the conclusion also reinforces the value of storytelling to carry the keys to revitalization and transformation that are often forgotten in contemporary society, but are remembered in traditional mythology and especially today in role-playing games.

“We were taught something very important in school; perhaps after such a long time we have forgotten it, but back when the ancient Greeks listened to the Homeric Poems, the great majority of them could neither read nor write. Under those circumstances it was very difficult to hand down any kind of knowledge. So they came up with an ingenious way to educate their children: Their idea was to invent a story and have it contain information. To hand this story down they used a rhythmic form that was easy to memorize: They made poetry and the poetry was actually an encyclopedia”.¹⁰

While there are clear messages contained in the content of the Jericho narrative, deeper messages on the nature of environment, space, and time that are buried in the inconspicuous objects, symbols and images carry the events of the narrative forwards. This thesis will uncover the similarities between game narratives and the principles of the Hero Cycle, an older, ancient form which also underpin structures of the narratives in historical mythology.

10. Carmelo B, pg8.



Fig 1.1, Players engage in an imagined game-world vicariously through their characters. Game-play fosters a social environment where players must work together to concentrate on the teamwork of their characters in the imaged game-spaces. Their collaborative efforts result in a fulfilling and shared collective experience.

EARLY RPGs

Early Role Playing Games

Role-playing games are derived from war games and simulations and can be traced back to 1811's 'Kriegspiel', a war-game created by a father and son, Von Reizwitz, for the training of Prussian military officers. Kriegspiel consisted of a tabletop board which represented a battleground on which players would loosely simulate battle. Since then, similar war games and training simulations were used in England, and elsewhere.¹

In the 1960's, wargamer, board-game designer, and (later) video game designer, Dave Wesley and his co-players developed a variation of war games whereby players could reuse their surviving 'characters' for subsequent battles. Game designer Dave Arneson (who credits Wesley for inventing the role-playing game) and writer and game designer Gary Gygax, two players who were inspired by Wesley, collaborated in writing a scenario for a game that focused on the control over a single character that a player would be bound to. Arneson and Gygax's 1974 publication of 'Dungeons & Dragons' was a text-based scenario with guidelines for role-play gaming which allowed players to create and focus on the development of a single, personal character.

The published texts included information for constructing an imagined world that players could adventure in, and contained sets of rules and of statistics, of descriptions of places, of races, of classes (professions, or vocations), and of items and objects, large and small. Players could also choose to use figurines or tabletop boards which came with some publications to represent a landscape or architectural space to aid in the conceptualization of the intangible game spaces. Coupled with a person in the role of a shaman called a Dungeon Master, players were able to mentally project themselves into the creation of an imaginary game-world.

By the late 1970s role-playing games had become popular amongst high school, college, and university students. The enthusiasm and interest in role-playing games allowed for the once obscure activity to grow as part of popular culture through the publication of its texts. By the 1980's there was a steady production of new texts and new editions to Dungeons & Dragons, RuneQuest (1978), Rolemaster (1984), and others. The growing popularity in role-play gaming and availability of texts helped transform the genre from a cult-like phenomenon amongst small and disparate groups of players into a codified system for role-play gaming. The widespread availability of standardized texts allowed game companies to maintain a desirable consistency in game-play. Rules, logistics systems and other critical game-play mechanics that were once a part of the tendencies of individual groups of players, became standardized and enforced by the texts. The crystallization of rules and of player knowledge that the text protected allowed for a greater focus on and fairness in, character development.

Counterculture and Mythology

Role-playing games often appropriate typologies that are useful for the reconciliation between our perception of natural law, social order, and the conflict it creates, with the personal wants and needs of the individual. Traditional mythology has always responded to this conflict, and medieval iconography especially is the one most commonly associated in role-playing games as a typological source for adventure that can reconcile the disparity between the perceptions of the mind and the wants of the body. The word 'medieval' derives from the Latin 'medium', meaning middle, and 'ævum' meaning age², and refers to the period of western culture that divides Classical Antiquity from modern times. In this period adventure was often a literary mechanism used to affect change through the

"Kriegspiel It is a remarkably straightforward game; it allows speedy resolution of combat; yet at the same time screens the players from any unrealistically panoramic views of the battlefield. All it needs is someone who will not be overawed by the responsibilities of umpiring." An example of game-play mechanics can be found at the following link: <http://www.kriegspiel.org.uk>

1. [http://en.wikipedia.org/wiki/Kriegspiel_\(wargame\)](http://en.wikipedia.org/wiki/Kriegspiel_(wargame))

2. <http://www.etymonline.com>

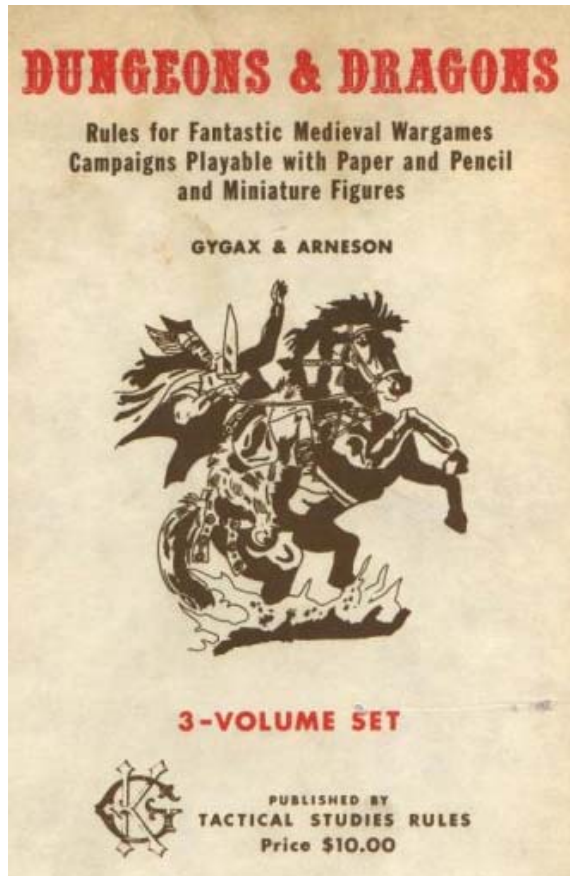


Fig1.2, Box set of Dungeons and Dragons, 1977-78.

transformation of the adventurer's consciousness. Joseph Campbell writes in 'The Hero With a Thousand Faces' that adventure can transform a person into a hero if they can "venture forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man."³ In a Medieval age when identity could only shift slightly within a rigid class system, the familiarity with mythology provided the clues to understanding the power of transformation in adventure. Adventure was the only manner with which a person could remove themselves from societal order without jeopardising their soul, as humans needed to maintain their social status during their life on earth in order that their soul could be recognised in Heaven and receive salvation after their death.

Pre-modern society had a firmer grounding in mythological tales, and countercultural tendencies were manifested as helpful conditions that had a positive role to play. In the Middle Ages, the crystal-line hierarchy of God's creation was read through differences and organized itself according to those differences. One could only affect change to this order by transforming themselves through their relationship to others, either by publicly swearing loyalty (in faith, marriage etc), or through a physical or mental process of death and rebirth. Adventure was a means by which a person could temporarily step outside society without becoming an outcast. Adventurers such as the Crusaders, travelling merchants and explorers were expected to return (if alive and able) and to reintegrate themselves back into society. This reintigration was critically important for Christians in the Middle Ages, as a person who existed outside of the social hierarchy was in fact a non-entity, a being whose mark of difference

3. Campbell 1990.

that distinguished them as one of God's creatures having been removed. As such, they would not be recognised or admitted into the Kingdom of Heaven. An adventurer however, was someone who could change within the social order of the time by dying when setting off on an adventure, and then being reborn upon their return. While technically dead, adventurers were not bound to any of the laws or expectations of their class, and could wander and explore freely, experiencing events or revelations that would have been inaccessible to them had they maintained their status within society.

In contemporary decades, the absence of a working knowledge of mythology by the populace at large and the intense repression caused by the extremes of social and political conservatism that dominated the United States during the 1950's to the early 1970's, gave rise to a countercultural movement that rejected the government policy and social order of the day, and attempted to absolve themselves from the reality of the time. The counterculture of the 1960's further problematized their movement by embracing drugs, and rejecting responsibilities in a counterproductive and hedonistic manner. Players like Wesley, Arneston and Gygax were exposed to the frustrations of the counterculture which had turned to the abandonment of its sanctioned responsibilities. The role-playing games they developed responded to the countercultural tendencies of that time, but unlike street violence and drug use, were positive mechanisms for adventure and transformation that could reconcile players with the realities of life at the time.

Proper counterculture should not seek a total rejection or disintegration of societal order, what it should seek is a method for living with an ordered system whereby one can reconcile the disparity between the rationality and logic of the system with the instincts and passions of the human body. Countercultural tendencies appear when a systematized and restrictive social, economic, or political order supersedes the ability to respond to the natural needs of our bodies, feelings and personal desires. Counterculturalism seeks alternatives to the current perception of the order or system that governs society and consciousness to allow one to live within the existing system by changing the perception of the system. Experiencing enlightening or transformative events that can change one's consciousness can allow a person to reacquire themselves with the system of order using their new-found perspective in a manner that can more effectively reconcile their wants with reality. Mythology is clear in its goals that the reintegration of a person who has had a transformation of consciousness can better cope within the problematic repression of the normal social structure. Moreover, mythology is also clear that the integration of one who has learned to live in a once oppressive or restrictive order can influence change of that order by teaching others to change their perception of reality, ultimately leading to a shift in social consciousness that affects the whole of society.⁴

Joseph Campbell cites as an example, the Norse myth of Sigurd (Siegfried) the dragon slayer. Sigurd journeys out to kill the dragon monster, but rather than returning to his home with evidence of the kill, Sigurd drinks the dragon's blood and begins to hear the song of nature. Doing so reacquires Sigurd with the powers of nature, from which his mind had removed him. Mythology contains other stories that describe man's removal from nature, and hints at the necessity to balance a relationship with nature, because as mythology teaches, humans are a part of nature. For example, Adam and Eve eat from the tree of knowledge to complete their total separation from nature and as a result, they are cast out from the Garden of Eden. The separation from the garden can be read as a total alienation from a natural state in favour of the mental awareness captained by the rationale of the mind. These myths teach that the mind is a "secondary organ of a total human being and must not put itself in [total] control."⁵ Contemporary mythology has also spawned several archetypal figures who represent the total domination of the repressive rational order of the mind, including George Lucas's character 'Darth Vader' from the 'Star Wars' series. Vader is ultimately defeated in battle by his son Luke. Vader

4. Campbell Interview, The Hero's Adventure.

5. Campbell Interview, The Hero's Adventure.

redeems himself by killing the Emperor who is killing Luke (his son), thereby defeating the overlord and governing intelligence of the Empire. That this battle takes place over the forested wilderness world of Endor is very important as it is the natural race of the Ewoks who defeat the technology of the Empire. That the 'Star Wars' trilogy was made in the 1970's is also significant since 'the Empire' represents the repressive politics of the time., and the rebellion, the counterculture.

Role-playing games offer the potential to adventure in unknown places to stimulate the same shift in consciousness that the physical separation of the medieval or mythological adventure creates. As such, many of the underlying principles of medieval society and lessons from traditional mythology are imbued either deliberately by conscious choice or inadvertently since our minds are channelled by our deeper psyches, in the game-play mechanics and in the tonality of the in-game environment. For example, the practice of proclaiming loyalty as a means of forming social ties to other players during game-play is conspicuously similar to the medieval proclamation of loyalty that blends different, yet hierarchically similar, people together in a transformative relationship. Players who are faithful to one another are able to successfully overcome the challenges of their adventures that they would have failed individually.

Due to the ephemeral nature of game-play in pen and paper (traditional) role-playing games, a sustained concentration on the imagined conditions of the game-world is critical to maintaining a satisfactory level of immersion and experience for gamers. As a result, gamers play in highly privatized conditions that foster a hermetic environment that not only helps with mental focus on the game, but also leads to the development of strong social fidelity amongst the players who are also, in practice, visibly differentiating themselves from one another in-game to properly contextualize actions and events.

Locations for Game Play

Desirable locations for role-playing games include those which allow players to cloister themselves within a hermetic environment. Players limit their senses to focus on divining the game-world, and interaction with each other and, in-game, between each other's character. While the locations amongst various groups differ, the amenities required for game play are always the same. These amenities include a surface for rolling dice, for writing and for drawing, and enough space for the assembled players to be comfortable, to sit, to lounge, to stand, to have conversations, and even to act and perform bodily, as necessary.

While many players meet as a convenience of coinciding schedules, in school cafeterias, libraries, parks, or in other public venues, most avid players prefer to meet in private spaces such as someone's home, or a private role-play gaming club, or a store. Within the home or club a secluded private room such as a den or basement is used to play, if available. Such places allow for fewer interruptions and provide a greater control over the players' immediate environment. Since role-playing games are driven by participation and integration of players through a maintained state of mediation or hyper-focus, lighting, noise control, and the ability to generally dominate all objects in a space is important, as the length of occupation is often indefinite and can extend for many hours, sometimes days or weeks or longer.

The hermetic conditions can also engender the inhabitation of space to mirror the space in the game-world to recreate as much of the corporeal sensibilities suggested by the in-game environments as possible. Players can be forced apart from the table or general collective space so that they cannot hear or see what is transpiring. Players can be told to lie down, stand, or sit, to enact or inhabit

their space to mimic the conditions of their in-game character. By stimulating corporeal sensibilities through physical spatial conditions on the body, players are able to respond bodily, and in a more complex and reflexive manner. Simply, gaming sessions operate best in hermetic conditions; they are not public activities and do not welcome or permit spectatorship. The presence of someone or of something who is not participating in, or that cannot be integrated into the game, is highly undesirable and often irrevocably disruptive.

Player Characters and Types

Role-playing games require that players concentrate on controlling their personal characters to overcome physical and mental challenges. They are required to work collectively as a team to overcome trials on their adventure that, as individuals, they would otherwise fail. Some players naturally contribute to the social group dynamic, while others focus on amassing in game experience and powerful enhancements for their characters, or in mastering their character's class or profession. As Barlte argues in 'Hearts, Clubs Diamonds, Spaces: Players Who Suit Muds', there are four types of players, each with its own particular interest; usually, however, a player exhibits elements of all the types in varying degrees. The four player types are: "socializers (who play to enjoy the company of other players), killers (players who enjoy preying on and harassing other players), achievers (players who like to win and triumph), and explorers (players who enjoy discovering the game's secrets and hidden mechanics, including discovering and exploiting programming errors, in the case of computer based role-playing games)."⁶

Despite the varying motivations and play styles of gamers, a role-playing game must be able to support the co-existence of diametric play types and avoid becoming a source of resentment for the frustrated gamer.

"After playing the multiplayer demo of Return To Castle Wolfenstein (the level called "beach invasion") for more than a year and a half, I am still occasionally amazed at what I see fellow players do. The game takes place on a Normandy beach, with one team defending a bunker as German soldiers, and the others playing as allies trying to invade it from the sea. At one point more than a year after the game was released, someone discovered that by exploiting the fact that players were invulnerable for the first seconds after they were revived by a medic, one could "fly" over the wall if one was revived next to a live grenade about to explode. Thus, by committing suicide, one could win the game in a novel way. This is clearly a Bartelian explorer at work, inventing a new strategy based on a weakness in the rule/simulation system. Far from an isolated case, the use of such exploits are typical in advanced game-play. Some games, such as GTA3 [(Grand Theft Auto 3)], even reward the player for certain innovative moves, such as spectacular car jumps (stunts). The dialectic between player inventiveness and game designers' need to balance realism and playability in the simulation can be regarded as a major source of creativity on both sides. Players find the discovery of exploitable bugs and loopholes in the games highly rewarding, while designers see the experiments of explorers as a challenge to their ability to predict the simulation's unwanted side effects. There is a fine line between a funny but harmless bug, and a game that is ruined by bug-exploiting players, especially in multiplayer games"⁷

To enter the game, a player needs a character. The character can be an existing one from a previous game, or created anew. The character, later known in massively multiplayer online role-playing games and computer simulations as an 'avatar', represents and acts as a type of puppet for the player in the game-world. While there are a variety of methods for character creation, the resulting

6. Bartle 1996.

7. Aarseth 2003, pg 4.



Fig1.3 left top and Fig1.4 left middle, Players concentrating on table-top war games. Game-play sessions can last for many hours, as was the case in this example where players took breaks during the day to eat and rest, but were otherwise engrossed in game-play.



The following article is an account of the dissolution of a group of gamers. External influences disrupted their focus on in-game events and conflicted with their fiduciary duties as trustees for their characters.

"A Dragons club, which has been meeting every Friday night for the last 8 years, has dissolved. The 11-member club, which played the Advanced version of the famous Role-playing game, had been experiencing severe problems for almost a year. The oldest member, Ricky Larsen, turned 21 on the 11th of April, 2001 and has brought large amounts of beer to each gaming session. "At first we thought it was the coolest thing," said fellow club member Bert Blaylock, "We felt really cool - like our Charisma was up 2 points at least." "Yeah, but people started having drinking contests," added member Billy Reed, "And our games fell apart with people giggling, shouting, and having their characters attack each other. Ricky renamed his character 'Vomit McUpchuck' and when he was DM he made a rule that if your character got killed you had to drink a whole 6-pack before you could be resurrected." Billy went on, "One time Bert had this really cool character Gandagorn that he had played for years. Bert whips out this big bag of chips and didn't share them, so Ricky had Vomit McUpchuck backstab Gandagorn. Bert got mad and told him that he was a dickhead, then Ricky called him a pussy and threw the Gandagorn character sheet in the fireplace. Then another time we had this sophomore playing with us for the first time and he wore a wizard hat to the game. Ricky kept calling him Dweebo the Magnificent until the kid cried and rode his bike home."

Tad Hayworth, for www.brokennewz.com, 10/19/2004



Fig1.5 right top, Disruption of game-play from third party observer.

elements of the creative process are the same: a visualized physical body, and non-physical character attributes.

There are a multitude of classes and professions of in-game characters which can be parsed to reveal four traditional character archetypes from which all other character types are made. The four main types are: Damage Dealers, Tankers, Controllers, and Buffers/Debuffers.

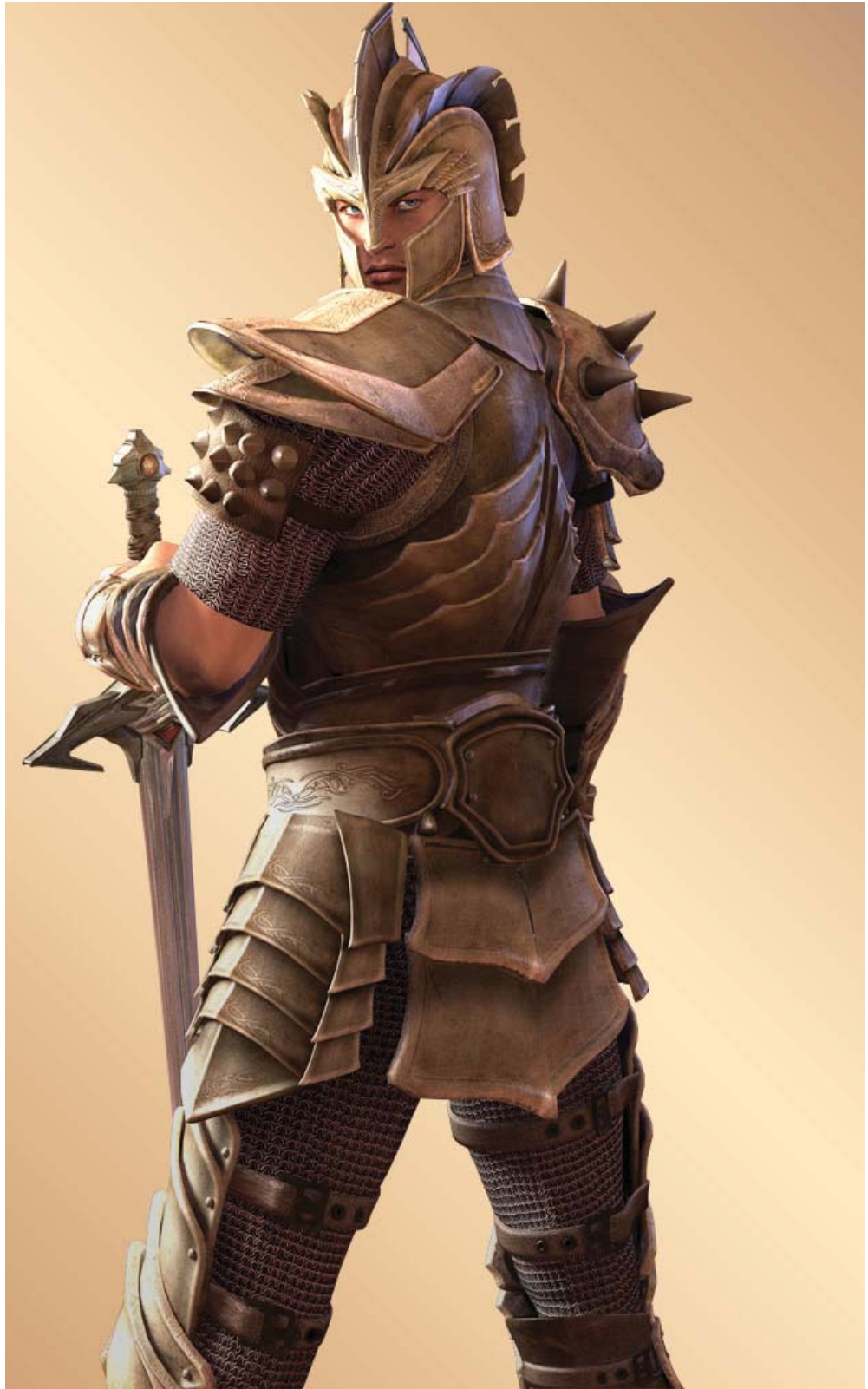
Tankers, or characters who 'tank', are specialists in negotiating corporeal, psychic, and magical damage. They protect and ensure the safety of their companions by mitigating the damage and negative influence of other characters or objects directed at their team-mates. Damage Dealers' principal concern is in developing a skill-set for dealing (ranged and/or melee) damage. Characters focused on dealing damage are also more likely to be in danger in that they are visible and thus often made into targets themselves. As a result, it is not uncommon to find many damage dealers with tanking abilities, or tankers with strong damage dealing skills. Characters who typify this hybridization and drawn from various games are Warriors, Barbarians, Minotaurs, Battle Mages, Ogres, and Berzerkers. Unlike 'damage-dealing', 'tanking' is most often achieved by putting oneself directly in harms way. The somewhat obscure Controller character type is one that usually develops slowly over time. A controlling character relies on a collection of skills that enable them to manage other characters, objects, and/or, energies, in a direct and strategic way. Buffer/Debuffer characters specialize in buffing (enhancing) and or debuffing (reducing) character attributes. This character type focuses on enhancing the effectiveness of their team-mates and friendly characters, while reducing the effectiveness of others. It could be argued that many forms of debuffing and controlling are themselves 'tank-like'.

The hybrid character class is composed of a blend of damage dealing and/or tanking and/or controlling and/or buffing/debuffing characteristics. Hybrid characters can handle diverse and non-linear game-play as they are not true masters of any skill-set, yet are better equipped to handle a wider variety of tasks, challenges and scenarios than any 'pure' archetypal character. As such, they can perform very strongly as solo players and are also extremely valuable to 'pure-bred' archetypes who require the assistance that a diversified character can provide. Hybrid character types can include: Druids, Hunters, Warlocks, Assassins, Monks, Rangers, Necromancers, Pyromancers, Elementalists, Summoners, Paladins, Knights, Ninjas, Thieves, Priests, Clerics, Rogues, Mystics, Shamans, Bards, Fighters (also called Scrappers), and Rangers, to name a few. It is significant to this thesis that typically games choose to use existing historical, often medieval, and mythological nomenclature to describe a class or profession, rather than inventing a new game or genre specific nomenclature.

A player begins their character creation by selecting or designing a physical body as well as a gender, race, or species. Once the physicality of the character is formed, its name, statistical attributes, and skills are assigned or chosen. The degree to which players can control these and other elements of their character varies with each game or Dungeon Master. The final stage of the creative process entails the provision of personal belongings to the character. During the creation process, character sheets are filled out with pencil (sometimes pen), and images, attributes, descriptions and all other information about the character is recorded. During the game this information is added to and manipulated as necessary.

Character sheets do not represent an ideal; instead they function as working documents that reflect the current status of the character in the game-world (or in stasis between game sessions). As a result, character sheets develop a patina as information is scratched out, erased, and as new information is added during game-play. This helps reinforce the credibility of experience of the controlling player and of the development of the character. Recreating this same credibility in a computer game requires that the game is programmed to develop its own form of patina or trace of the passage of time on a character and is discussed in Chapter Three. The loss of a character sheet results in the

Fig1.6 right, Rendering of a warrior from the massively multiplayer online role-playing game 'Guild Wars'. The prevalence of medieval iconography extends to the class and symbolism in character types in most games; the knight, or warrior being one of the most recognisable.



death of the character. Even when it is possible to remember all the vital statistics of a character, they cannot be resurrected without the original sheets; as the traces of patina left on the sheets reflect the vicissitudes that a character underwent in its development, and cannot be replicated.

Once a character comes into existence, a player can enter the game-world. To do so, a scene, place, or space is presented to the players orally, pictographically, or through a combination of the two. A player can then project themselves, in the guise of their character, into the game-world. The game-play that ensues involves a complex slippage for players, who must communicate with each other and their Dungeon Master as both themselves and as their characters. Every player group has a default mode whereby dialogue, action or behaviour by players may be directly reflected on their in-game characters.

Non Player Characters

Non-player characters, or a character who does not have a direct one-on-one relationship to a player, function as iconographic figures used to support the story line and ethos of in-game spaces and places. Most often prominent non-player characters have been 'involved' in a pre-game history or story line. Prominent non-player characters are used as archetypal figures to generate lesser, more abundant non-player character types in-game. The self-referential contextualization of in-game objects and characters crucial in imbuing the simulation of a narrative with historical authenticity, as historicity provides immediate value to the fictitious non-player characters, and other constituents in the narrative.

Initiation of an adventure through the involvement of a non-player character can be achieved directly or indirectly. A call, which provokes a player to adventure, by a non-player character in role-playing games resonates strongly with the call to adventure by a third party voice or figure in traditional mythology. In role-playing games, the non-player characters exist to accelerate the transformation of players and their characters into heroes by provoking them to adventure. Non-player characters also provide insight into the workings of particular game-mechanics, knowledge of which is helpful to players who are engaging in more complex narrative story arcs or simply more advanced than the average player. Non-player characters provide this knowledge by exposing mythological events or narrative content to players at various moments during, after, and before an adventure. As in mythology, non-hero/player characters also provide aid and can create problems or hindrances for the adventurer.

There are several ways to instigate adventure in a role-playing game. A non-player character can call players to action, a player can seek out a non-player character for a quest, or players can fall into a chance encounter with a non-player character. Another and more subversive tactic in creating adventure is to deliberately remove non-player characters from a space in an in-game environment. This unusual and often awkward setting promotes the self-motivated exploratory adventure for players. In massively multiplayer online role-playing games adventure can also be initiated by calls for help from other players.

The person who is responsible for all non-player characters in a role-playing game, the management of all in-game content, and assessment of the actions and deeds of the player characters, is another player who does not have an in-game character. It is the Dungeon Master, who negotiates between the environment of the game-world and the physical world. In the physical world, the Dungeon Master communicates with players through narration, drawing, physical actions, and mathematical calculations. In-game, the Dungeon Master is the voice of the non-player characters and of the environment itself.

Archetypal figures are often recontextualized in game, but maintain similar character traits that reflect the 'real-world' type.



Fig1.7, Picture of a medicine man performing a ritual act that will enhance the abilities of another. In-game, this is called 'buffing', where the enhancement is the 'buff'. "A medicine man invokes the power of Marabout Dama Ciss and sprays a girl in order to project his own god-given power into her to reinforce her ability to achieve her dream."
www.corbis.com



Fig1.8a, Rendering of a monk from the massively multiplayer online role-playing game 'Guild Wars'. Monks, druids, mystics, shaman and other hybrid types are most valued in-game for their buffing and debuffing capabilities.

Fig 1.8b right, a screenshot of one character 'buffing' another in-game. The red aura around the head of the buffed character remains until the buff expires and must be recast. Note that these visible symptoms are relied upon to communicate the type of buff and its duration. In this screenshot, the red aura is particular to the 'Fortitude' buff of empath 'defenders' and 'controllers' in City of Heroes.



Spells per Level:	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Spell: _____	_____		_____		_____		School/Sphere: _____		
Level: _____	Range: _____		_____		Components: _____		Duration: _____		
Casting Time: _____	Area of Effect: _____		_____		Saving Throw: _____		Reversible?: _____		
Effect: _____	_____		_____		_____		Pages: _____		
Spell: _____	_____		_____		_____		School/Sphere: _____		
Level: _____	Range: _____		_____		Components: _____		Duration: _____		
Casting Time: _____	Area of Effect: _____		_____		Saving Throw: _____		Reversible?: _____		
Effect: _____	_____		_____		_____		Pages: _____		
Spell: _____	_____		_____		_____		School/Sphere: _____		
Level: _____	Range: _____		_____		Components: _____		Duration: _____		
Casting Time: _____	Area of Effect: _____		_____		Saving Throw: _____		Reversible?: _____		
Effect: _____	_____		_____		_____		Pages: _____		
Spell: _____	_____		_____		_____		School/Sphere: _____		
Level: _____	Range: _____		_____		Components: _____		Duration: _____		
Casting Time: _____	Area of Effect: _____		_____		Saving Throw: _____		Reversible?: _____		
Effect: _____	_____		_____		_____		Pages: _____		
Spell: _____	_____		_____		_____		School/Sphere: _____		
Level: _____	Range: _____		_____		Components: _____		Duration: _____		
Casting Time: _____	Area of Effect: _____		_____		Saving Throw: _____		Reversible?: _____		
Effect: _____	_____		_____		_____		Pages: _____		
Spell: _____	_____		_____		_____		School/Sphere: _____		
Level: _____	Range: _____		_____		Components: _____		Duration: _____		
Casting Time: _____	Area of Effect: _____		_____		Saving Throw: _____		Reversible?: _____		
Effect: _____	_____		_____		_____		Pages: _____		
Spell: _____	_____		_____		_____		School/Sphere: _____		
Level: _____	Range: _____		_____		Components: _____		Duration: _____		
Casting Time: _____	Area of Effect: _____		_____		Saving Throw: _____		Reversible?: _____		
Effect: _____	_____		_____		_____		Pages: _____		
Spell: _____	_____		_____		_____		School/Sphere: _____		
Level: _____	Range: _____		_____		Components: _____		Duration: _____		
Casting Time: _____	Area of Effect: _____		_____		Saving Throw: _____		Reversible?: _____		
Effect: _____	_____		_____		_____		Pages: _____		

Fig1.11, 3of4

A blank inventory of magic spells that a character may possess. Note the variety of elements which contribute to the casting of a spell, which makes the skill of casting and the art of knowing when and how to cast an important game-play mechanic that players must learn. A knowledgeable character is benefited even if they are not spellcasters themselves. This is because spell casting combines corporeal sensibilities which we have no real experience with.

The Dungeon Master

“The DM [Dungeon Master] comes to the table with a story arc which they would like to convey, in addition to being prepared to act as narrator and secondary actor on behalf of all of the various characters that may inhabit the world that they have created. On the other hand, the players have come with their characters prepared in the hopes of embarking on an exciting adventure, which the DM is responsible for providing... A Good DM [Dungeon Master] must remain selfless and flexible to suit his players’ needs, otherwise the game itself comes crashing to a halt. This is not an exact science, and it requires the DM to assess how the players react to the challenges that are offered to them, mentally noting what elicits gasps and what elicits yawns. However, once the DM has captured the heart of what the group is looking for, and has the imagination to back it up, truly unique and entertaining adventures can ensue wherein players are given the freedom to present creative solutions to problems, providing them with a true sense of agency in regards to the world. What is meant by ‘agency’ is that the players, by virtue of their action, change the world in which they inhabit, thus altering the story line accordingly.”⁸

A Dungeon Master operates as a modern or contemporary shaman to narrate and guide players on the visualizations and mental computations necessary for role-play gaming. In early tribal American cultures, a person who had undergone a traumatic psychological experience could become a shaman. These experiences could come about naturally in dreams, visions, or nightmares, indicating a sensitivity to the spiritual world, and the willingness of the spirits to communicate with such a person. Another technique, according to Campbell, to achieve this experience was to induce it through meditation and starvation in an adventure. Campbell called this adventure a vision quest. Vision quests involved a physical separation from the domestic space and out into the wilderness to a sacred site where one would meditate, fast, and hopefully receive a vision. Some shaman also received their dream or vision during severe illnesses that could come about during childhood. The person who undergoes such an experience and successfully returns from it with knowledge of the spirit world, or with the skills needed to interpret the relationships between the physical and invisible world are traditionally thought of as a shaman. An experienced shaman could even use their skills to boost the strengths or natural abilities of a tribesman/woman (such as their ability to hunt, bear children, etc), or to protect those who are undergoing their own vision quest or who are too weak to negotiate the infiltration of spirits in their dreams. Rather than block these dreams, a shaman may instead increase the tolerance of the dreamer to protect them and to allow them to receive the dreams in the hopes that they will become stronger and more independent in time, and eventually assume the role of shaman themselves.⁹ Shaman were required to communicate with the spirits and to ensure the spiritual and physical wellbeing of their community. They were trusted because only they were able to personally divine from the spirit world what others could not.

Like a shaman that relates the invisible spiritual world to the waking world, the Dungeon Master imports the invisible game-world to players, and translates player conduct back into the game-world. As a judge and moderator, a Dungeon Master assesses all actions and behaviours characters perform in-game. Dungeon Masters also adjust the difficulty of in-game challenges and enforce decorum amongst players. They can deviate from the instructions of a fixed rule system to assist players if they feel it is necessary. Sensitivity to the abilities and needs of in-game characters and of the players is critical to achieving balanced game-play. While the pedagogic functions of a Dungeon Master are codified according to standard rules of the game, the ineffable quality of the Dungeon Master’s natural ability to utilize the deep structure of architecture and space through narration that guides

7. Price 2003, pg4.

8. Paraphrased from an interview with Joseph Campbell, *The Power of Myth: The First Storytellers*.

Fig1.13 left, Rendering of City of Heroes non-player character super hero, 'Statesman'. Note that prominent non-player characters exhibit symbols that are iconographic of the mythology and cultural identity of the game-world. Since City of Heroes has a narrative that parallels world history (to a degree), and is a US city, Statesman's costume is highly concordant with symbols of American national identity. This helps to provide legitimacy to the adventure and narrative, as Statesman is an integral part of the mythology that shapes the narrative.



Fig1.14 right, The non-player character arch-villain 'Ghost Widow' also holds a prominent status in-game and is used as a type to derive other non-player characters (see example below).



Fig1.8, Concept Art, development of CoV/CoH villain type. From left to right: 'Fortuna Initiate', 'Fortuna', 'Fortuna Mistress', 'Black Widow' and 'Ghost Widow'.

players by limiting their freedoms without restricting their desires, cannot be taught. The pedigree of a good Dungeon Master cannot be overlooked as a source of intensity and credibility of experience in role-playing games.

Despite the intensity of experience a skilled Dungeon Master can provide, in the early 1990's players embraced graphic based computer role-playing games that eliminated the social experience of role-playing and the need for a Dungeon Master; and instead emphasized a single player, computer driven experience. What computers promised role players that traditional forms of role-playing could not was a guaranteed standard of quality and experience. Prior to computer role-playing, groups of gamers would disband when a suitable replacement for an absent Dungeon Master could not be found. Players' social habits and commitment to their characters would also dissipate as a result of the loss of their cult leader, their Dungeon Master.

Early Computer Role Playing Games

Role-playing games evolved from a nascent genre of turn-based strategy war games into mainstream popular culture. The role-playing game promised above all, an experience of excitement and rapture that went beyond the normal range of daily accomplishments and existence. By the late 1970's and into the 1990's, game developers used the tools from pen and paper role-playing games to construct graphic based role-playing games on the computer. In his 2003 thesis entitled 'Evolution of Interaction Schemes in Computer Role-Playing Games', a philosophy major at Carnegie Mellon University, Charley Price, reviewed games he considered to be benchmarks in the development of computer based role-playing games.

Beginning with Infocom's 'Zork', Price elaborated on the strengths of the game through the lens of traditional role-playing while keeping in mind the level of technological sophistication at the time. His thesis identified the difficulties early games faced in their attempts to translate the experience of traditional role-playing into an experience manufactured with the computer. Fundamentally, his work exposed the critical architectonic presence that is required to establish a vivid sense of place and orientation to support a player's character development and a variety of game-play mechanics. Price cites games such as Lucasarts' 'Monkey Island', Bioware's 'Planescape Torment', Maxis' 'The Sims', and 'Irrational's 'Freedom Force'. For him, these games were exemplars of the key developments to have strengthened the computer role-playing game, allowing the game to more directly reflect the complexity, flexibility, and fulfillment that is achievable in traditional role-playing games. The developments noteworthy for Price were: 'dialogue trees' (branching dialogue with non-player characters), increased non-player character involvement with game-play, object interaction, non-linear story lines with the ability for personal play styles and exploration of personal interests, and increased character specialization.

'Wolfenstein 3D' released in May of 1992, was the most prolific computer game at that time, as it was the first game to simulate three-dimensional space. In the game, a player 'saw' as though they were seeing from their character's eyes. The game was a 'kill or be killed' first person shooter; the first of its kind. Despite the three-dimensional space, the game narrative was very mon-scopic, and this reflected in the flexibility and versatility of its limiting game-play.

Early single player graphic based role-playing games assigned players a character, or provided them a small selection of characters to play with. Wolfenstein 3D assigned players the character BJ Blazkovicz. Blazkovicz began his character as a damned character; he was an American prisoner in

a Nazi compound, whose goal was to escape.

Wolfenstein 3D also establishes an 'us versus them' condition that was in accord with traditional mythological tales that focused on transformation through physical action. This condition allowed players to use Blazkowicz unmercifully and without regret against his enemies. It allowed players to view the enemy characters as objects and not as the representation of real people, as the players were asked to see their own character.

To win, Blazkowicz had to be guided and controlled by the player to kill Nazis that came in his path, acquire hidden resources, and find a route out of the large compound to freedom.

The critical flaw in early role-playing games was not the simplified graphics or absence of dynamic particle systems, or any other of the technological advancements that are currently available today. They were flawed by the linear narratives that could not create a diversity of experience or support varied game-play styles. In early games each challenge required the same solution and forced players to operate robotically. Games with such linear narratives have a very short life-span, as the experience of (re)playing a game would become unfulfilling and mechanistic. More to the point, being able to 'complete' or 'finish' a game was both the ultimate triumph and disappointment for the player whose character had become powerful and knowing, yet, had no more to do or see in-game.

By the mid 1990s games contained more complex narratives and content that was peripheral to the major story line. In later games, narratives were structured to generate a different outcome for each player, based on the actions of their characters.

“Infocom’s Zork is universally considered to be the forefather of the Adventure game genre. If we cast aside the classic, arcade-style games that came before it, such as Pong, Defender, etc., we are left with Zork as a classic player character game that is unique amongst its peers, both in its unusually non-abstracted text-based interface, and in the relatively complex story that it attempted to tell. Zork not only paved the way for a litany of future text adventure games (the much beloved Planetfall perhaps being the best example of the genre), but it set the bar by which interactivity was to be judged.

In Zork, the player is an adventurer who has come seeking the treasures of a long forgotten race, supposedly hidden throughout the caverns of their once legendary empire. The player has received a tip that says the entrance to said caverns can be found within a conspicuous white house in the middle of nowhere, and thus the saga begins.

Given the text input/output interface, Zork’s DMBOT was designed to reflect an actual player-DM conversation as much as possible. It did so by taking whatever string of characters the player entered, parsing out the relevant information (usually in the form of verb-object, such as “get leaflet”), and then returning a simple response that indicated how the player’s action impacted the world (if at all). While this often took a bit of getting used to as the player experimented with which verbs were and were not acceptable, after a few minutes the player developed an appropriate vocabulary that allowed them to navigate the world with relative ease (confusion was mostly limited to verbs, since objects would be referred to explicitly in room descriptions and the like). This vocabulary encompassed a reasonably wide range of potential actions, from “get” to “read” to “jump” to “attack”, which provided the player with a sense that, just about anything they wanted to try and do within the world was doable, within reason. Granted, if you were walking through the woods and you typed, “sneer at tree”, it would be seen as an invalid request, but rightfully so, since there would be no conceivable reason within the game-world to perform such an action. Therefore, even though the list of commands was fairly limited, the illusion of utter interactivity was maintained, which is essentially exhibiting the same skill that is required from a good DM, who seeks to take explicit requests, abstract them to interpretable fragments, and then return results in a fashion that maintains player agency.

The story in Zork is pretty straightforward and formulaic – find caverns, explore, collect treasure, ward off monsters, escape. However, the use of the storytelling medium of simple text entry and response is quite impressive. Take, for example a scenario early in the game when you first enter the caverns :

>open trapdoor

The door reluctantly opens to reveal a rickety staircase descending into darkness.

>go down

It is pitch-black. You are likely to be eaten by a grue.

Immediately there is a dramatic rise in tension. The player’s leisurely exploration of the game-world suddenly has a dangerous element introduced and every action counts. It is not uncommon for most players to freeze at this moment and carefully ponder, heart pounding, their next move. Even if they succeed in making a “safe” move that prevents their being eaten, the stakes still continue to escalate. Consider if the player was fortunate enough to have a lamp on their possession upon descending the stairs:

>turn on lamp

The lamp is now on.

Cellar.

You are in a dark and damp cellar with a narrow passageway leading east, and a crawlway to the south. On the west is the bottom of a steep metal ramp which is unclimbable. The trapdoor crashes shut, and you hear someone barring it.

Now, in addition to imminent danger, there is no turning back, no sanctuary available to calm one’s nerves. As one could imagine, tension is maintained and rekindled throughout the Zork adventure, keeping the player glued to the screen, all the while hesitant to make their next move. Such a sensation is a clear indication of implicit immersion and agency within the world, where the player feels responsible for the circumstances at hand, as opposed to the frustrating feeling of the computer using the player as the butt end of a cruel joke.

There is very little elaborate NPC interaction in Zork, as it is much more a game of player vs. environment. However, the way that environment is represented by both described surroundings and assailants alike causes the written environs to come alive within the player’s mind, clearly an example of a job well done on the part of a good DM.”¹⁰

Price’s commentary on the game ‘Zork’ emphasizes that even verbal and text based role-playing games (like pen and paper games) rely as heavily on the architectonic construction of space. His thesis works to explicate the success of several games based on the mechanics of their game-play with the establishment of credible architectural spaces. His review reveals that technologically unsophisticated games with simple but effective game-play mechanics can be superior to technologically sophisticated game that use impressive graphics but do not support their game-play through a credible mythological narrative. In such games, the visual images are mere decoration.

10. Price 2003, pg 11-13.

Fig1.16, Concept Art from Diablo 2, released Sept 2001. Architectural paradigms are used to support the mood in game and establish credibility for the game's mythology and living narrative. As well, typology helps players to recognise the implications of their actions and to assess the risks involved in participating in certain quests, as accepting risk is a tenet of the transformation of the hero's adventure. Thus it is imperative that players are able to discern risk in order that they can accept or reject integration with the narrative according to their own readiness.

Blizzard Entertainment's 'Diablo', released 1996:

"An unknown force of evil has swept across the land, plunging it into civil war and terrorizing the populace. A mad king, his missing son, and a mysterious Archbishop are all piece to the puzzle that faces you. You have journeyed to the source of the evil, the town of Tristram. Now inhabited by only a handful of survivors. The cathedral there is built over the ruins of an ancient monastery, and now eerie lights and sounds are heard echoing through its abandoned halls.

Diablo invites you to enter a world of dark Gothic fantasy. Play as a brave warrior, cunning rogue, or mysterious sorcerer. As you venture deeper into the labyrinth, you'll discover weapons, armour, and magical treasures, and develop your character's skills and abilities."

Bethesda Softworks' Elder Scrolls 'Oblivion', released 2006:

"Oblivion is a single-player game that takes place in Tamriel's capital province, Cyrodiil. You are given the task of finding the hidden heir to a throne that sits empty, the previous emperor having been killed by an unknown assassin.

With no true Emperor, the gates to Oblivion (the equivalent of hell in the world of Tamriel) open, and demons begin to invade Cyrodiil and attack its people and towns. It's up to you to find the lost heir to the throne and unravel the sinister plot that threatens to destroy all of Tamriel."



© 2000 BLIZZARD ENTERTAINMENT. ALL RIGHTS RESERVED

Narratives

A quest that is unconditionally required for player integration with the narrative, as in early computer gaming, can be problematic as it becomes a central and commanding path that players are 'forced' to take. Central quests that provide the only path to credible transformation is contrary to the potentialities of the experience that traditional role-playing games are meant to provide. As in traditional mythology, it is often through the exploration and investigation of other undefined paths or goals that players find fulfillment, especially when these discoveries are reflected within the greater scope of the narrative. While side quests and other non-central quests may involve operations that are unlike the tasks required of the main or central goal, they can still offer the fulfillment and appreciation that players are meant (by the game developers) to receive from the central quest. It is also likely that these quests, considered to be peripheral to the narrative, and often unrestricted and player initiated, can dwarf the desire to participate in a central quest as was the case for Aarseth in his paper entitled 'Playing Research: Methodological approaches to game analysis' in 2003. Aarseth documented his experience playing Elder Scrolls 'Morrowind', a Bethesda Softworks game that preceded 'Oblivion'. The importance of game-play mechanics and the integration into non-linear narratives that is critical in role-playing games is exemplared in his writings included in more detail on the final pages of this chapter.

In keeping with Aarseth's view of the importance of actual game-play experience in research I will include my own experience in this thesis. My experience in Morrowind was similar to Aarseth's in that I too was playing as an explorer and achiever type. I played for roughly a month developing a magic user who eventually challenged the head of the mage's guild to combat. After becoming the head of the Mage's Guild and acquiring a number of powerful artifacts and substantial financial means, I accidentally learned (in-game) of the central quest while speaking to non-player characters about financing the construction of a mansion for my character. When I learned about the central quest, the credibility of my past experience and of the accomplishments I had made in game completely deteriorated, as none of them had in any way influenced the narrative. Learning of my character's uninitiated status in the central quest made me feel as though I had been playing in an expanded training or simulation setting during the course of the past month. It was as if I was still a newbie with respect to the narrative. I had more powers and I had means but knew nothing about what the game was telling me mattered, which was the central quest. What I was capable of and what I did know seemed irrelevant and was totally devalued. As quickly as I had begun playing, I stopped.

While the presence of a central quest in role-playing games can problematize the experience of fulfilling side quests, the absence of a central quest could also problematize a game made up entirely of 'side-quests' for the same reason; there will be little evidence, if any, of a player's actions or progress towards some over-arching goals reflected in the mythology of the game-world. The rule system and the game-theology must be flexible enough ,to reflect the actions of players while maintaining a clear and identifiable game identity. In 'Morrowind' the absence of theology to guide and educate players generated a schism between game-play and the narrative, whereby a player's play-style and experience bore no weight on the narrative of the game. Specifically, there were too few rules and too much freedom. Players could move about and were able (as was the case in my experience) to achieve great feats without any form of integration or narrative exposition. The skill system, which was based on a rational and linear model of experience, allowed characters to develop virtually any skill simply by using it during game-play. This system problematizes the credibility of a fantasy game that draws on mythological typology rooted in hierarchical social and spatial order; as someone

uninitiated should never have the ability to participate in an activity or have access to knowledge that is outside of the scope of their social status or their level of integration in the narrative. With respect to Morrowind, it should have been impossible for a totally uninitiated character (in the 'central' narrative) to have amassed enough knowledge and power to successfully challenge an arch-mage guild master and assume his role.

In Morrowind, player characters were able to learn whatever they wanted, and could perform any of the tasks or functions the game was design to support, as long as they had built up their experience in the requisite areas. This reflects a deep misunderstanding of the paradigms simulated in game and is more suited to a modern or contemporary game-world, not a fantasy world. The freedoms in Morrowind would have been less problematic if they had been incorporated within a model that would provide the opportunity for characters to integrate themselves with the narrative, or to reject it outright. For Aarseth, as well as myself this opportunity was not presented and in both our cases, our characters were unable to perform as progenitors of events that would reveal details of the mythology of the game narrative. As a result, our characters could not carry the mythological associations that would have maintained the value in our experience as well as the desire to participate in the main quest.

There is also a similar problem on the opposite pole of strong central narratives. In many novelty games there is always a central quest that needs to be followed, and imposes strict limitations on the development of characters. These games are usually 'spin-offs' from television shows, popular movies, or comic books. True role-playing games that wish to avoid the pitfalls that would transform it into a novelty game must be designed with a balanced coincidence of character development and narrative exposition such that players can knowingly reject or accept integration depending on their play-style and personal goals. For instance, if a player learns of a guarded non-player character (NPC) who will provide them with an important mission, they should be able to act in a number of ways to reach him/her. For example, a player might choose to present or wear an artifact or article of clothing that will grant them access to the NPC (that they acquired by making it/finding it/stealing it/killing/robbing etc), they can choose to perform a task for the guards who might agree to grant access, they can attack the guards and barge in, they can sneak in a number of ways (at night, using invisibility, putting the guards to sleep, breaching a wall, et al), or they might choose to ignore this NPC entirely and follow another path of their own choosing, or seek out an NPC who is more accessible.

"After having played quest games for nearly twenty years, I am struck by the repetitiveness of the situation. Receive a task, find a solution, look for the next challenge. Or, in other words, explore, kill, explore some more, kill some more, etc. The two redeeming features of such games were improved graphics and, as a consequence, richer, better game worlds. From Crowther and Woods' original Adventure via Myst and Duke Nukem to Half-Life, Serious Sam, No One Lives Forever, Max Payne and beyond, the game-play stays more or less the same, the rules likewise, but the game-world, as a corollary of Moore's Law, improves yearly (along with expanded development budgets). If not, the new games would never sell at all. Where is the new adventure game with retarded graphics that was successful? It does not exist. Take away the game-world, and what is left is literally the same game skeleton, give or take an algorithm. Bungie's quite successful first-person-shooter Halo was more or less a remake of their earlier hit Marathon, but with better graphics and an improved engine, of course. Science fiction futurism, medieval fantasy, or 20th century noir, the formula is the same: kill, explore, kill some more. The linear structure of adventure games like these is unnoticed the first time you play one, and perhaps also the second or third game you play, but after a while the boredom hits, and even the most enjoyable game becomes un-re-playable. Another law than Moore's is probably at work here: the more linear, the less replayable. The corollary – the more nonlinear, the more replayable – also seems true. One such nonlinear game is Morrowind (Bethesda Softworks, 2002), the third installment in The Elder Scrolls trilogy. Morrowind is set in a mysterious fantasy empire, with elves, orcs, various political and religious organizations, monster-infested waste lands, Imperial law enforcers, magical weapons, treasure dungeons, and more. Morrowind is a bildung-game in the tradition of Rogue/Nethack, Ultima Underworld and Diablo, where the player-character gathers strength and personal skills in a typical rags-to-riches scenario. Unlike these dungeon games, however, Morrowind is set in an open landscape, populated with small towns and occasional large cities, and plenty of underground crypts, caves and dungeons. The scale of the game-world is impressive, as is the variety of wildlife, people and vegetation, and even architectural styles.

The game starts with the player choosing/creating a character. This character is then let loose in the Morrowind world, freed from prison by the Emperor's order, and with some yet undefined task to perform in return. At first the world and your place in it is bewildering. The non-playing characters you meet are willing to talk to you, especially in the towns, where imperial guards keep order, but out in the open country-side monsters and villains will attack you on sight. Luckily, there are a few alternative means of transport, such as silt-riders (elephant-sized, strange-looking bugs) whose drivers will take you to the nearby towns for a few coins. Slowly you gather information and join guilds or factions to perform tasks that will make you rise in rank. As you perform these tasks and gather experience points you increase your skills. A quicker way to do this is to pay for private lessons from various eh.. personal trainers you meet here and there.

Little by little you learn to fight, to use magic and to navigate the world, and slowly the map of Morrowind expands to let you see more and more of the grand picture. The exact events as they happen, however, are completely unique from player to player. The first thing I did after having bought a suitable sword with my meager initial allowance, was to wander into a dungeon and get myself slaughtered by the despicable villain who lived there. Needless to say, much later when I happened by that region again, I sought a terrible revenge and afterwards looted his filthy abode, not finding anything of real value.

After my first unfortunate encounter, I learned my lesson and played much more carefully and cowardly, through numerous colorful adventures that space will not allow me to recount here. I learned that stealth and cunning get you much further than brawny behaviour. Money is very hard to come by at first, so I decided to leave my real-world morals behind, and steal whatever I could get away with. Most items in the game have owners, but you can still sell stolen goods to others. In particular, a dour book seller in Vivec, the largest city, became a favorite victim. I would visit his shop and stuff away a few dozen expensive volumes when he and the guard weren't looking. Then I would sell them to a merchant across the street. Eventually nearly half his three hundred books were gone, but since I was not actually caught in the act, the poor book seller never really noticed anything, regardless of his half-empty shelves. Later I discovered an even more profitable exploit, which wasn't even illegal. With

Aarseth documented his experience playing Morrowind. His experience suggests a relationship between the narrative and the game-play mechanics which must work to support each other to sustain the veracity of one's experience.

all the selling, my merchant skill went through the roof. This meant that I could bargain well, and make much greater profits than a beginner would. So I would seek out the merchant with the most money, which happened to be an apothecary in the provincial town of Balmora, buy her most expensive item, a mortar, at a very reasonable price, and sell it back to her for a very nice profit. This I would repeat over and over, till she was out of money. I would then go upstairs and sleep in her bed for 24 hours (the time it takes for her money to regenerate) and start the process over.

With an unlimited supply of money, I could buy the training and weapons I wanted, and become a master fighter, the scourge of Morrowind. No monster too dangerous, no quest too hard. I could explore freely, and I could enter the most dangerous places I could find, such as the volcano at the center of the world. There, in a dungeon, lived a demon named Dagoth Ur, and this, finally, was an opponent worthy of my might and magic.

Until that moment, I had enjoyed a game with almost no linearity whatsoever. Any quest presented to me I could take or refuse, and little consequence would come of it. Sometimes a character would ask me to help him, and follow me around until I did, and I still remember with some shame a near-naked mercenary I promised to help find his gear, but had to abandon when he got stuck in a cave (the NPCs² have limited navigation skills, and get stuck easily). Occasionally I would do the wrong thing, as when I was on a mission to eliminate two Kwama mine robbers but killed two innocent miners instead (they were in the wrong place and fit the description . . .). But, all in all, these were happy times, exploring, fighting, and pearl-diving, in a vast landscape filled with countless wonders. I even learned to fly.

However, when I met Dagoth Ur, my world changed. Dagoth Ur was simply too powerful to kill, or, as he tauntingly pointed out, I did not have the right tools for the job. Hmm. Where to get those tools? I had a rough idea, but it would involve lots of tedious exploring, so curiosity got the better of me and I finally dropped out of the game and googled for a walkthrough.

That was a mistake. The walkthrough contained a wealth of information, about quests, characters and challenges I did not even know existed, and about a central quest that I had never heard of. So instead of simply finding the information I wanted, I was overloaded with information I had never asked for. This should have added depth to my impression of the game-world, but it had the opposite, flattening effect: Instead of making me want to explore further, the walkthrough put me off playing the game! The magic was gone, and my personal investment in the world, after a week of playing, was totally devalued. I stopped playing. I still have fond memories of a great game, where my wish for an open, undirected game experience came true beautifully. However, the knowledge that there was a central quest, and that by following a recipe made by others I would be able to enact this quest, simply put me off further playing. I was no longer in love with the game."¹¹

11. Aarseth 2003, pg4-5.

Fig2.1 facing page, Blizzard Entertainment concept art depicting the fallen human character 'Kerrigan'. Like mythological figures such as Jesus and Moses, Kerrigan undergoes a series of transformations that allow her to persist, albeit in a totally different guise, throughout the Starcraft narrative. Her involvement maintains credibility and historical context in the narrative.



INTEGRATION INTO THE NARRATIVE:

THE HERO CYCLE

Making a Hero – the deep structure of game-play

There is a common structure to the hero's adventure in mythological tales. Adventure is used to transform a figure into a hero and to develop a narrative in which that hero is an integral part. Joseph Campbell identifies the model which he called the 'Hero Cycle' in 'The Hero with a Thousand Faces.'¹ Campbell's model is based on the assumption that a single archetypal mythos is common to all hero figures in mythology. He used this model to reveal striking general similarities between myths that had been previously concealed by their particular cultural semiotics. Role-playing games structure their narratives according to this model, however research for this thesis has not revealed any documented proof to suggest a conscious awareness of the Hero Cycle by any game developers. Despite an apparent variable conscious awareness of the Hero Cycle, it is unquestionably present in most role-playing games to varying degrees. For game developers, understanding the mechanisms which can be used to recreate the conditions of the Hero Cycle and how deeply those must be programmed as part of the game, is critical in fully realizing the potential for experiencing the hero's adventure in role-playing games yet to be designed.

Before understanding how a game can recreate the Hero Cycle, however, one must first understand the model itself. Most simply, the Hero Cycle organises a series of events that project a figure out to adventure where they face trials, receive boons, and then return to share those boons. As seen in the illustration on the facing page, there are four main stages within the cycle, yet within each stage multiple mini-cycles can occur (see page 42). Note that throughout the adventure in a Hero Cycle, the character must be willing to accept the risks and to provide the necessary sacrifices that are required within each stage of the cycle to transform as a hero. However it is important to also remember that mythology is clear that a hero will not face a challenge they cannot overcome and will not be asked or required to sacrifice something that is an intrinsic part of them or that they truly need – these two principles are also key factors which suggest a correlation between the organisation of space and the identity of the hero in mythology. Game developers must make use of such clues to strengthen their approximation of the hero's adventure if they truly wish to recreate a rewarding experience of transformation in their games, one that reaches, as Campbell suggests, into the deepest recesses of the individual and group psyches.

Stage One

The first stage of the Hero Cycle is the separation from an originating place, concept or story; this begins the exposition of a larger and complex narrative in a role-playing game. In the first stage a character commonly receives a call to action but may also respond to a threat, or simply fall into a serendipitous adventure. The call is often announced to the hero by another character who acts as a 'herald', "often represented as dark or terrifying and judged evil by the world, [the herald] may call the character to adventure simply by the crisis of his appearance."² The call can also come from within a character or a community that requires some form of salvation.

In-game as in mythology, this salvation can include finding or developing an identity or establishing (or re-establishing) a social order. A mystical or physical salvation including the escape from prison/danger, or the curing of a disease or curse is also commonplace in role-playing games. This stage pitches a character out of their domestic and normative life and coincides with the mental projection out from the domestic and normative life that players must make to immerse themselves

1. Campbell 1949, Part 1: The Adventure of the Hero.

2. http://en.wikipedia.org/wiki/The_Hero_with_a_Thousand_Faces

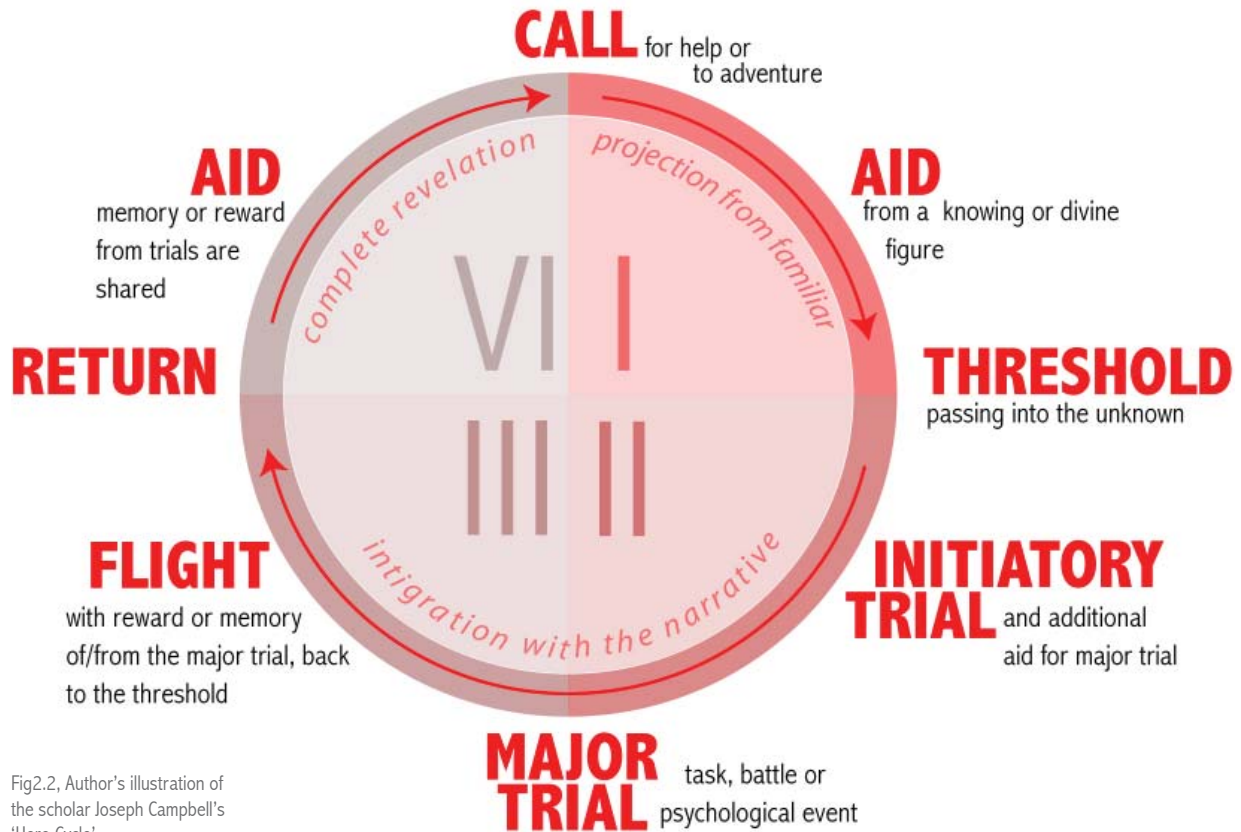


Fig2.2, Author's illustration of the scholar Joseph Campbell's 'Hero Cycle'.

in the game-world. It is the first transformation of consciousness in the Hero Cycle that requires the acceptance of the (known) risks of the adventure and the sacrifice of one's former identity. In mythology this stage most often occurs in safe and domesticated places that are familiar and comforting. Role-playing games follow suit by programming their city and domestic spaces to function as the primary locations for receiving or sending out calls for aid and as the 'beginning' spaces where new characters appear.

To pass from the first stage to the second stage a threshold that divides the domestic space from the unknown or unsafe world must be crossed. In mythology a guardian is often encountered at or as the threshold, whereas a role-playing game always maintains an architectonic threshold at this point of crossing (though a guardian may be present). This threshold commonly takes the form of a gate, bridge, door, or a vehicle that can navigate across air, water, or another impassable obstacle such as a ship, a railcar, or a taxi or ferry that could be mechanical or organic. Magic and mechanical gateways are also commonly used though despite their fantastical implications, they maintain an architecturally recognizable form, material, and mode of engagement that identifies them as a threshold or gateway. For example, in-game there are few magic portals or gateways that one cannot engage by passing through the exact same way as they would pass through a regular architectural gate or portal.

The act of movement through space is critical in linking the identity of the hero to the narrative and is discussed more fully developed in Chapters Four, Five and Six. Not only do role-playing games architecturally mark the location of their threshold points, they also rely on the architectural form and type to help explicate risk associated with crossing and rely on players' ability to read the architectural form and type to make the assessment. For example, a footbridge that connects the extreme edge

of a grassy landscape to the extreme edge of another (unfamiliar) landscape suggests an ease of access that is relatively safe and sound, whereas a player might hesitate before a magic gateway, they have no way to know what is on the other side, nor do they necessarily know whether or not there is a portal or gate that will allow them to return.

Taxi services can also act as the threshold crossing, yet they cost money and could leave a low level player stranded in an undesirable or dangerous area if they cannot afford the return trip. While crossing the threshold is necessary to progress to the next stage in a Hero Cycle, it is absolutely imperative that the decision to hold off from crossing should not result in the stunting of a character's development or integration into the narrative unless all other thresholds have already been crossed. This principle should be an irrevocable tenet for all game designers who are interested in developing a good role-playing game as it is an exact parallel from the lesson mythology teaches: that "the adventure that a hero is ready for is the adventure that the hero gets"³. This principle is necessary to allow for the development of players with different backgrounds, interests, and play-styles to enjoy the same game.

Stage Two

Once a hero has crossed the threshold and is in the second stage of their cycle, they must explore or travel in the new space, possibly to avoid immediate danger or to find or reach a desirable object, character (another PC or NPC), or destination. In this stage, as in traditional myths, players are able to discover and interact with spaces and places that were previously unknown to them. Their reconnoitering of the unfamiliar space transforms it as an unknown (potential wilderness) into a known (relatively safe) space.

Games should be designed to allow players to successfully accomplish their immediate and minor goals in new spaces and to receive artifacts or knowledge that can help them with their major trial or goal to come. This aid begins another transformation whereby a character takes on the attributes of the boons given from the unknown space and in a sense, becomes a character who is now of the once unknown or foreign space. Campbell believed that this experience is part of the narrative integration of a hero, and occurs as they emerge out of the threshold as a lost or broken figure (often symbolised by being 'shredded' or torn) and rediscover themselves by discovering the new landscape (put themselves back together, form a clear image). Campbell called this stage of narrative integration and transformation 'The Belly of the Whale'.⁴

The story of Jonah and the Whale provides a clear model for the death and resurrection of identity necessary in many Hero Cycles. The prophet Jonah was commanded by God to go to the city of Nineveh and prophesy to the Ninevites, instead fled by ship to Tarshish. En route Jonah is thrown overboard to save the crew from a storm that threatens the ship. Rather than dying a physical death in the waters, Jonah is saved by being swallowed by a whale. In its belly, Jonah refashions himself and is able to ask for forgiveness. Forgiveness is granted, the whale spits the revitalized Jonah out, and he is able to hence to Nineveh to give his prophecy and thus, save the city. The architectonic separation required for the death and resurrection of identity is symbolized in this myth through the whale, not only because of the physical separation of its interior space, but also due to the natural transformative powers of digestion that occurs in the body. Jonah's reconstruction allows him to participate in the narrative proactively, rather than being swept along by it. Whereas he had previously denied his call from God (rather than reject it), he now possesses the internal strength to accept the risks associated with God's demand and is able to perform as required.

3. Campbell, Interview: The Hero's Adventure

4. Campbell 1949, Chapter 1: Departure.



Fig2.3, Prophet Jonah Escapes Capture in Nineveh JC Bodenehr, late 17th century. According to Campbell, the theme of descent, fragmentation or death can be manifested in many ways. Whatever symbols are used in any given myth, they can be parsed to reveal similar substructure of narrative events and conditions.

Stage Three

The transition from the second to the third stage is accomplished by facing a major trial or goal. As with any other event, trial or quest put before a player in a role-playing game, the rejection of a major trial should not totally retard their ability to advance in their character development unless absolutely necessary. With that said, characters who reject the trials they are offered may suffer from shame or other forms of punishment and will eventually begin to stagnate at the level of development they are at. As in mythology, a hero is required to take risks and make sacrifices in order that they can transform and should not be forced to accept risk or sacrifice they feel unready for. Games must be able to ensure that players who are stagnating or hesitating will receive aid that provokes them to move forward willingly.

While it is important for games to provide a variety of paths that can lead a player character to become a hero, it is also important that the most significant advancements that occur are the result of the trials set before the player. It is important that these trials can be overcome through the different inherent strengths of each of the four archetypal characters discussed earlier, as this will enable players to engage in trials on their own terms and with their own play style.

Take for example, one of the oldest and most common hero myths, the myth of setting out to slay a monster (and then returning to tell of it/prove it)⁵. In such stories, the hero is strengthened or empowered by some form of buff, weapon or armour that enables them to complete the heroic physical act. This support is instrumental in completing physical trials for damage dealing and tanking characters in-game and is provided by the support of buffing/debuffing and controlling characters. In teams of damage and non-damage dealing archetypes, each character aids the other in completing

5. Campbell, Interview: The Hero's Adventure.

the same transformative quest whilst players are simultaneously developing a shared memory of the heroic acts performed by their characters. A shortcoming of the role-playing game is the difficulty with which it can simulate psychological trials that are common in mythology, unless one takes into consideration the psychological transformation of the player, though this is not a truly heroic act unless the player is somehow at risk by entering into their meditation. On that note, one may speculate that players who stubbornly refuse to withdraw from gaming may be doing so because it requires additional sacrifice and can strengthen the integrity of their experience in-game.

Mythologically speaking, obsessed players are setting themselves up to risk harm in order that they can elevate their experience gaming into a mentally heroic act; something that is inconceivable for the casual or non-gamer. In fact, most avid or hardcore gamers will admit that they do sacrifice in their real lives in order that they can invest the amount of time and energy they put into gaming. Like mythological figures, gamers admit that at times the sacrifices are too great, while at other times, they believe that they are necessary and totally worthwhile.

Stage Four

A major trial bridges the third and fourth stage of the Hero Cycle, culminating with a single task of slaying or defeating an enemy. This trial can also involve reaching a destination that is across a dangerous landscape or more simply discovering the correct path or sequences of actions to move forward with the narrative exposition or character integration.

The fourth stage in the Hero Cycle is the afterglow of the major trial and results in the acquisition of useful knowledge or objects. Boons are acquired in a number of ways in this stage and can even contribute to the precipitation of new Hero Cycles that extend the scope of the current cycle a character is in. The boons a player can receive range from straightforward weapons or objects for their personal use, to complex mythological puzzle pieces or special skills. These boons are symbolic of the achievement made by the character which enable them to deeply integrate themselves with the narrative, by performing new tasks and exploring more. At the end of the fourth stage a hero must take the boons (either physical artifacts, or the enlightenment/knowledge gained in their adventure) back through the threshold. For this reason boons are not always useful in-game until a character has brought them home or taken them to a city where their powers can be revealed, or where training in their use is available.

In mythology, the most powerful rewards are brought about to change the consciousness of a society and to teach its citizens a new way of living. In role-playing games, players can complete the fourth and final stage of a Hero Cycle in a passive manner as a result of the unconscious efforts of the game developers. As mentioned earlier, role-playing games are built on the backs of the lessons learned in mythology, whether consciously or subconsciously, and have structured their spaces to ensure a return and reintegration of the hero after his or her trials are completed. While the flight and return of the hero may involve a complex or dangerous series of trials of its own, the emergence of a player character back to the place of their origin rebirths that character as a hero who bears the memory, reward, and knowledge of their adventure. In-game, player characters are constantly returning from their adventures with boons that visibly differentiate them from other characters in the over-arching game society who do not possess the same boons, and who are themselves returning from their own adventures.

Mini-Cycles

In role-playing games as in mythology the narrative is structured according to a series of minor Hero Cycles, the totality of which can be looked upon as the single major cycle of transformation described above. Two poignant examples of the use of mini-Hero Cycles to uphold the integrity of a bigger narrative are seen in the narrative mythology of Moses and Jesus. These figures were required to assume risks throughout their lives, often risking both their physical and spiritual well being simultaneously. The boons they returned with ranged from laws for human conduct and ways of living to divine revelation that could lead one to salvation. As well, each phase of their life can be described by the transformations and integration that was brought about from the Hero Cycle. Role-playing games are designed to enact these mini-cycles to allow players to guide their characters as they see fit, without truly having them reject the entire game or mythology. It is difficult for games to simulate the psychological transformation that characters like Moses and Jesus underwent, however, they compensate by providing players with the ability to develop social ties with other players, and to work collectively as a team in online games. Players can thus integrate themselves in-game as prominent or well respected figures or as hated dishonourable characters as they see fit.



Fig2.4, Moses Brings Forth Water Out of the Rock by Follower of Filippino Lippi, 1500.

Moses was unwilling to speak with the rock as God had commanded in favour of 'saving face' in front of the tribes. Instead Moses hit the rock twice before it brought forth water. His non-compliance with God's instruction to speak to the rock directly contradicts with the covenant in the Sinai, thus it is reasonable for Moses to die outside of Canaan. By rejecting his covenant to obey the laws of God, Moses removed himself from the cycle of events that would have carried him with the tribes into Canaan. Moses does not become a fallen figure for rejecting the call to provide aid and is fated to die outside of that land, after passing leadership to capable hands. Whatever Moses' fate, his refusal did not halt the progress of the narrative, or of his own development, it simply shifted it on another course.

Integration into a narrative can occur by ritualistically performing rites prescribed by the theology of the narrative. A rejection of this theology and action against integration can also be performed to maintain a separation from the continuum or identity of a narrative. In-game, the refusal to a call to action, or the rejection of risk or sacrifice should not lead to the retardation the exposition of the narrative or of one's character development.

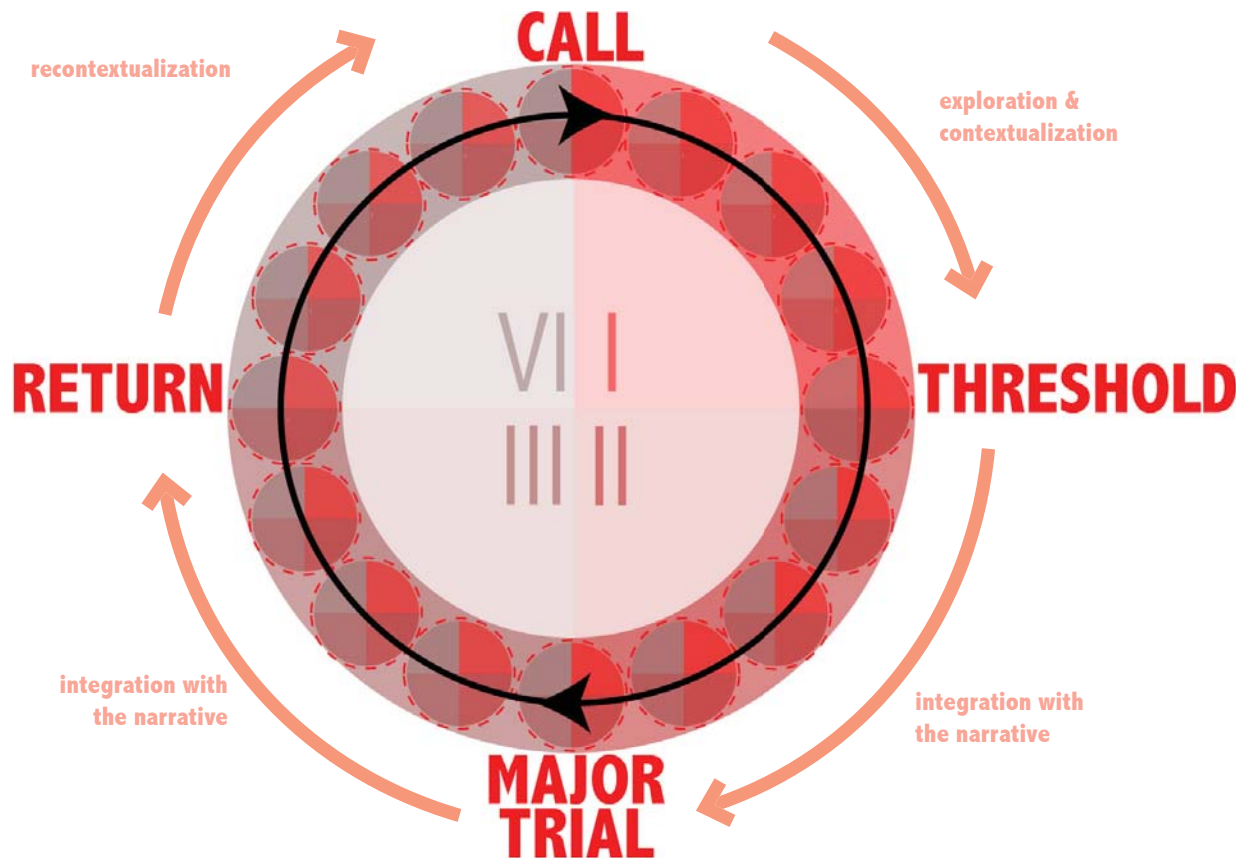


Fig2.5, Conceptual diagram showing the structure of Hero-Cycles as a collection of an infinite number of mini-Hero-Cycles. As such, each cycle precipitates the next, and teaches that life requires transformation.



Moses was required to save himself while still an infant, when was tested by the Pharaoh. He was put before hot coals and the Pharaoh's gold, and was expected to choose between them. By putting the hot coal in his mouth he was spared execution, proving he did not long for the Pharaoh's riches and was not a threat. The speech impediment developed here would later require that Aaron speak on Moses' behalf when confronting the Pharaoh in his court. This is one mini-cycle that makes up the greater mythology in the Torah.

Fig2.6, Moses Undergoing Trial by Fire, 1502-05 Galleria Degli Uffizi, Florence.



Fig2.7, The Finding of Moses, Edwin Long.

There are two unavoidable heroic acts made during every human being's life, birth and death. While mythology teaches that one cannot control the events that contribute to the conditions of one's birth, those conditions are nonetheless imprinted as part of our identity. At the time of Moses' birth, the Pharaoh had commanded that all newborn Israelite males to be drowned in the Nile. At great risk, Yochevet (Moses' mother) hid her baby until she was ready to send him away. She made a basket of reeds, and set him adrift on the Nile. He was rescued by the Pharaoh's daughter who was bathing in the waters, and despite knowing that he was a Hebrew, she took him in secret as her own. Moses, actually pronounced 'Mo-Sh-eh' in Hebrew, comes from 'Me-Shee-tee-hoo', meaning 'I drew him out' (of the water), as he was named to reflect this act – which is itself (drawing life out of a body of water) a metaphor with many significances.



Fig2.8, The Annunciation, Fra Angelico 1430-32.

Fra Angelico's 'The Annunciation' depicts the fall from grace in the Garden of Eden where Adam and Eve were cast out of nature and into the world of mankind, and foretells man's reconciliation with God, and therefore with nature (and visa versa). The beam of holy light represents the presence of God and travels from the sky down to Mary, through several hierarchical layers of space. As it passes from one layer to the next, there is a spiritual transformation that occurs to the light until it ultimately reaches the human, Mary who acts as a living, organic vessel allowing further transformation of the light into a baby. The first layer the light passes from is the sky, then the earth, then the architecturally framed space that the angel Gabriel is in. The light then passes to the arch under which Mary sits. The ceiling of the architecture is painted to resemble a night sky with stars, and suggests that Mary, whose robe is the same blue as the painted sky, is also being penetrated by the holy light, and impregnated. Within the mini-cycle depicted in this image, there is a strong correlation made between the space as a vessel that can hold a significance for reading the state of transformation in the Hero Cycle.

Fig3.1 facing page, Modified concept art from Diablo II, by Blizzard Entertainment Inc. The iconography of the knighthood is used to stylize many hybrid character types in role-playing games as knights were themselves considered to embody multiple roles that extended to religious and prosaic matters. In-game as in mythology, the knight is associated with religious virtues of faith and fidelity, as well as upholding secular interests such as loyalty and honour between men and the protection of earthy goods and material resources.



Definition and Etymology

Avatars are the only means for players to access game space and participate in-game because they are consubstantial with that world. They are part of a topology of iconographic images that support the game's theology as players explore the landscape and move through space on their Hero Cycles. The avatar is the body of the player's character and the vehicle through which players are able to enter the simulation to access in-game content. While the word avatar was popularised in Western culture by William Gibson's novel 'Neuromancer', published in 1984, and later by Neal Stephenson's novel 'Snow Crash', published in 1992 to mean 'online virtual bodies', the word avatar is epistemologically derived from Eastern mythology and describes a divine transformation of form and consciousness. Avatar comes from the Sanskrit 'avatara', which is constructed from 'ava' and 'tara', 'ava' meaning 'to protect', 'to defend', and 'to please'¹, 'tara' meaning 'crossing over'², and 'star'³. Together, 'avatara' can be understood to mean the 'descent of God', an as 'incarnation'. According to India's ancient Vedas,

“The Avatara, or incarnation of Godhead, descends from the kingdom of God for [creating and maintaining the] material manifestation. And the particular form of the Personality of Godhead who so descends is called an incarnation, or Avatara. Such incarnations are situated in the spiritual world, the kingdom of God. When They descend to the material creation, They assume the name Avatara.” (Chaitanya-caritamrita 2.20.263 -264)⁴

Avatars in games, like the avatara, are symbolic of the protection, instruction and redemption that their players will provide for them. While avatars can exhibit weakness such as fatigue or failing health, they can also be developed to great and almost godlike capabilities within the game-world. With that said, developers are careful not to allow any character to become overly godlike and are rightly averse to allowing players to generate a truly Godlike character, referred to as a 'tank-mage'; a self-sufficient character who is physically and spiritually supreme and has mastered all four archetypal character traits. Eastern mythology teaches that the avatara sacrifice their divine autonomy from the laws of nature when they transcend to earth. If they were to descend as a God, they would cease to exist as heroes according to mythological standards, they would continue to be Gods (this lesson can also be applied to studying the figure of Jesus in Christian mythology). If a character was ever to become a god in-game the credibility of their experience would dissolve as they could no longer perform as a hero, they will have transformed beyond the sphere of the hero. Note that many early role-playing games culminated with the transformation of a character into a god-like divinity as an ending for their narrative, while current games are less prone to such an ending.

In many games, including most of the digital role-playing games in the early 1990's, players were assigned a predefined character (and avatar) or were allowed to select from a short list of three to five or sometimes more existing characters. These avatars were pre-designed and their character classes were pre-selected for each of the avatars. A game would typically include one Warrior or melee fighter (a damage dealer/tanker hybrid), a generalist magic user (a ranged damage dealer/controller/buff&debuffer), and a ninja/ranger/thief (a ranged and melee damage dealer/controller/buff&debuffer). As technology advanced, these character classes were diversified into much more complex and less generalist character types.

Currently technology and game design has allowed for a greater manipulation of the size, gender, shape and race of an avatar during the creation process. However the avatar's image will develop more dramatically as one plays and is a function of transformation that the narrative and the Hero Cycle will actualize.

1. <http://www.avatara.org/essay.html> and <http://www.sacred-texts.com/hin/skttdict.txt>

2. <http://www.avatara.org/essay.html>

3. <http://www.religionfacts.com/buddhism/deities/tara.htm>

4. <http://www.avatara.org/essay.html>

Disembodiment

At the moment, there are few contemporary cultural rituals that assist in one's journey through a given phase of their life without relying on institutionalised religion; which itself has been criticised for domesticating its rituals and reducing the veracity of transformation and integration they were meant to trigger. Role-playing games offer the fulfillment of transformation by linking the consciousness of the player to the actions and deeds of their avatars through meditation. Like heroes in mythology, the player sacrifices their own wellbeing for this experience. The meditation requires that players focus on their vicarious link to the game through their avatar and must often supersede their immediate biological and spiritual needs. In fact taking a 'bio break'⁵ to use the washroom, get food, eat, change your baby's diaper, or to perform another of life's prosaic tasks commonly occurs during moments of inaction or of waiting in-game, and almost always when a player believes their avatar is safe and protected from harm. The bridging of consciousness between two bodies that can override the needs of one body in favour of the other is a common theme in mythology and suggests that while we exist in a temporal state of the body, consciousness exists in a continuum for which a body (or vessel) is merely a carrier and vehicle.

The avatar must also establish a balance between the wants of the player and the needs of their character by restraining the controlling mind of the player that might otherwise impose itself in a selfish manner that is destructive to game-play. As such, avatars should not act as projections of the user's persona into the game and must remain beholden to the in-game theology rather than

Fig3.2 & 3.3, Orthographic views of the player character 'Sanguine Warrior' from City of Heroes. In these orthographic screenshots depicting the massively multiplayer online role-playing game 'City of Heroes' player character 'Sanguine Warrior', the angelic wings are symbols of time spent in the game. They are part of a system of 'veteran rewards' in City of Heroes, which are made available to the characters of veteran players. The more visible the symbols adorning the avatar, the greater the integration, and stronger the connection an avatar has with the game-world. This is one method which integrates a new character whose player has much in-game experience, and helps to maintain the interest of veteran players who will be more likely to create a variety of characters. Another method for this immediate integration is to bestow visible boons upon veteran players' new characters that can help to accelerate their Hero Cycles. The screenshots on the right capture images of the Sanguine Warrior patrolling the skies of Paragon City with Longbowmen; iconographic non-player characters who protect its Paragon City.



Fig3.4 and 3.5, Screenshots taken during game play in City of Heroes.

5. See 'bio break' in Lexicon.

the desires of the controlling mind. The separation of personal identity from that avatar character's identity requires that players leave their personal identity behind when in-game.

If a simulation or game tends to objectify the avatar as tool or object, it is likely that a similar relationship of agency will exist between users and their avatar. In such a relationship an agent (avatar) with no power of discretion acts under the controlling mind of the principal, in this case, the user. Simulations that encourage a pure relationship of agency are most often self-destructive as the interests of the user are often in contrast to the best interests of the character. This is especially true for social meditations and traditional role-playing games (example on page 15 and 82-83). Conversely, when the prosthesis avatar is balanced by placing emphasis on the character as an iconographic symbol of the in-game narrative and cultural identity, users will act more like trustees ensuring the safety and procurement of boons for their beneficiary, their avatar. In such a relationship the avatar is shared by the game and the player, and both the avatar and player benefit by caring for the other.

Image and Identity

The transformation of the image of the avatar occurs over time as the game is played, and is critical to the development of the identity of their character. Since avatars are iconographically supportive of the cultural narrative in-game, the collective identity of the game-world is developed vis-à-vis the avatar. Historically the image of visible figures has been used as a mechanism to actualize cultural transformation and to legitimize the actions and decision making of that figure, especially when visible figures are also the controlling mind/s of state or culture.

In traditional culture, and graphic based role-playing games, image is used as a medium for the representation of invisible ideals, past and future events, knowledge, and authority. For example, Elizabeth I developed her royal image as a primogenitor to the national identity she hoped to foster for her people. In early state portraits as queen, Elizabeth the person is groomed as an avatar of the state, representing her social status as monarch. Later she is groomed in state portraits to embody an iconography that would transform the English nationality through the pursuit of interests and values she presented through her avatar. The avatar of the queen is also rife with images that speak to the credibility of her authority and of her right to rule. Other symbols that are drawn from external sources are recontextualized as part of her personal identity. For instance, Elizabeth, in her portraits is seen to appropriate the symbols of the phoenix and the pelican. The pelican comes from the myth of the bird who gave of its own body to feed its young, while the phoenix symbolizes rebirth and transformation. Elizabeth's respect and passion for the mystical arts including astrology are also exhibited by her avatar, yet in an inconspicuous manner. This may be so, as the mystical arts were not sanctioned by the religious orders at that time, while biblical references are boldly presented; for example, Elizabeth is often adorned with snakes, as a reference to the consumption of the apple from the tree of knowledge in the Garden of Eden. Parsing the portraits of Elizabeth that follow, according to hermeneutics that support the conceptualization and manifestation of avatars and images in role-playing games, reveals a similarity in the treatment of iconographic image, context and identity. For example, the transformation of Elizabeth's person into an avatar of the state rather than an avatar for the state (as is the case in the portrait of Elizabeth in her coronation robes) enabled her to appropriate foreign symbols that bore no association to the Tudors or to the English. Her transformation into an avatar of the state recontextualized existing symbology that became integral to the iconographic identity and subsequent narrative for the English people. The portraits of Elizabeth I that follow are organised chronologically, and depict the development of the English queen, as a woman crowned as head of state, into a person who is an avatar of the state.

In the portrait depicting Elizabeth I in her coronation robes in 1559 (Fig3.6) Elizabeth's gold dress has a floral rose motif signifying her Tudor bloodline and is lined with Ermine fur; a material reserved exclusively for the monarchy, and she wears a crown of the state. The crown is topped with a cross invoking the divine authority that is responsible for her coronation. Her left hand rests on a globe representing the earth. This globe is topped with a cross, representing a Christian Earth, part of which is now in the Queen's care. In her right hand she holds a gold sceptre studded with gems representing her authority as sovereign. The symbology and arrangement of iconographic trappings are in accordance with the traditional doctrines of coronation for the English monarchy.

In the Pelican Portrait by Hilliard in 1575 (Fig3.7) the imperial crowns over each shoulder represent Elizabeth's dynastic claims to both England and France while the Pelican pendant on her breast, a personal icon unrelated to English monarchy or cultural identity, symbolize charity to, and redemption of, her people.

The phoenix hanging from Elizabeth's breast in the Phoenix portrait (Fig3.8) is a symbol of transformation and rebirth. The massive cultural, religious, and legal progress made during her reign indeed reflects the death of one order and birth of another. The Act of Uniformity which she passed in 1559 established a Church of England that was autonomous from the authority of the Vatican also gave rise to the writing of common law. These laws were written to assign rights and protection for the people of England who were now separated from the consolations provided by the authority of the Vatican. The rose held in Elizabeth's hand could symbolize the virginity she held as a sign of purity and control over her body, as a metaphor for the authority of her control over her government and English sovereignty (it would also support reasons for her refusal to marry).

The abundance of pearls worn by Elizabeth in her portraits represent her purity as in the Ermine Portrait by Hilliard in 1585 (Fig3.9). In this portrait the ermine on her arm is a symbol of royalty; notice the crown it wears around its neck. The hilt of the sword of state rests by Elizabeth's left arm and is a traditional symbol of power and monarchical justice, while her right hand demurely holds an olive branch, symbolizing the peace and stability Elizabeth attempted to provide her people.

In the Armada Portrait (Fig3.10) Elizabeth no longer wears the crown of state and instead is actively engaged in indicating her authority over the globe. This image portrays some of the monumental achievements made thus far in her reign. While she is no longer wearing the crown, which could symbolize the autonomous Church of England, it is nonetheless present and is placed between the window and globe to symbolize her authority over land and sea. The queen points to the new world on the globe, while in the background the Spanish armada is defeated by her forces with the help of the tempestuous English weather. Note that in the Ditchley Portrait (Fig3.11) by Gheeraerts the Younger in 1592 Elizabeth is depicted as a master and god of weather. The Armada Portrait also depicts Elizabeth's rule over land and sea and even references pagan mythology with the inclusion of a Faun at the bottom right hand corner of the image, which would have had no place in a state portrait prior to her appropriation of these diverse symbols. Fauns, like Elizabeth, were well known in mythology for their love of music and dance. Its presence must be in reference to the sea-goat constellation of Capricornus who is arguably an iteration of the faun Pan. When Pan was chased by Typhon, he escaped death by jumping into the Nile and turning into a fish. This story parallels the English consciousness that was acquired when they were forced to turn to the sea to engage the Spanish. Elizabeth's depiction alongside the faun denotes the transformation of the faun and concurrently, of the English people she guided towards the sea.

In the Hardwick Portrait by Hilliard in 1599 (Fig3.12) the queen rests her hand on the throne and is adorned in a dress that is loaded with images of real and mythological animals. The images on the

gown present a tableau of knowledge of these mysterious creatures, none of whom are land dwelling. This reflects the broad search for knowledge and scientific understanding that Elizabeth made part of the English cultural mandate. There are also many serpent-like creatures that are no doubt symbolic of the snake from the Garden of Eden who presents an apple from the tree of knowledge.

In the Rainbow Portrait by Oliver in 1600 (Fig3.13) the avatar queen is portrayed as a divinity whose illuminating knowledge brings peace and prosperity. Unlike the Ermine portrait where the queen demurely holds an olive branch to suggest the peace she wants to bring for the English, in the Rainbow Portrait she firmly holds a rainbow in her fist and brings prosperity personally as a divine



Fig3.6, Elizabeth I, in coronation robes, 1559.

figure. Above the rainbow a text in Latin reads as follows: "No rainbow without the sun," and Elizabeth is dressed as a sun in a bright orange gown. The symbol of the moon on her crown references Diana, who participates in bringing knowledge to earth with the sun God Apollo; here Elizabeth is an avatar of both Apollo and Diana and brings forth knowledge to her people herself. The snake on her left arm is a biblical reference to the tree of knowledge as it holds a ruby apple in its mouth and her dress is covered in eyes and ears, tools for seeing, hearing, and learning. This portrait paints a picture of the queen as a goddess rather than a head of state.

Images in role-playing games reference the traditional iconography developed during periods



Fig3.7, The Pelican Portrait, Nicholas Hilliard 1575.

where myths of the hero, of adventure and of transformation were developed. Iconographic symbols used historically and in contemporary culture in comics, movies, and role-playing games help trigger anamneses of personal and collective identity and destiny, and is the same anamneses revealed through a parsing of Elizabethan portraiture. When one parses away the minutiae of historical context, and of art criticism, the capacity of the image as a vehicle to educate, transform and recontextualize a person and the collective to which they belong is revealed. As such it is no surprise that over time and with experience of successfully completing Hero-Cycles, avatars become dressed with images that are symbolic of their accomplishments and reference historical iconographies. This trend in role-playing games is part of a subconscious pathology of the ancient and pre-historical archetypes that trigger appreciation in players for the richness of identity authored by the recontextualization of consciousness that results from the Hero Cycle.



Fig3.9. The Ermine Portrait, Nicholas Hilliard 1585.



Fig3.8, 'The Phoenix Portrait' Nicholas Hilliard 1575.



Fig3.10, The Armada Portrait, unknown, 1588.



Fig3.11, The Ditchley Portrait, Marcus Gheeraerts the Younger, 1592.



Fig3.12, The Hardwick Portrait, Nicholas Hilliard 1599.



Fig3.13, The Rainbow Portrait, Isaac Oliver 1600.

Dressing and Equipping the Avatar

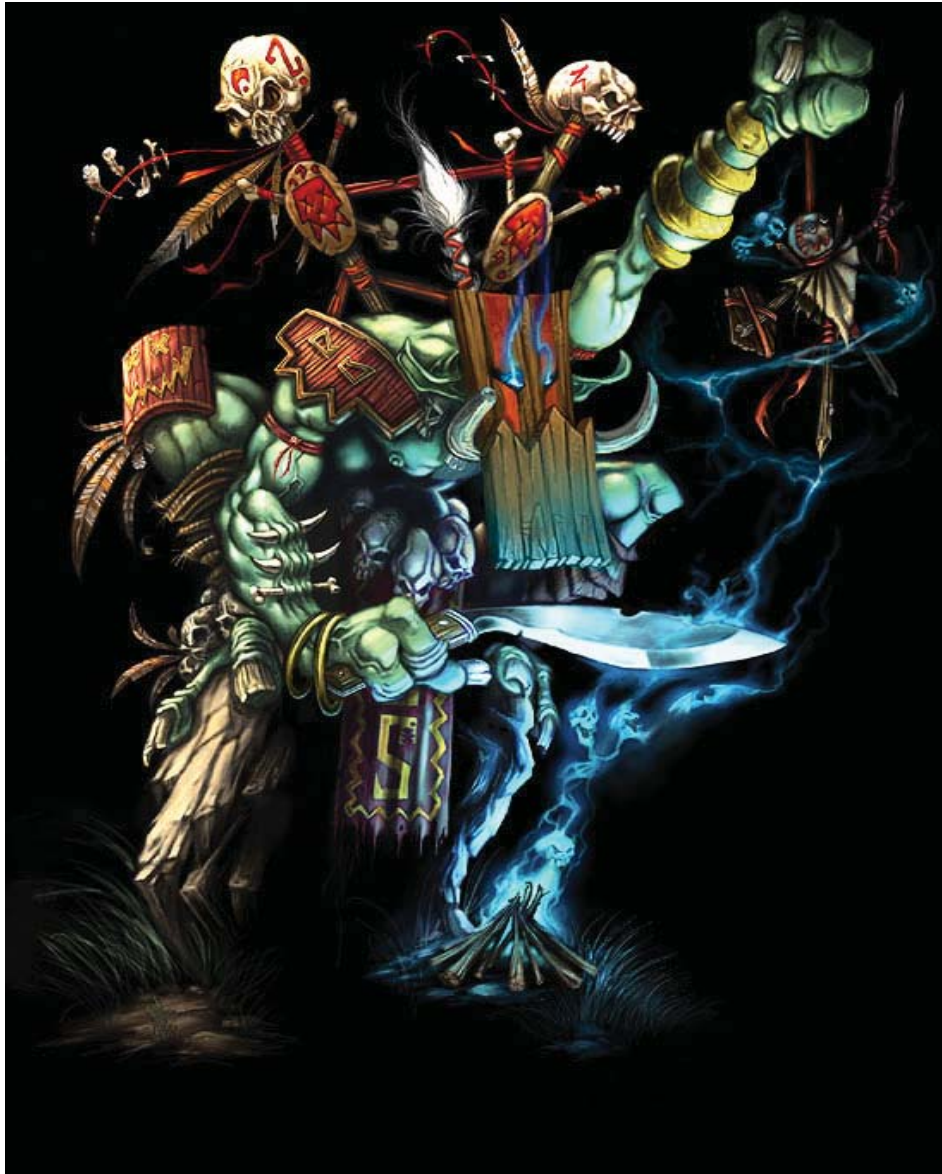
As an object (or a body), the avatar alone reveals very little about the nature of the character it represents. Invisible character traits are exposed through the visible symbols that adorn the avatar. Like Queen Elizabeth I in her sequential portraits, avatars become iconographic carriers through the accumulation of artifacts during their adventures and are symbolic progenitors of mythology. These artifacts also represent the experience of the adventure and are designed to exhibit the abilities and skills of the characters who carry them.

While most of these artifacts are always visible when equipped, skills or knowledge acquired might only become visible when performed or enacted by a character. At the time they are acquired, the attributes and value of any artifact should always be equivalent or greater than (unless damaged) the abilities and potential of the character acquiring it. As such, lower level characters exhibit significantly fewer acquired game objects than higher level characters. The objects they do possess are usually less ornamented and are less visually provocative. This is not to say that high level characters always exhibit a larger number of artifacts. They can be adorned with few objects but the objects they do possess are likely to be graphically spectacular.

As avatars grow through in-game experience players develop the ability to read the images that they are presented with quickly and efficiently. Knowledge of the symbols in-game provides the opportunity for players to function as iconographers where everything they see is symbolic and carries multiple meanings. This is also a sign of the relationship between the character's experiences in game that binds the symbolic identity of objects to the consciousness of the player.

Mounts

Items described above are most often distinct and belong to one of the cultural, racial, or professional archetypes of the game's mythological narrative. One symbol ubiquitously recognized in both games and mythology as an icon of social status and power is the mount or transportation, as this object symbolises one's capacity for movement through space, and can, if flight is possible, afford a unique panoramic and expansive view of the land below. Since space is hierarchically organised in Hero Cycles in mythology and in role-playing games, movement becomes extremely important and puts a greater emphasis on the symbolic nature of one's method of transportation. Mounts in the massively multiplayer online role-playing game *World of Warcraft* incorporate different types, each being referential to an in-game culture and player character skill and achievement (reputation) level. While the technical rewards that can boost movement speed and the costs associated with the purchase of a mount are standardized for each mount type (according to player character level and reputation), the iconographic symbology used to depict each mount is expressed as part of the unique experience and achievements of a player. Note that mounts that require a higher level of achievement are more highly ornamented and contain a greater wealth of detail. The most significant mount types are those which are the boons from epic quests and extremely difficult challenges that often require a large number of players to work collectively to overcome. Some of these special epic mounts can even fly. Mounts provide avatars the ability to reconnoitre larger areas, and with flight, or protective footing, to travel across inhospitable or towards unreachable (by foot) spaces, thereby expanding the game-world for a player with a mount.



The Orc Shaman is adorned with objects and symbols of his authority and responsibilities. The skulls and carvings are evocative of the totems he can create to buff and debuff player characters and non-player characters. The small pile of wood is smoking, and like Moses' burning bush, it is not being consumed or burnt. This image portrays the intimate relationship the shaman has with the ground and to nature, as his abilities are generated through relating to local spirits and essences. Shaman cannot train in, or use large or heavy weapons or armour. They are committed to the natural powers that they possess.

Fig3.14a, A depiction of an Orc Shaman in the massively multiplayer online role-playing game, World of Warcraft.

Despite the consistency in the form and material of the garments and equipment that adorn the characters on this page, the images are symbolic of racial and class specific traits that are unrelated to one another. One character is an Orc Damage Dealer/Tank, the other, a Human hybrid Buffer/Tank/Damage Dealer. They are both half naked, they both have prominent tribal tattoos, and are both wearing toughened leather armour, suggesting a preferred freedom of movement, and speed or agility that helps keep them safe and compensates for their lack of armour, or possible inability to wear armour. The bloodied blade held by the Orc is a sign of the barbaric tendencies of that race, and of the low intelligence typical of their warrior and tanking classes. In contrast, the weapon held by the Ritualist is clean and sheathed. Establishing differences can help distinguish the symbolic meaning of otherwise similar (looking) images, such as the tattoos, and naked bodies.

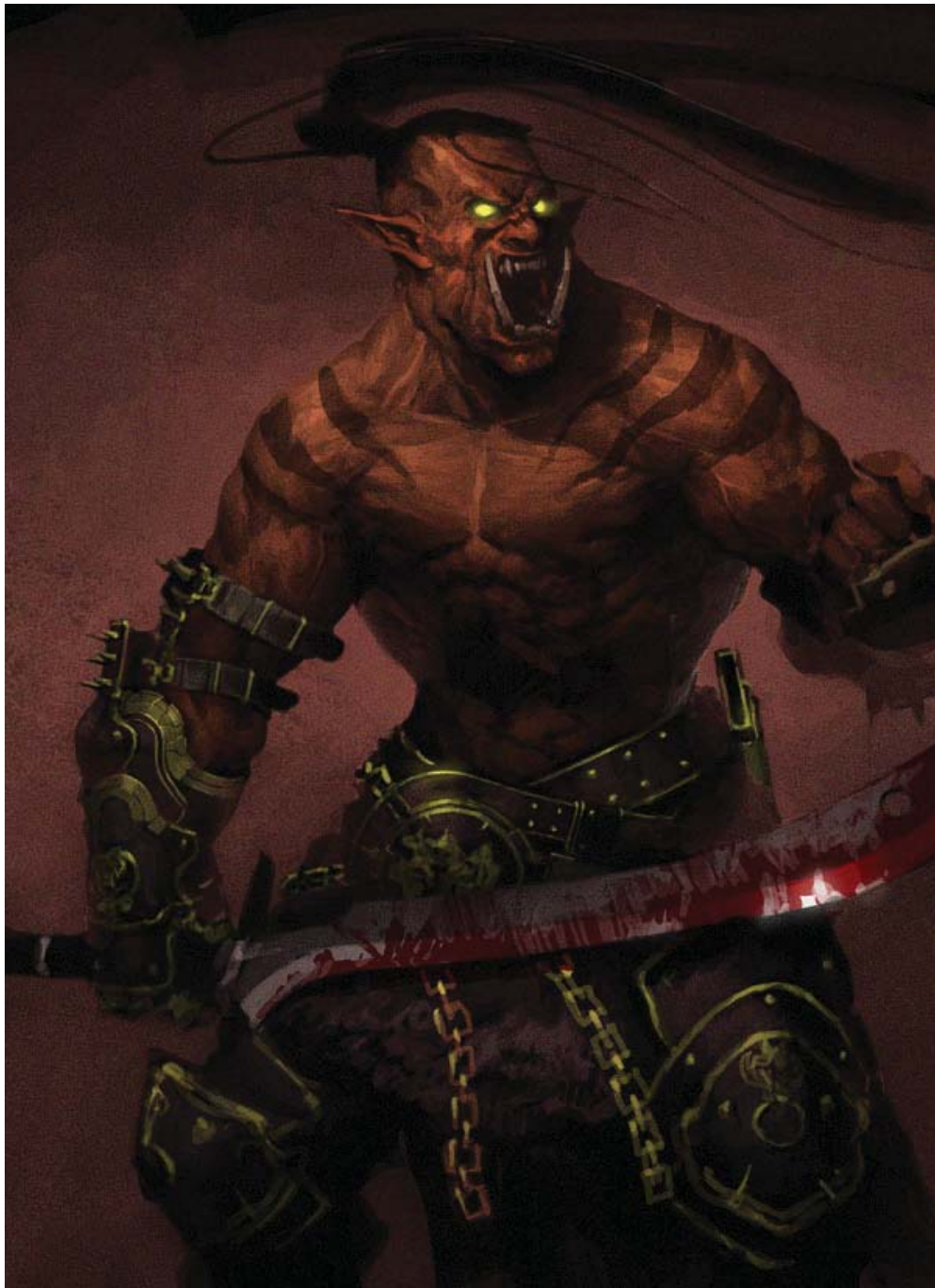


Fig3.14b, Portrait of WoW PC, 'Blademaster', by player Kim Bum.



Fig3.15, Concept art for 'Guild Wars', Ritualist class.

Mounts expedite the participation in adventures that require journeying across large distances, and broaden the area of space that a player is able to potentially access. Mounts that function as iconographic symbols that are vernacular to the cultural typology in-game as well as being functional objects for avatars, will help to enforce the historical authenticity of the game's mythology.



Fig3.16, Image from Elderscrolls 'Oblivion'.

The following pages contain a sampling of the mounts available in World of Warcraft, including four examples of racially specific mounts, two examples of class specific mounts, and six thumbnail images of epic/unique mount types.

“Mounts are associated with a specific race and are available to other races if the player has achieved exalted reputation with that race’s capital city. For example, for a Dwarf to purchase a Night Elf mount, he or she must have Exalted reputation with the Night Elf city of Darnassus.

There are five types of mounts. The first is available at level 40 and gives a 60% speed increase and the second is available at level 60 and gives a 100% speed increase. The 3rd are rare mounts that are dropped by certain bosses, PVP rewards or are from special events in game. The 4th is flying mounts which are attainable at level 70 which is a 60% speed increase. The final mount type is the Epic flying mount which is attained at level 70 and requires Artisan riding skill, these mounts offer a 280% speed increase. Note that the costs for each are different. In order to ride a mount, a player must first purchase the riding skill for that type of mount.”

Blizzard Entertainment Inc.

<http://wowvault.ign.com/View.php?view=Mounts.List>

RACE SPECIFIC MOUNTS

HUMAN MOUNTS - HORSES

"The strong bond between the humans of Azeroth and their warhorses has existed for generations. However, since the fall of Lordaeron, only select varieties continue to be bred throughout Alliance-controlled lands. Most prized among these are the stately Evendales of Elwynn Forest, renowned for their loyalty and even tempers. These horses command a hefty sum, but they reward their owners with steadiness and speed."

"Available to: Human (No reputation requirement)

Dwarf, Gnome, Night Elf – requires 'Exalted' reputation with Stormwind.

Locations: Eastvale Logging Camp, Elwyn Forest

Menethil Harbour, Wetlands (no riding instructor)

Theramore Isle, Dustwallow March (no riding instructor)

Riding Skill: 20g (18g Honourable discount)"



Fig3.17, 3.18, 3.19,
clockwise from top left: Black
Stallion, Swift Palomino, and
Chestnut Mare.

RACE SPECIFIC MOUNTS

UNDEAD MOUNTS – UNDEAD HORSES

"Not even the noble steeds that succumbed to the Plague are allowed any rest in the hands of the Forsaken. Through an arcane mix of alchemy and necromancy - the Royal Apothecary Society has raised numerous fallen steeds to serve as mounts for the vengeful dead. These undead steeds are as strong as they were in life, and far more resilient. An unfortunate characteristic, however - one that the Forsaken are none too enamored with is the steeds almost universal stubbornness. From death and beyond, the mighty steeds still cling to the willful spirit that served them in life."

Available to: Undead (no reputation requirement)

Orc, Troll (Requires 'Exalted' reputation with the Undercity).

Location: Brill, Trisfal Glades

Riding Skill: 20g (18g Honourable discount).

Fig3.20, 3.21, 3.22 clockwise from left Purple Skeletal Warrior, Brown Skeletal Horse, Red Skeletal Horse.



RACE SPECIFIC MOUNTS

GNOME MOUNTS – MECHANO-STRIDERS

"The Gnomes revolutionary Mechano-strider represents yet another marvel of their engineering prowess. Each strider is specifically designed with the individual rider in mind. They are constructed using state-of-the-art steam compression, servo-motor dynamics, and duro-steel plating. This offers the rider a reliable and durable means of transportation. Some claim that the Mechano-strider's lack of true sentience makes for a very dumb mount. However, the gnomes counter that under a skilled rider, the Mechano-strider is more responsive than even the best trained live mount."

Available To: Gnome (no reputation requirement) Dwarf, Human, Night Elf (requires 'Exalted' reputation with Gnomeregan Exiles).

Location: Steelgrill's Depot, Dun Morogh.

Riding Skill: 20g (18g Honourable discount).



Fig3.23, 3.24, 3.25, 3.26, 3.27, clockwise from left, Swift Green Mechanostrider, Green Mechanostrider, Red Mechanostrider, Unpainted Mechanostrider, Blue Mechanostrider.

RACE SPECIFIC MOUNTS

TAUREN MOUNTS - KODOS

"There is but one creature in all of Kalimdor that possesses the strength and stamina to bear a tauren rider into battle: the majestic kodo beast. Swifter and slightly smaller than their wild cousins, kodo mounts nevertheless demonstrate the same resilience and fearlessness found in their untamed brethren, traits that serve them well when bearing their equally resolute riders. It is said that only the most virtuous of taurens can win the affection of a kodo war mount, for these mighty beasts only serve those that approach them with honor and respect in their hearts."

Available To: Tauren (no reputation requirement)

Orc, Troll, Undead (requires 'Exalted' reputation with Thunder Bluff).

Location: Bloodhoof Village, Mulgore.

Riding Skill: 20g (18g Honourable discount).



Fig3.28, 3.29, 3.30,
clockwise from top left, Purple
Kodo, Swift Teal Kodo, Green
Kodo.

CLASS SPECIFIC MOUNTS

PALADIN MOUNTS - WARHORSES

"Possessed of a noble spirit and deceptive intelligence uncommon among its kind, the warhorse is a regal charger that only the most inspiring of paladins can call to service. Once it pledges its service to a worthy master, the warhorse holds to its responsibility as a loyal mount and steadfast companion with a devotion that cannot be found in its lesser cousins. The paladins warhorse is more than a steed; it is a tireless cohort for its valorous master, carrying the paladin across Azeroth on a ceaseless crusade to vanquish evil wherever it may lurk. Blood Warhorses, and Blood Chargers are available to Blood Elves only."

Available To: Paladins ONLY (no reputation requirement)

Location: Paladin Trainer.

Riding Skill: None.



Fig3.31, 3.32, 3.33, 3.34, clockwise from top left, Paladin Warhorse, Paladin Blood Charger, Paladine Blood Warhorse.

CLASS SPECIFIC MOUNTS

WARLOCK MOUNTS – FELSTEED

"The remote plains of Desolace were once home to a unique breed of horse too proud and wild to countenance riders. Yet it is precisely this willful conceit that enticed the elders of the Shadow Council to bind these majestic steeds to their service with dark rituals too horrific to perform by any but the most depraved of warlocks. Although they retain their imposing forms, these newly-christened felsteeds have become twisted with infernal energies, treading flames and breathing fire. Where their eyes once shone with exuberance and a zest for life, they now burn with hatred for the warlocks who corrupted them and anguish at the passing of the lives they once knew."

Available to: Warlocks

Locations: Warlock Trainers

Riding Skill: None

Fig3.35, 3.36 left to right,
Warlock Dreadsteed, Warlock
Felsteed.



EPIC MOUNTS



Fig3.37, DEATH CHARGER'S REINS
Requirement: Loot from Baron Rivendare in Stratholme



Fig3.38, FIERY WARHORSE'S REINS
Requirement: Loot from Attumen the Huntsman in Karazhan (10 person raid)



Fig3.39, PHOENIX ASHES OF AL'AR
Requirement: Loot from Kael'thas Sunstrider The Eye (25 person raid)

Fig3.40, REINS OF THE RAVEN LORD
Requirement: Loot from Anzu Sethekk Halls (Heroic 5 person mission)

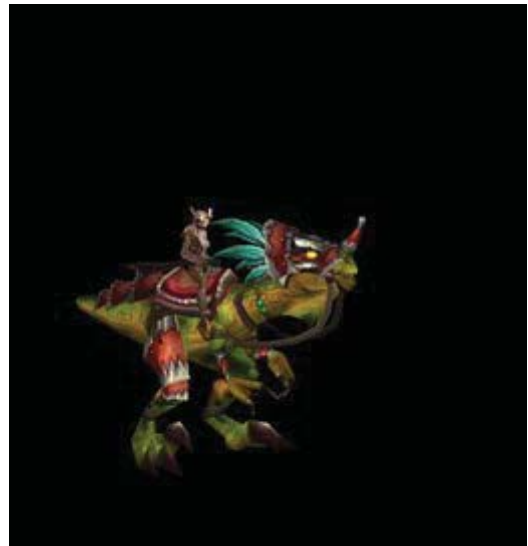


Fig3.41, SWIFT ZULIAN TIGER
Requirement: Loot from the High Priest Thekal Zul'Gurub



Fig3.43, SWIFT RAZZASHI RAPTOR
Requirement: Loot from Bloodlord Mandokir Zul'Gurub

Fig3.42, AMANI WAR BEAR



The Avatar as a Symbol

The patina on character sheets and the standardization of rules from common texts established credibility for the experience of characters and players in pen and paper role-playing games. Graphic based role-playing games rely on the integrity of their images to establish this kind of credibility. In-game image is used for conveying legitimacy to the vicissitudes of a character's experience by allowing their boons (in the form of objects or skills, tattoos, clothing, or other markings) to be visible and exposed to other players. Player characters' avatars are symbolic of the events that led to their transfiguration and describe the balance of agent and trustee that their avatars maintain for players and characters. Visual indications of transformation of the avatar occur vis-à-vis the transformation of consciousness in the user who is constantly learning new and unique ways for controlling their avatar as a result of the newly acquired artifacts are symbolic of this transformation. Thus the avatar also lends credibility for the experience of the controlling player who has managed to acquire these artifacts through their skilled control over game-play mechanics.

Games prefer to use recognisable symbols whenever possible, as these are immediately legible. For example, unlike real-world shamans, mystics, and druids who practice mystical arts that are part of their personal relationship to another essence or source of power, the in-game priest, cleric, or mage (see 'mage' in Lexicon) is trained and accredited by a highly institutionalized pedagogical order that repudiates those who practice or are proponents of arcane arts that are not learned through their institution, and are based on 'real-world' figures, two of whom can be seen in images on the facing page. Cultural or historical authorities such as the Pope, or High Priest, who hold office for religious institutions, carry symbolic artifacts and wear vestments that are appropriated by game developers and bestowed upon in-game avatars who are a part of their own institutionalized order.

Take the High Priest for example: The Hebrew High Priest, called 'ko-hEhn huh-gadaol' wore garments that were used to symbolically represent the invisible relationships between the spaces and places within the temple and the tribes of Israel. The fulfilment of covenantal duties to worship God and the Hebrew people are also represented symbolically in these garments. It is for this reason that it was important that they be worn by the High Priest when performing public rituals and more so when performing rituals in the unseen holy of holies within the temple. Otherwise the fulfilment of the performance of the ritual may not be ascribed to the people, for whom they were being conducted. Similarly the practical tools, instruments and garments of avatars in role-playing games symbolically link the acts performed using the tools or artifacts with the narrative.

Artifacts are also used to communicate silently with other players by portraying the characteristics of an object with elements that are naturally associated with it. The three examples that follow parse several hybrid characters according to the visibility of their garments and equipment. These characters borrow from 'real-world' iconography where appropriate and use inventive images that relate the function of an object to the image it is manifested as. For example, the image of an object or armour of ice suggests the properties of cold. The character 'Super Shiek' (Figures 3.49, 3.50 and 3.51) is a tanker/damage dealer/debuffer, while the Monk class from Guild Wars is a buffer/debuffer/damage dealer, and the Paladin in World of Warcraft is a damage dealer/tanker/buffer/debuffer.

'Super Shiek' carries no visible weapon, but forms highly visible armour suggesting his involvement in battle. He is also a veteran player of significant experience and means, evident through the bone dragon wings and multiple auras he possesses. These types of wings are acquired through a creation process that includes rare ingredients and a rare recipe that only highly experienced player characters might find during their adventures. They are so rare that most players do not find them,



Fig3.44, 3.45, 3.46, 3.47
 clockwise from top left,
 Garments of the High Priest,
 Dutch Artist 1705. Blood Elf
 priest in World of Warcraft
 'Blissfullily', by Wyndforge.
 Rendering of Blood Elf magic
 user in World of Warcraft, by
 Ziv Qual 2006. Pope John
 Paul II in robes and with staff,
 Bettmann May 30 1982,



and instead, purchase ingredients and the recipe from NPCs, or from an in-game auction house. Wings of this nature cost in the millions of in game dollars (called 'influence'), sometimes costing 20 million, depending on the wing type being purchased. Currently, 5 million influence can be purchased through player characters and various MMORPG online businesses for \$30 US.



Fig3.48, 3.49, 3.50, 3.51, clockwise from left, 'Super Shiek' in Peregrine Island in Paragon City in the massively multiplayer online role-playing game 'City of Heroes'. Screenshots showing the 'High Clerist' taking pictures of other characters (tankers).



Fig3.52, 'The Four and Twenty Elders', Henry John Stock 1911.

Light and light auras, especially those visible in images of the Christ Pantokrator, are symbolic of the presence and power of the divine. Light is often used as a symbol in role-playing games to authenticate the relationship of a class, power, or skill with divine authority; this is especially true for Paladins, Monks, Clerics, Priests and other spiritual based mystics.



Fig3.53, Screenshot of a Monk, from the MMORPG 'Guild Wars'.

"The Monk can speak directly to the gods to open a conduit for divine magic that can heal and protect allies in battle or unleash holy power upon the Monk's enemies. The Monk's connection to the gods is illustrated in the primary Monk attribute, Divine Favor, which grants extra healing ability and makes Monk skills more effective. Monks often choose to focus on one of the other attributes. Healing Monks build up the Healing Prayers attribute to revive allies and mend their wounds. Smiting Monks put points into Smiting Prayers, which inflict damage on foes and work especially well against undead enemies. Protection Monks pump up the Protection Prayers attribute and use magic that prevents allies and themselves from taking damage. The Monk is the definitive Guild Wars "support profession," and will probably never have to wait for a group invitation. Combined with a secondary like Warrior or Ranger, Monks can also be quite effective when it comes to hurting the enemy."

NCsoft Corp. <http://www.guildwars.com/gameplay/professions/monk/>



Fig3.54, Paladin in the MMORPG 'World of Warcraft'.

"Guardians of the Holy Light, paladins bolster their allies with holy auras and blessing to protect their friends from harm and enhance their powers. Wearing heavy armor, they can withstand terrible blows in the thickest battles while healing their wounded allies and resurrecting the slain. In combat, they can wield massive two-handed weapons, stun their foes, destroy undead and demons, and judge their enemies with holy vengeance. Paladins are a defensive class designed to outlast their opponents. The Paladin is a mix of a melee fighter and a secondary spell caster. The Paladin is ideal for groups due to the Paladin's healing, Blessings, and other abilities. Paladins can have one active aura per Paladin on each party member and use specific Blessings for specific players. Paladins are pretty hard to kill, thanks to their assortment of defensive abilities. The Paladin can also heal with Holy Light, unlike other combat classes. The Paladin is an Undead specific fighter as well, with several abilities designed to be used against the Undead."

Blizzard Entertainment Inc. <http://www.worldofwarcraft.com/info/classes/paladin/>



Fig4.1: Screenshot of the Sanguine Warrior travelling within the 'Talos Island' zone of City of Heroes.

Simulating Space with Text: Space in MUDs

Space is necessary for adventure and the Hero Cycle and is a priori to all content in the simulation of the game-world. In traditional role-playing games the integrity of the in-game space or world rested on the Dungeon Master's sensitivity and aptitude for narration and the ability for players to mentally visualise. The absence of the live human narrator charges game developers with the role of creating simulations that are readable to the players' eye while being responsive and dynamic enough to meet their needs.

Early online attempts to recreate the potency of adventure in the social environment found in traditional role-playing games took the form of the MUD. The Multi-User Domain, or MUD, is actually an umbrella term used to describe a variety of online programs, they are: the Multi-User Shared Experience (MUSE), the Multi-User Shared Hack, Habitat, Holodeck or Hallucination (MUSH), and the Mud Object Oriented (MOO). In truth, MUD originally stood for Multi-User Dungeon, as a nod to Dungeons and Dragons, its typological predecessor and is the general term used to describe most text based online games and communities that present themselves as part of a spatial construct in which events, objects, and time can exist.¹ These online environments used text to describe single units of space at a time where each unit of space was considered a 'room'. Some MUDs' founding room structures attempted to mimic 'real-world' spatial accessibilities such as a neighbourhood in a city or even the spaces in someone's apartment. Ironically the most successful and highly populated MUDs quickly became wastelands of uninhabited and empty rooms, significant only for their virtual corpulence.

Initially it was thought that residents, also called users or players, would be positively contributing to the community if they could construct their own rooms and furnish them as they desired. Laws were in place to protect the founding organisational structure, at times prohibiting a direct link or connection from or to new rooms. Residents also had the authority to allow or deny other residents from linking to their own rooms. Teleportation helped in accessing rooms that were not linked to a greater structure, but also eliminated the need to actually travel from room to room, effectively eradicating the unpredictability and vibrancy of live movement that space supports so well. In time, the number of 'hidden' rooms with no direct 'pedestrian' access (which required teleportation), exclusive rooms (which required the authority of the room's creator to enter), and a general overabundance of rooms that had no organisational structure, would grow to a size and complexity that would make a MUD obsolete as a spatial construct because its spatiality was no longer recognisable, nor did it reflect our ability to make sense of it or to intelligently navigate its spaces.

A study conducted in 1995 at the New Jersey Institute of Technology's School of Architecture systematically charted and modeled the spatial organization of ten MUDs.²

“students, in teams of two, became citizens of their selected MUDs and explored the spaces described by the text. Typically, the team would divide the work between a navigator and cartographer. One operated the machine, ‘moving’ from place to place within the MUD. The other charted locations of the places they visited. As the domains were mapped, these diagrams grew increasingly complex... Cubes represented spaces which were accessed directionally, using N, E, S, W, or Up and Down commands. Spheres indicated spaces accessible by teleporting to by invoking their names. Points of MUD entry were colored red. Spaces were linked with simple rod connections appropriate to the directions indicated.”

1. <http://en.wikipedia.org/wiki/MUD>

2. Anders 1998, pg 220-232.

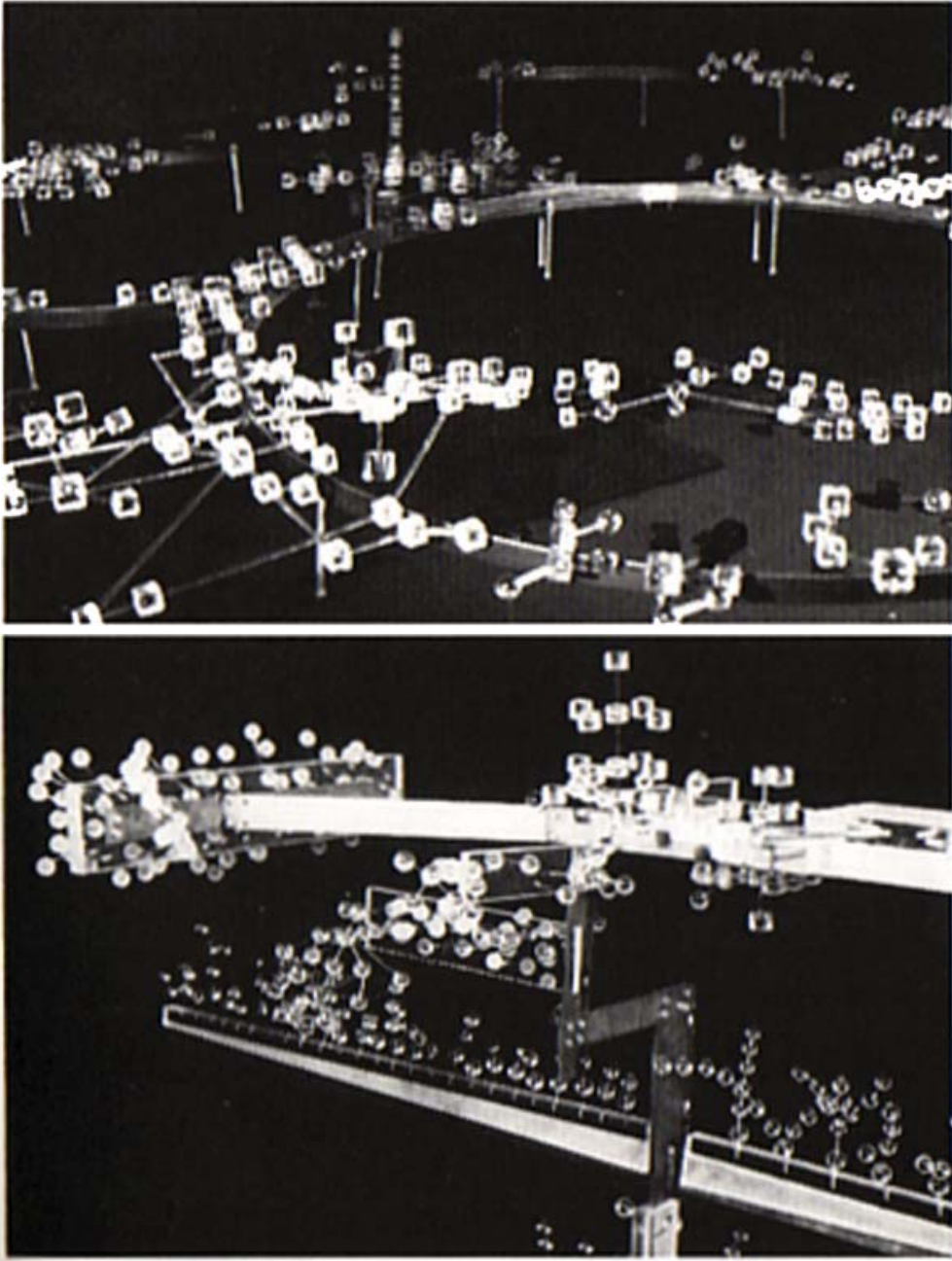


Fig4.2, 4.3, images of two 'adjacency models' representing the rooms in MUDs and their connections to one another (Anders, Peter, 1998).

The experience of travelling in these MUDs has been compared to the experience of a passenger in the backseat of a station-wagon who is only aware of the space they are in after they have moved through (or into) it. This condition of movement in text based MUDs makes it difficult for them to recreate the natural intuitive responsiveness of a Dungeon Master's narration.

The spatial diagrams from the Anders study (Figures 4.2 and 4.3) resemble large molecular models and could represent many hundreds of spaces, per model. Students were prevented from actually completing their models due to the rapid growth of some of the MUDs, as well as the spatial anomalies that existed in some of the MUDs.

“A room in DreaMOO described as being west of another, was entered by going east from that room.”

“The nested arrangement of the Chatting Zone spaces would not translate easily to a ball and stick model.”

“The rigorous structure of HoloMUCK forced the creation of pseudo-spaces just to allow movement through it.”

These models portray conceptual adjacency, more simply, directionality, not spatiality - there are no spatial relationships between these 'rooms'. Without a hierarchical structure to help organise this directional adjacency, the MUD cannot function. While there are many spaces to explore in MUDs, most residents would instead teleport directly to their desired destination. Although room to room teleportation is supportive of rooms which are distant or difficult to access due to a blockage created by a private room, or due to an overly confusing series of navigational commands, it undermines the social activity that would otherwise occur as a result of traffic through an enfilade.

Teleportation also supports access for exclusive residents to private rooms and private enfilade spaces that are not connected to the rest of the community and therefore undermines the incentive for residents to develop a coherently organized spatial configuration of rooms. It allows residents to build indiscriminately and ignore the needs or desires of other residents. Regardless of the by-laws protecting any founding structure, the majority of newly constructed rooms, which overwhelm the number of rooms in any founding organisation, become totally disconnected and 'lost' in the corpulent MUD. Further, the larger and more complex the MUD, the more teleportation became necessary to support its population.

It is ironic that MUDs with most resident involvement and the highest number of spatial and architectural interventions by its residents, are often the least densely populated. In these MUDs, most rooms are vacant. Despite the potential for adventure and enriching social interaction that might occur as a result of the complexities that mature in a MUD community, the most notable events from the heyday of the online MUDs includes psychological trauma and ethical offences made by its users. One notable example is an incident of sexual abuse that occurred in LambdaMOO.

In the abovementioned environment, a user created a "voodoo doll" program that could run in the open source softcode so that his avatar, Mr. Bungle, could perform actions that would be attributed to other characters in LambdaMOO. This resulted in several characters describing and performing sexually explicit acts on each other for more than several hours. The incident outraged the residents of LambdaMOO and one user found that she had "post-traumatic tears streaming down her face". Three days later a meeting was held in LambdaMOO to discuss what should be done about Mr. Bungle. The result was the creation of a ballot and petition system where any user could call a vote for an action that would typically require a Wizard (master-programmer/administrator), such as avatar eviction or deletion from the community. In this case, Mr. Bungle's user account was permanently deleted.

The liberal mutability of MUDs utilized space as a neutral construct for the benefit of users' enjoyment. The mistreatment of space as a neutral construct led to the dissolution of MUDs into an

The description of LambdaMOO on the right, paints the picture of an immersive simulation that carries the traits of role-playing game spaces however it lacks the mythological underpinnings which ground player activity and identity. Without the sacrifice of one's personal identity to the character in-game and without a foundation rooted in mythological tales that are presented in the form of a narrative, simulated spaces become a reflection of the personal and egoistic needs of its residents, and will most likely transform into a post-modern kaleidoscope of unrelated and incomprehensible activities and spaces that hold little to no credibility.

Online 3D communities such as Second Life mimic the functionality of role-playing games, exhibiting all of the visible, tangible morphological elements in a fairly unconstrained and liberally mutable environment. The lack of a theological in-game mechanic to support a developmental and morphological pathology desirable by the developers will ultimately transform the simulation into a direct reflection of the 'real-world' environment of its users, rather than allowing them to project themselves out of their world, into a non-domesticated experience. Second Life will wrap them more tightly to the life experiences and insights they already possess. Already, there is a strong presence of corporate America in Second Life, bringing with it the same disregard for spatial and cultural coherence that game companies, who are also driven by their bottom line, do not share. This is because role-playing games are concerned with moral codes that privilege the hierarchical structure of architectural spaces that will drive Hero Cycles.

almost forgotten and insignificant social experiment that bears little relation to their role-playing roots. MUDs serve an example of the pitfalls of Post-Modern epistemology that ignores mythological lessons that hint at the potentialities held in space, time, and experience that are necessary for designing and creating worthwhile environments.

"LambdaMOO is a text-only world so you won't find any elaborate graphical avatars or 3-dimensional space warriors. Instead you're following along with things as fast as you can read. The Moo can really suck you in, and before you know it, as you drift around from room to room and building relationships, you begin to visualize all the things around you, like being immersed in a really good book.

The first time you enter the Moo, you start as a guest character, but when you get the hang of it you can create a permanent one; a persona of your choosing who has a name, a physical description, and who can be seen by all whom meet you. This is where your imagination kicks in. Be yourself or be whatever you've always wanted to be and that's how they'll see you. As you move around from room to room you're given a description of the room and a list of contents (including the people).

You can look at each person to get a more detailed description of them. They, in turn, see a message stating that you just checked them out. This really begins to cultivate the 'real-world' feeling. You can talk to people and your words are shown to them in quotes, like spoken words in a book. (Bob says, "Hey, how's it going?") Despite being able to describe yourself as whatever you want, you soon learn that this is one of the few places where your description has very little bearing on how people see you. Get ready to be able to hold a conversation! On top of everything else, you can also emote, or communicate with body language. You use gestures like a smile or a nod of the head. (Sue smiles at you warmly).

In time you'll learn to create your own rooms and other interactive objects, which are limited only by your imagination (and your building quota)."³

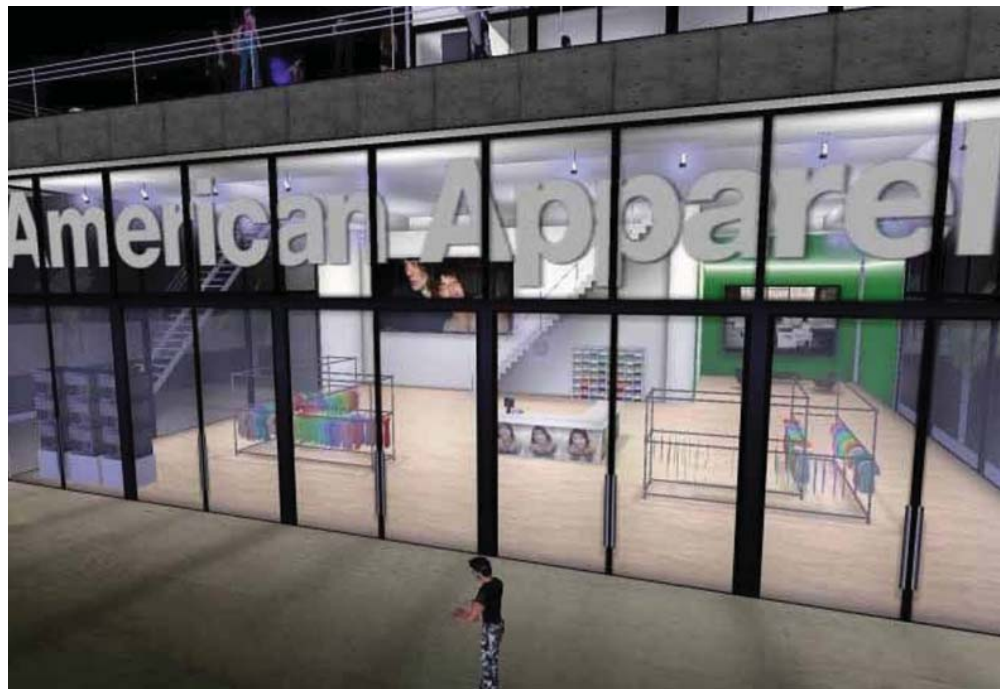


Fig4.4. American Apparel, in Second Life, architect, Aimee Weber.

3. <http://lambdamoo.info/>

Simulating Space with Surfaces

Contemporary game spaces are image based fabrications of critically composed phenomenology that mimics the memory of the human eye and transforms the flat two dimensionality of the screen into a lens through which players read the three dimensional in-game spaces. The simulation on screen incorporates visible symptoms of space to create the sensation and impression of a three dimensional construct. A reading of these symptoms mirrors the reading of space made in the 'real-world' and thus, is able to convince players that they are seeing real space.

The very word space comes from the Latin 'spatium' meaning "room, area, distance, stretch of time"⁵, but more commonly is understood as "the unlimited or incalculably great three-dimensional realm or expanse in which all material objects are located and all events occur."⁶ The meaning of the word space and even the artistic representations of space both rely on the relationships of surfaces which exist in a vacuum of physical distance.

Understanding the image based surfaces on-screen are necessary for understanding the game-world. These surfaces are positioned strategically to represent distance and are of varying sizes to represent differences in scale. A combination of texture, colouration, and gradation is used to differentiate the materiality of one surface from the other is called texture mapping. Texture mapping, the act of 'wrapping' a surface with an image of colour, and/or pattern is used to articulate that one flat surface is ground, whereas another is a door or window. The 'ground' is no less of a two dimensional surface than the 'window' yet by also simulating corporeal sensibilities such as gravity and light (or shadow) it is read by the player's mind as a deep and solid entity, whereas a window is not.

Games must also satisfy the curiosity that we ask of space, which is how big it is and where does it end? A remarkable talent of game designers is to provide reason for the limits of space in their game-world. World of Warcraft which is made up of several distinct large spaces and uses the oceans of water surrounding each space act as a barrier for players who attempt to cross; for their avatar's endurance will not allow them to swim far out without dying. In Paragon City (in the City of Heroes), each space is surrounded by a concrete wall with a secure access point which is the only means for pedestrian (on foot) access to another space – which is itself enclosed with its own concrete wall. In both World of Warcraft and City of Heroes, these devices coincide with the narrative and mythology of the game and enforce the cultural identity of the game-world and its iconography.

The simulation of a surface can also simulate a false sense of space beyond the plane of the surface. The sensation of space beyond the flat screen on which players see the game-world is real and can be recreated in painting, and other art forms.

Creative 'Interioration'

While games are designed to visibly recreate perceptible spatial phenomena, understanding the inherent relationships that underpin the phenomena is critical to recognising how the images on the screen are truly behaving, and why they behave in the manner that they do. Studying the maps provided by game developers can begin to reveal the true nature of the simulation of space in-game. The computer role-playing game-world is made up of a collection of separate volumes that are borne through the simulation of a firmament of visible and/or invisible surfaces. In MUDs, these volumes were its rooms whereas in graphic based role-playing games, they are the containers which hold its spaces. The extreme interior distance between the innermost face of each surface is the simulated space in role-playing games. The firmamental boundary that defines the volumes of spaces cannot

5. <http://www.etymonline.com/index.php?search=space&searchmode=none>

6. <http://dictionary.reference.com/browse/space>



Ophelia, by Ted Hughes

"Where the pool unfurls its undercloud –
There she goes.

And through and through
The kneading tumble and the
water-hammer.

If a trout leaps into air, it is
not for a breather.
It has to drop back im-
mediately

Into this peculiar engine
That made it and keeps it
going

And that works it to death –

There she goes
Darkfish, finger to her lips,
Staringly into the afterworld."

Author's 'Silent Stare' installation at the University of Waterloo School of Architecture in Jan 2006 recreates the effect of water at night, made visible through the reflection of light reflecting off of its surface. This installation embodies suicide and penetration, the violation of natural law invoked in Hughes' poem and transposes the surreal quality of a private nocturnal suicide into a public space. This absurd siting invokes humour and the recreation of the surface of dark water strengthens the viewer's ability to sublimate the scene and more honestly experience the catharsis of being so close to, yet safe from, tragedy. The reading becomes clearest from a distance, when the viewer sees the surrounding lobby and puddle of black water simultaneously.

Fig4.5a top, two students watch their reflections in the black pool of water.

Fig4.5b bottom, bodies of water are only visible at night by the reflection of water off their surface.



be penetrated, altered, or in any way breached. Apart from weather systems and projections of light, shadow, and colour that act as a backdrop to 'invisible' firmamental boundaries (like the sky), there is no attempt made to simulate space beyond the confines of a given volume of hierarchically organised space.

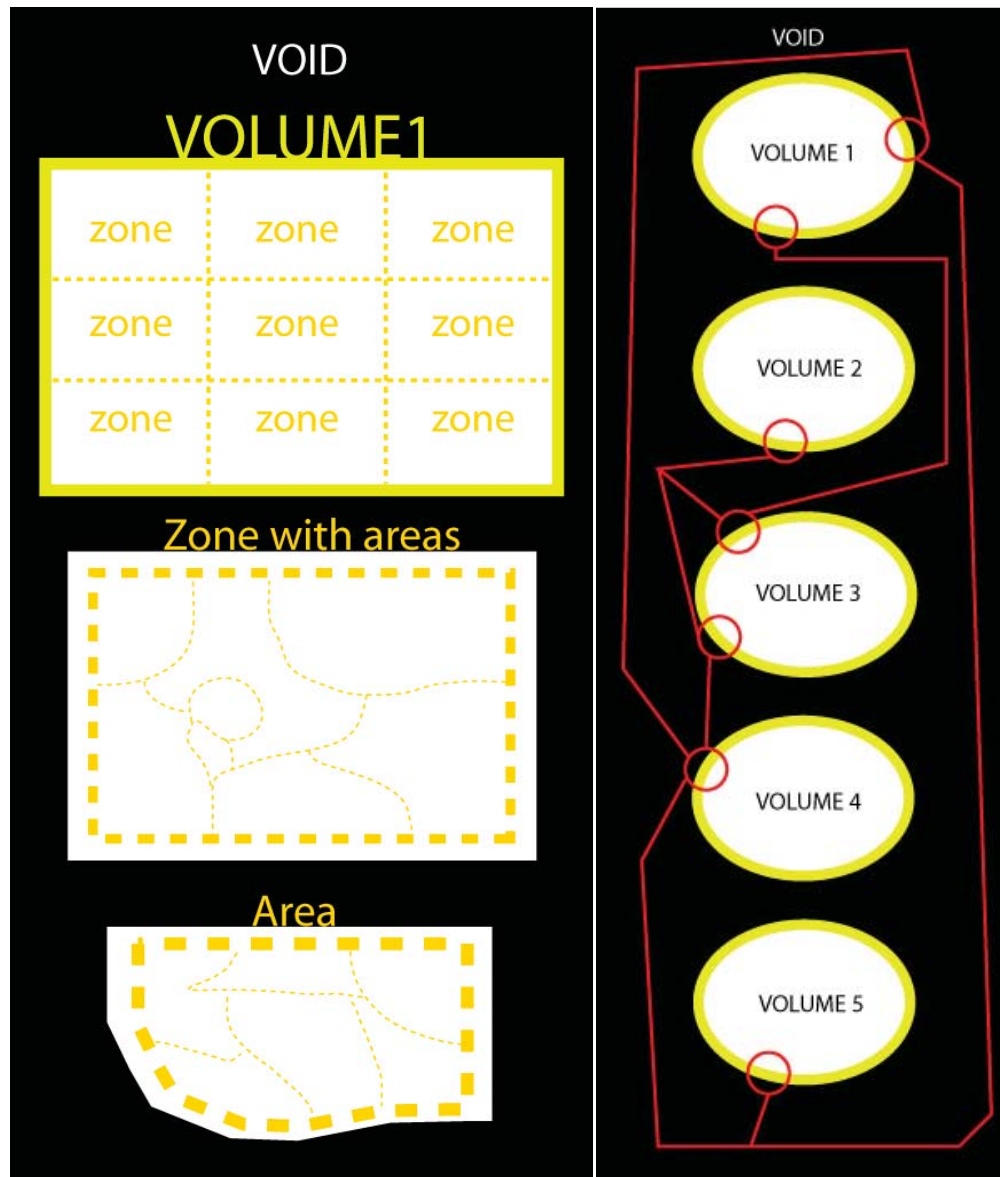
Spaces in a game-world exist in a void and are each hierarchically organised according to principles recalling those of the Hero Cycle. The volumes of space or city precincts, islands, or continents that are illustrated to help players conceptualize the game-world on a map, do not exist in space at all, nor are they even spatially related, as a map may suggest. The maps and dynamic on-screen images are of the relationships of elements that players are accustomed to seeing in real life, portrayed in a convincing manner that assists them in making sense of the game-world and its content. They do not show the 'interioration' of space-time that supports the behaviour on-screen. These vessels of game-space are neither separated from each other, nor are they connected by distance. They can be stacked, arranged, and reorganized in any plano-metric fashion necessary to represent the directionality of linkages that exist to enable transference for player characters between the vessels. In transit between vessels, characters are invisible in the game-world and cannot interact or communicate with anyone, or anything in the game, it is as though they are in the void. Interiorated space is a volume of contained physical distance that is hierarchically unique and without an exterior corollary. Each volume of interiorated space is absolutely finite in its physical (material) scale and can only be directionally related to any space outside of its firmament.

Interioration exists as part of a tradition that informs a perception of space-time and a hierarchical order that is also the basis for organising society. Interiorated spaces separate chaos from order, symbolized by the built form of their container. As such, interiorated space contains the unique potential to assign social identity and status to those who exist inside of that space and to eliminate the identity, status, and even existence for those who are not inside. The Hero Cycle relies on this transformative function of interiorated space to support exploration and movement (not locomotion) but requires that spatial access be granted ritualistically in order that one is transposed as an adventurer who is integrated, or being integrated with the narrative; rather than a lost or wandering character who has no place in the game/societal/religious order.

In the Middle Ages, the pyramid shaped social structure placed the king or queen below god, and the rest of mankind below in a uniform but varied order according to the region and exact moment in history. The interiorated social structure that bore the knight into existence held no exterior to which a person could exist and still expect to receive salvation. One's identity is wrapped in their place in the interior of society. Existing apart from that interior was equivalent to killing your God-given identity. Today there is nary a role-playing game which does not develop a character class, type, or profession that is not directly based on knighthood. While paladins and warriors are the typical names given to these in-game character types, there are also a plethora of contemporary 'knight' characters featured in comic books, movies and literature that embody the same ideals of interiorated social freedoms and rights upheld by an order, group, or individual who embodies the values of their society. Historically, knights rose in prominence after 1100 AD when the church separated them from the third estate and effectively created a new knightly class. The metaphor of the knight as a symbol of loyalty, justice, and redemption makes it an ideal archetype to include in role-playing games, as the knight is a highly credible icon of social value and cultural (narrative) integration.

Knights effectively established chivalry as a virtue and were required to protect man, who had fallen in Eden, and had hence been let out to live in the wild dangerous world. The metaphor of being 'let out' of Eden is actually symbolic of leaving the hierarchical space of animals and entering the interiorated societal space of men. The Knights' function in society was to protect the weak and

Fig4.6, 4.7 left to right, Conceptual diagram showing organization of spaces within a single volume. The volumes exist in a void, and will maintain their directionally linked access points when rearranged.



uphold justice in this world. Eventually the knighthood transformed into a secular class of priesthood and ultimately, a form of nobility. Their ascent to nobility also established the modern perception of romantic love between two individuals that was required of the knights to compete for marriage against other wealthy nobles. More importantly was the transformation of knighthood into a holy order after Pope Leo VI proclaimed that any knight who dies defending Christian Europe would go straight into Heaven as a defender of the faith, effectively turning the knighthood, through military orders like the Templars, into a Christian vocation that was the only vocation that could guarantee salvation. The Cistercian order (originally founded by a group Benedictine monks in 1098-1108),⁷ while not a military order, also adopted the metaphors of the knighthood including the myth of the quest for the Holy Grail. Cistercians believed that the grail represents the reconciliation between the spirit and body of Christ and thus mankind, and led to their acknowledgement of knighthood which protected the grail, as a metaphor of the religion; further increasing their social status.

7. <http://en.wikipedia.org/wiki/Cistercian#History>

Instanced Space

Within zones and areas, and really having no parallel in the actual world, there are ‘instanced’ spaces. These are deeply interiorated spaces that function as smaller versions of the larger volumes and are accessed from a space within those volumes. Instanced spaces are used for balancing game-play by controlling the number of avatars within a given area (the space of the instance). Most often they are used as the space for special trials that are designed to promote an intense or challenging single player or team effort. As such they can duplicate themselves as necessary to allow multiple versions of the same trial to run simultaneously without interference to the integrity of a player’s experience (see Fig4.11 and 4.12). Instanced spaces can also be used as a network of access points to other volumes; however they are never interrelated to other instanced spaces. While the formal representation of the access to an instance and the admission through that access point depends on the variables of game-play mechanics, the number and location of access points are principally determined by their ability to support the spatial organization of the zones and volumes.



Fig4.8, 4.9, 4.10, clockwise from top, Screenshot of from the massively multiplayer online role-playing game Lineage II. A depiction of Marvel's Captain America, artist unknown. Depiction of a Templar Crusader Knight, Mark Churms.



Area

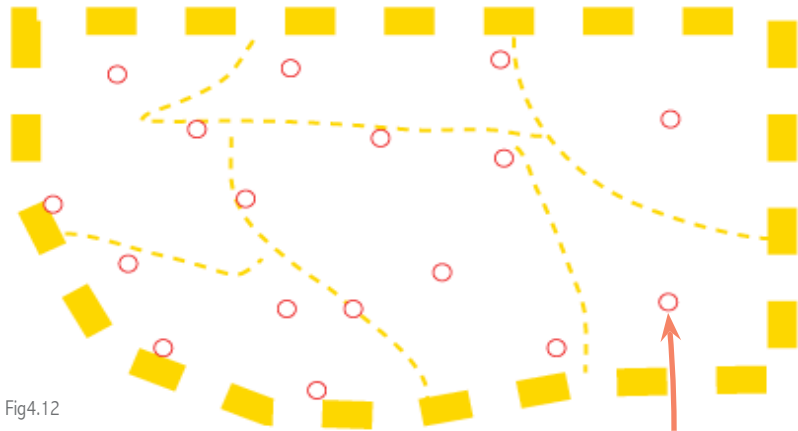


Fig4.12

Instanced spaces function like miniature versions of the large volumes. Single access from within a zone can link to multiple instanced spaces.

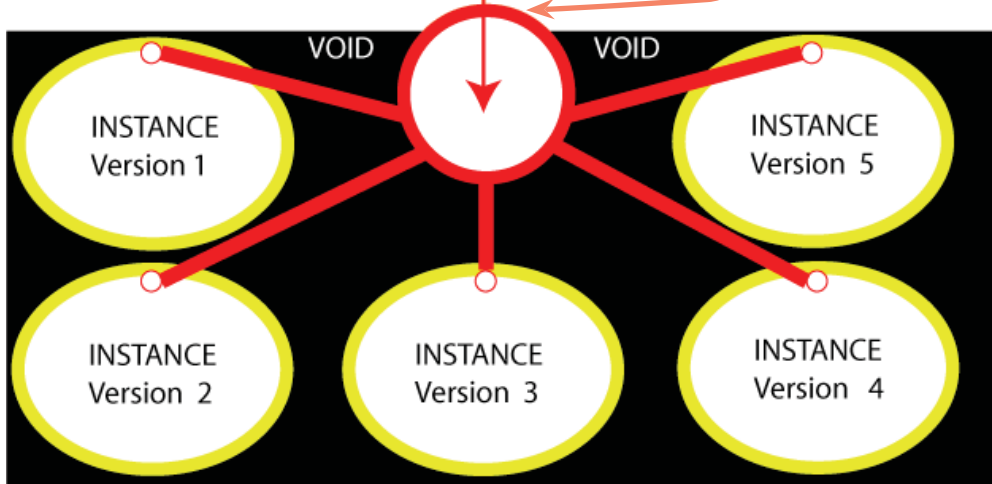


Fig4.11

Fig4.13, Screenshot from City of Heroes. The flashing yellow beacon on the western edge of Talos Island is the access point to an instanced mission space.





Fig4.14, Pixie Guardian and her team-mates wait at the entrance to an instanced space, as she searches for more players through private messages. Note the laptop used by Pixie Guardian as a visible cue that she is occupied.

Fig4.15a,b, and on the facing page, 4.15c,d, Instances often take the form of interior space and can be accessed a number of ways. On the mission screenshots on these pages, and on the last page, a simple door provided access into this instanced mission.





Hierarchy and Movement

Role-playing game spaces are hierarchically organised to propagate their narrative and to assist with integration into it. Integration is a function of one's place in space and reflects their position in a Hero Cycle. This hierarchical space establishes the same type of conditions as a real world cathedral, whereby a person's physical position in space and conscious mental preoccupations work together to denote their level of participation and integration with the mythology that governs that space.

In-game movement can be made problematic by the void, discussed in earlier in Figures 4.6 and 4.7, which makes it impossible to ever be moving in relation to another space outside of the volume one is currently inhabiting. While a character can move inside a volume or with respect to the other characters and objects within a volume, they can only be in locomotion with respect to all the spaces and object in other volumes. However architecture and ritual can be used to guide players forward and backwards between major volumes of space, enabling them to safely and knowingly access disparate spaces in a manner that supports the exposition and integration of the narrative. As such, role-playing games are designed to correlate their narratives to the hierarchical organisation of zones within their volumes. The hierarchical structure of the game space must also support the readiness of a player to pass into a cross-threshold space and does so by regulating the amount of increase in hierarchy on either side of the threshold. The greater the increase, the more risk there will be to assume. To ensure that these elements are correlated, games link volumes with access points that are available for characters with enough skill/knowledge/means to reach or engage them, and are located in areas that are hierarchically concordant (or lower/easier) to the level of the character. This ensures the mythological lesson which teaches that a hero will receive the adventure they are ready for. It also ensures that the character has fulfilled enough mini-Hero Cycles in order that they are able to take their next adventure.

In the massively multiplayer online role-playing game 'City of Heroes' the precincts (volumes) of Paragon City seem to be placed within a larger landscape, but are in fact insular volumes that exist in a void. Connections that bind access points to one another are only representational of directionality between points and not of distance, space, or movement (see Figure 4.18 and 4.19). The majority of architecturally established linkages in City of Heroes occur along one of the two monorail lines and two ferry lines. In City of Heroes the fixed connection points encourage a pattern of ritualized movement throughout the city in a coherent but unconscious manner. It is typical for games like City of Heroes, which has many volumes and a straightforward pattern of ritualized movement, to require the simulation of many instanced spaces in order to increase the complexity of spatial hierarchy whereby one volume may contain several overlapping hierarchical trials at the same time. Whereas in games with fewer but larger volumes, such as World of Warcraft, patterns of ritual movement become increasingly complex and the use of instanced spaces is diminished.

To move from volume to volume in any role-playing game, avatars must be competent enough to travel within a volume to reach the location of each access point. The location of these access points are strategically situated to generate a controlled pattern of movement that coincides with players' experience levels and to promote exploration and movement towards frontier spaces.

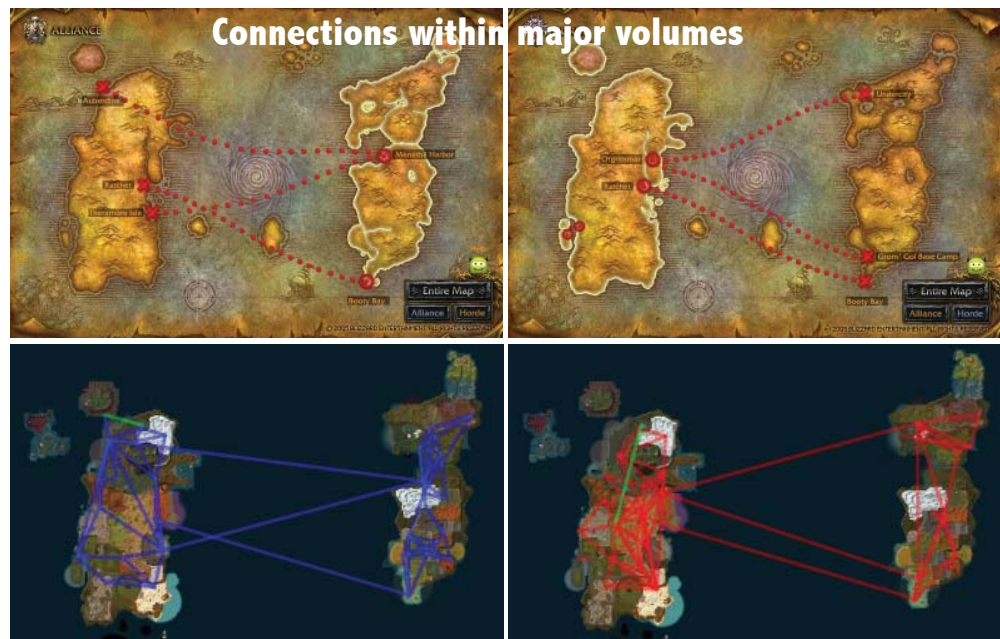
“In World of Warcraft the landscape operates in a similar fashion to the architecture, presenting a immersive spatial experience. Players weave and manoeuvre their way around and under trees, across hill, dale, dune and dell, through streams and lakes into underwater terrains, into caves and up mountain ranges. Ocean surrounds the continents of Azeroth, only avatar fatigue prevents the player from swimming endlessly into the sea, delineating a border to the game-world in which death occurs before a player can reach the edge. Terrain is expressed to the player as a function of simulated physical properties [and through the representation of form and material], such as steepness of the land in which players slip downwards as if forced by gravity on certain gradients. Rather than inaccessible mountains World of Warcraft has slippery mountains, that still form part of the playing field even if they act as impenetrable barriers. Players will jump off un-traversable cliffs for shortcuts and for fun, while other players devote hours to mapping out paths afforded by the junctions of geometry within supposedly impassable terrain...

Looking at the zone in which Ironforge is situated, Dun Morogh, the discrete sectors within the zone are clearly visible. Coldridge Valley is the beginner’s zone, separated as a nursery from the rest of the more inimical world by mountains. Other areas are less enclosed but retain a homogeneity of scenery and populace, within the greater heterogeneity. The landscape collates quests within each zone and houses them in well-defined areas. In the same manner as the architecture, World of Warcraft’s landscape arranges activity.”⁸

Travel on foot (‘free’ directional adjacency) forces a prescribed pattern of movement according to the breaks in the material division of space. In World of Warcraft the large spaces within the volume are divided by natural objects such as mountains, rivers and impassable terrain, thereby establishing a hierarchical system that defines their borders and simulates distinct qualities of each space. The architectural intervention (bridge/gate/tunnel etc) at each break in the ‘natural’ container links the two spaces, while maintaining their independent identities, despite being within the same volume.

Directionally related movement through space controlled by physical (architectural or geological) constraints is tempered by the ritual movement that is used to bypass such constraints to expedite travel and the progress of a Hero Cycle.

Fig4.16a,b, 4.17a,b, clockwise from top left, Alliance flight paths connecting major volumes (ritual movement) in World of Warcraft. Horde flight paths connection major volumes. All Horde flight paths, All Alliance flight paths. Alliance and Horde flight paths are exclusively available to characters belonging to those factions only.



8. McGregor, pg4.

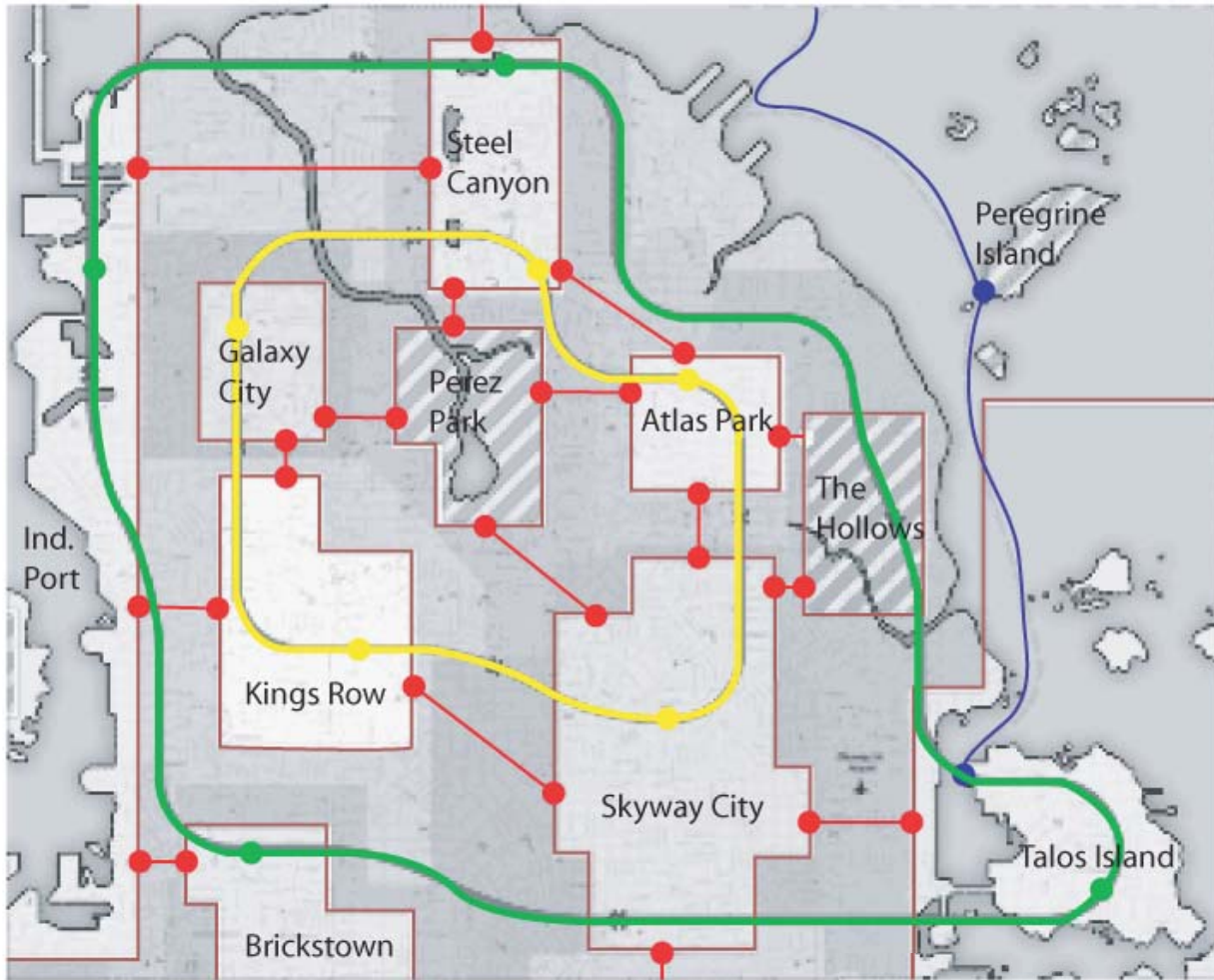


Fig4.18, Map from City of Heroes' Paragon City with the volumes, access points and linking 'monorail and ferry lines coloured.

ACCESS POINTS:

- pedestrian
- yellow line - monorail
- green line - monorail
- water ferry

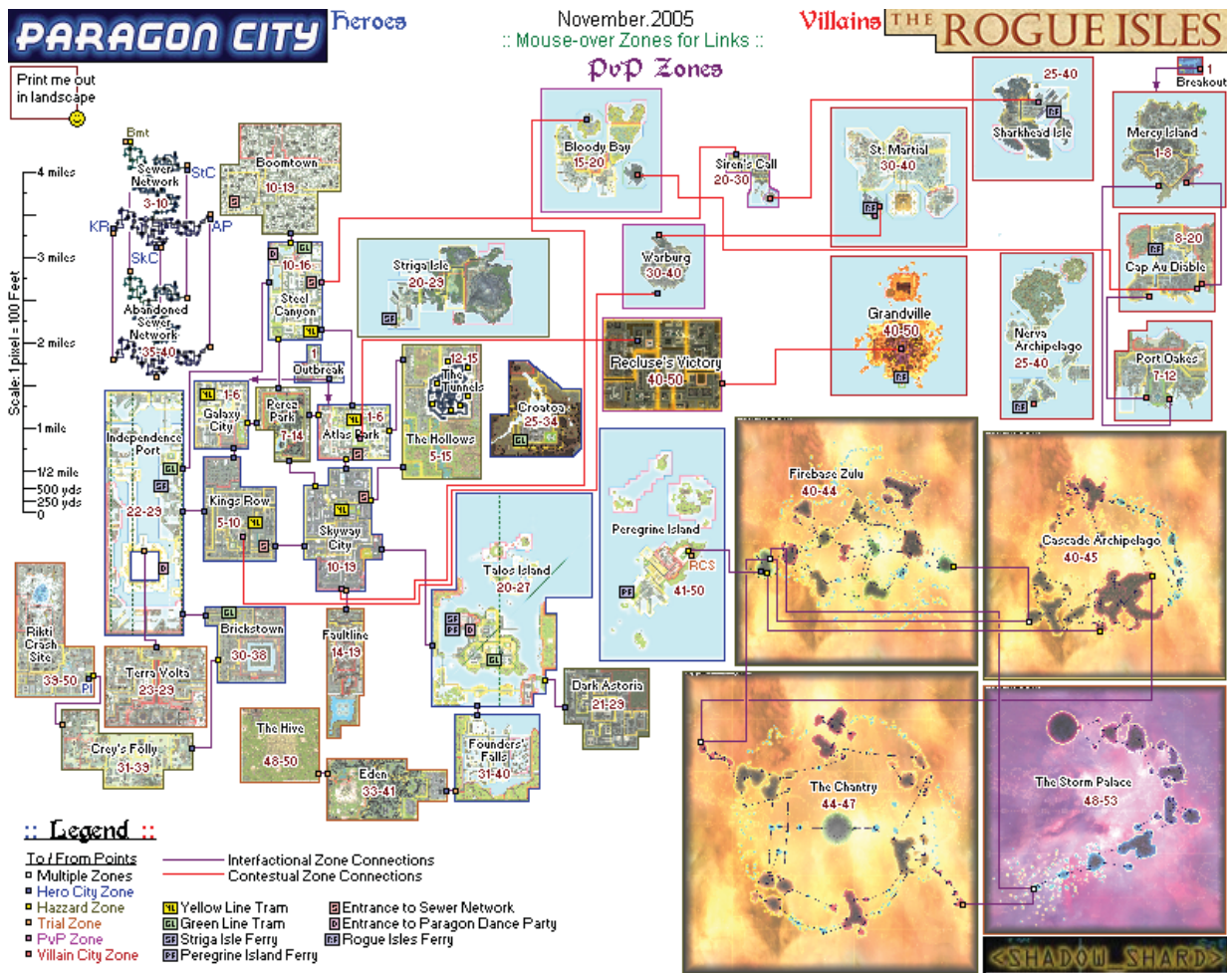


Fig4.19. Instead of falsely depicting a continuum of spatiality in which Paragon City's precincts fit, (as is done by the official maps and publications) the city precincts are shown to exist as independent and unrelated spatial volumes that are contained by their firmamental boundaries.

Fig4.20, the Western Continent of Kalimdor in the World of Warcraft, with ritual access points indicated.





Fig4.21, the Eastern Continent in the World of Warcraft, with ritual access points indicated.

- Instances
- Alliance Flight Nodes (ritual)
- Horde Flight Nodes (ritual)
- Neutral Flight Nodes (ritual)

Fig4.22, Southern end of the Eastern Kingdoms on Azeroth (the world) illustrating the major division of space on the continent. Note that the breaks in the natural borders are thresholds where 'free' pedestrian access is made possible.



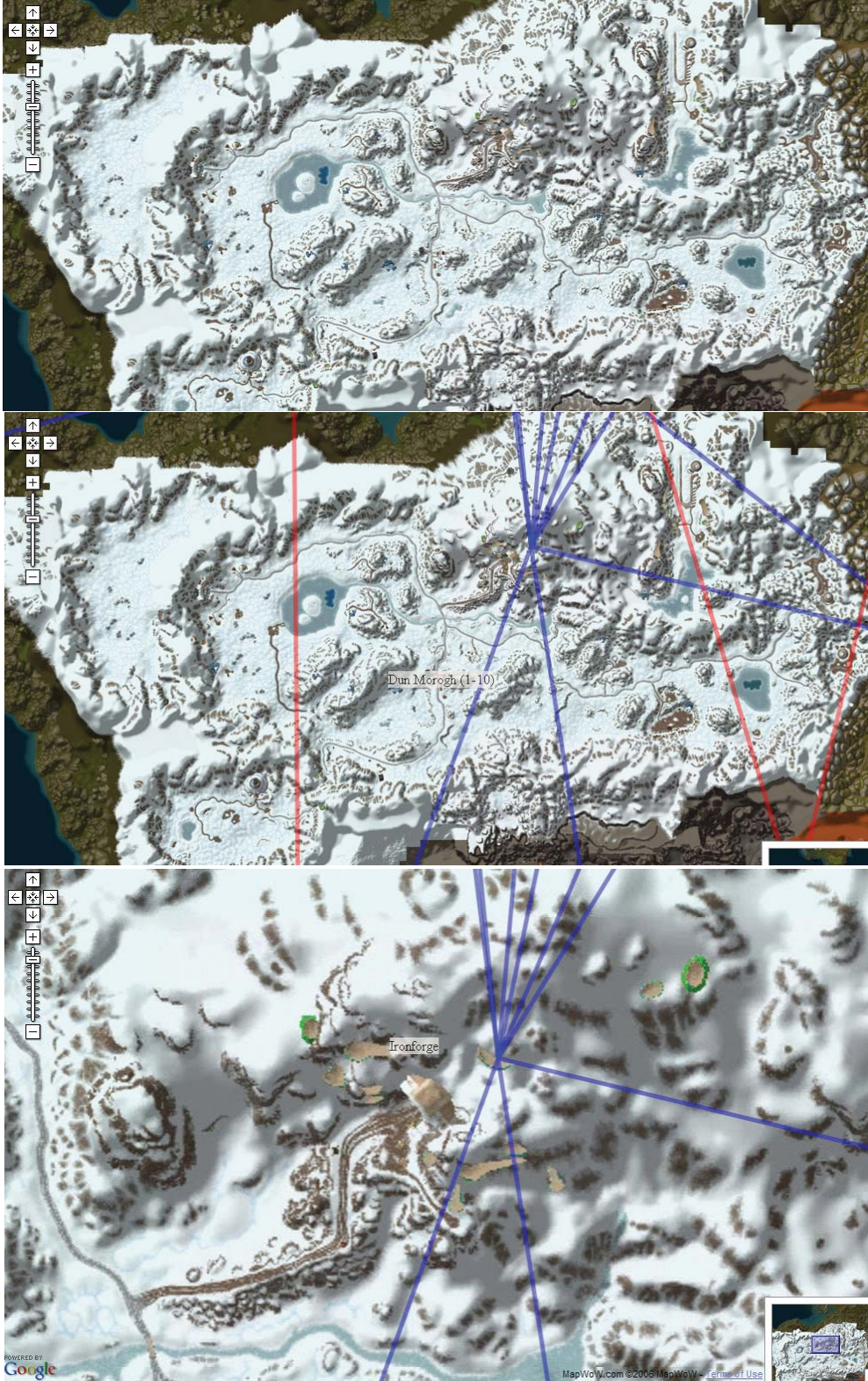


Fig4.23a,b,c, top to bottom, Zooming in on the Dwarven city of Ironforge (also home to Gnomes, whose city was destroyed in battle against Troggs). In these images, flight paths are shown to pass over the inaccessible mountains, directly accessing a portal to the underground city. Players who cannot survive a journey on foot, will be forced to take a flight into Ironforge, but at a cost, depending on where they are coming from.

Fig5.1, Screenshot (modified with plan of Florence Cathedral Italian Gothic 1296-1436) of the High Cleric running towards a portal in Peregrine Island in City of Heroes.



RITUAL PLACE SPACE TIME

Surfaces and Thresholds

Creative interioration similar to the process used by contemporary game developers is used to provide a place for human habitation in the creation stories of Judaeo-Christian mythology. These monotheistic religions have developed techniques for remembering the space-time derived from the theology of their myths through an architectural interioration of religious space and rely on ritual and movement to activate their mythological lessons and theological relationships. Thresholds, surfaces and ritual movement are used to educate, integrate, and transform the consciousness of worshippers in Hebrew and Roman Catholic spaces in the same manner and for the same purposes as they are used in role-playing games. Similarities in the conceptualisation of space, time and place and in the relationship between these concepts to personal and collective identity that are seen in traditional Hebrew, Catholic and role-playing game environments, strongly suggests a mediation between corporeal and spiritual reality. This reality begins to reveal itself when triggered by movement through architectural form and suggest that an architectural paradigm can be examined as a symptom of a natural predisposition to understanding space, time, place and identity, rather than being totally symptomatic of the beliefs and semiotics of culture or religion.

Both role-playing games and traditional Hebrew and Catholic architectural paradigms encourage the projection of consciousness out from one's domestic space into another space. The act of passage from one space to the other should produce a shift in consciousness that is part of the ritual of transformation that occurs in such paradigms. In Hebrew and Catholic architecture ritualized movement can involve a physical movement or locomotion in space, or a mental leap (meditative projection) and is meant to recall the mythology upon which it was based. Depending on the complexity or type of ritual, theology may demand both. The displacement of religious mentality in a non-religious culture has allowed role-playing games to borrow the semiotics of religious architectural paradigms to model the space-time in game-worlds where ritual is used to recall the mythology on which it was (consciously or unconsciously) based. These paradigms are effective in role-playing games if a strong mental focus on the intangible in-game spaces is maintained before a person's physical needs. Ironically, the demand for mental concentration and physical sacrifice made of worshippers in religious institutions is also asked of players by role-playing games. In both cases, the successful player or worshipper is promised both transformation and cultural integration. The recontextualization of space into hierarchical vessels requires that players are taught to adjust their perception of space and begins the transformation of their consciousness that will extend beyond the time of the game session, depending on the integrity of the experience and credibility of the simulation; the more positive the experience, the more likely a player will feel the need to revisit the game space.

The clarity of architectural resolution provided by the surfaces and thresholds in cathedrals enable the senses to perceive conditions that are imperceptible in daily life. Role-playing games utilize surfaces and construct space to simulate these kinds of conditions.

The Hebrew and Christian paradigms that follow offer two examples of ritual projection orchestrated by architectural surfaces and thresholds to create space and conduct transformation. The use of surface and threshold in these paradigms is identical to the use of simulated surface and threshold in role-playing games, where space and architecture participate to curate the transformation of characters and players. The transformation in-game integrates the identity of the character into the live narrative as their actions reflect the exposition and potential development of that narrative. For players narrative exposition and personal experience transforms them into iconographers and conductors



Fig 5.2, The Annunciation, left panel from the Columba altarpiece, by Rogier Van Der Weyden, 1455.



Fig5.3, Right panel of the Columba alterpiece, Presentation at the Temple. Note how the events are depicted within the frame of an architectural space. This interiorates the event, distinguishing its spiritual hierarchy from other spaces. Architecture is also used to make the invisible connection between the divine and human space visible through the illumination and penetration of light into an interior space.

of the narrative. Players become proficient in the functional use of game-play mechanics as well as with the game mythology that justifies those mechanics. The greater the sensibility between the mythology, the narrative and game-play, the more likely a game will produce a credible experience.

Hebrew World and Architectural Vessels

The interior of Hebrew architectural vessels were places that could sustain life by dividing the wild chaos on the outside from the stability and order of the interior. The visible surfaces of the vessel acted as symbolic time sinks that captured the essence of the events that transpired around them. The material beneath the surface would absorb the essence of the events and time that occurred in their presence like a dry sponge does with water (Figure 5.4). The interior of the architectural space could therefore be ruined by the contamination of events that happen within, and emphasize the need for controlled thresholds to keep contamination out. Vessels that can hold the interiorated space that architecture created for the Hebrews included the firmamental boundary which holds the earth in its interior, and even womens bodies (see Appendix, page 232 - 238).

Hebrew Architectural Vessels

Spaces within vessels (or the vessel of the firmament) exist as distinct places (see Figures 5.5 and 5.6), despite being part of the same interior space. Individuation and separation of place within a single space is achieved architecturally through the creation of a void made from a material surface (III) that separates place I from place II. As result, place I and place II can also be said to be infinitely far apart, but also infinitely close.

Conceptually space and void are mutually exclusive, existing only in a dialectic with one another. The ability to conceive of a void that can be materially articulated requires an understanding of environment and architecture that prioritizes place over space. Materially, a thin veil or (hollow) wall would constitute the void.

The Hebrews related to their world through a complex understanding of the relationship between time and place. For them, time could be held in matter which was used to create architectural vessels to contain volumes of space that would be safe from events transpiring outside. Spaces that held time and had names were considered places. This relationship is evident in the architecture of The temple of Solomon, and the Tent of the Tabernacle (also 'of Appointment', see Appendix, page 237). In essence the Hebrew paradigm is that of an axis-mundi connecting the physical world to the invisible spiritual world, not only through space, but also in time. It links the eternal of what is beyond to the constantly moving time on earth.

Take for example the Western Wall that enclosed the second temple (see Figures 5.8, 5.9 and 5.10). From an architectural perspective the exterior side of the Western Wall becomes a credible holy site when considering the use of architecture in Hebrew space-time to articulate void space. The wall represents the separation of the outside space of the world to the interior space, or place of the temple mount. As such the wall acts like the curtain in the temple (or Tent of the Tabernacle) itself which divided the Holy space from the Holy of Holies. In this case, the Western Wall is a physical indicator of a void space between the temple mount and the outside world. Prayer does not occur towards the wall, the wall is used as a channel to bring the ritual prayers to the Holy space of the temple mount. The wall signified the continuum of holy place that is spread out amongst many divisions of space, some of which remain inaccessible.

Fig 5.4, Illustration depicting the description from the Hebrew text in Genesis 1:6-8. As a note of interest, the English translation loses the nuance of the Hebrew poetry. Biblical Hebrew literature developed a system of homophones for relating double meanings and spiritual concepts through its oration. In Hebrew, the sky ('sha-Ma-yim') and the waters ('Ma-yim') are phonetically linked.



“And God said, “Let it be that there is a firmament inside of the waters, and let it differentiate between waters to waters. And God did make the firmament and did differentiate between the waters that are under the firmament, and between the waters that are above the firmament, and it was so. And God called sky, the firmament.””

בראשית א: ו - ה
וַיֹּאמֶר אֱלֹהִים, יְהִי רָקִיעַ בְּתוֹךְ
הַמַּיִם, וְיִהְיֶה מַבְדִּיל, בֵּין מַיִם לְמַיִם.
וַיַּעַשׂ אֱלֹהִים, אֶת-הַרָקִיעַ, וַיַּבְדֵּל
בֵּין הַמַּיִם אֲשֶׁר מִתַּחַת לְרָקִיעַ, וּבֵין
הַמַּיִם אֲשֶׁר מֵעַל לְרָקִיעַ; וַיְהִי-כֵן.
וַיִּקְרָא אֱלֹהִים לְרָקִיעַ, שָׁמַיִם

Hebrew Paradigm, Illustration

Figure 5.7 is derived from the plan of the Temple of Solomon and Tent of the Tabernacle (both were derived from biblical scripture which describes the spaces). In figure sequence A, time and memory are captured in a vessel and a clearly defined place is created (I). A conscious shift in place is achieved with a threshold. In figure series A & B, the threshold is neither interior nor exterior. The threshold is placeless in that it belongs to both interior and exterior spaces, yet to neither place. It is a hinge that physically links the interior and exterior, but guards against the admittance and subsequent folding of the essence of the place within to the essence of the place without.

Note the relative size of the portal which accesses the interior space, as represented in the elevational diagram. In figures A and B, the architecture of the portal is modest in size compared to the footprint of the interior. This allows for a greater degree of containment to the space within and retards a flow between interior and exterior.

Thresholds are used to articulate a shift from exterior to interior and within space, from place to

1. Translation by author from the Hebrew Genesis 1:6-8

place. More specifically, the memory of passage through a threshold can act to incorporate a visitor into the space-time of the place they have entered. The memory of an event can be also be triggered with iconographic symbols, images, and names (Appendix, page 236) or captured in the materialization of a vessel around the space of the event.

Catholic World and Architectural Vessels

The Roman Catholic cathedral's vessel-like space helps bring Medieval Catholic theology to life originally in the Middle Ages and also in this world by animating the space with visible signs of Christian theology. These signs often include symptoms (such as reflection, diffuse and direct light, echo and reverberation) of the world that are made to be present in the architectural space. The cathedral also uses space as a tool for conducting and actualizing ritual worship to educate and to integrate. The ritual is a retelling of mythology that is the source of the religious doctrine. The location of space that a worshipper is in (physically and mentally) plays a strong and undeniable role in defining where they are hierarchically with respect to the theological system at hand and in what stage of transformation, or moment in that narrative, they are participating in. This same function of space is applied in role-playing games where a character's presence in a location of space strongly suggest their position in a Hero Cycle and therefore, their identity, level of experience, degree of integration and familiarity with the narrative.

Spaces within the vessel function to elevate one's consciousness onto a higher, and invisible, ephemeral place, space (III). In figure 5.12 one can see how architecture helps to achieve this transformation when considering the ritual of physical and mental projection from space I into space II, that leads to a metaphysical space (III) of rapture. For this reason space II is punctuated with openings in the material of the enclosing vessel; to allow for light to penetrate, illuminate, and be held in space. The contained illumination is significant in representing the connection between invisible spiritual space (III) with visible space (II).

In the Counter-Reformation the connection between these spaces was made more explicit through the use of trompe l'oeil techniques within architecturally framed surfaces. Architecture provided evidence of the connection to the spiritual realm through the strategic presentation of images which depicted mythological events, and through the dramatic penetration of (holy) light into the space (see Figures 5.13 and 5.14).

Catholic Paradigm, Illustration

In figure 5.15, sequence C, a vessel is used to contain and a create space (I). A conscious shift in space is achieved with a threshold. In figure series C & D, a threshold acts to organize space. The material placement of the threshold creates a hierarchical relationship around which space is organized and can be understood.

Because this relationship is based on material adjacency in physical space, and is therefore non-ephemeral, time and memory are not critical in revealing the transcendental qualities of the architecture. Thresholds are used to differentiate the exterior space from the interior space, and within from space (I) to space (II) to space (III).

Note the relative size of the portal which accesses the interior space, as represented in the el-

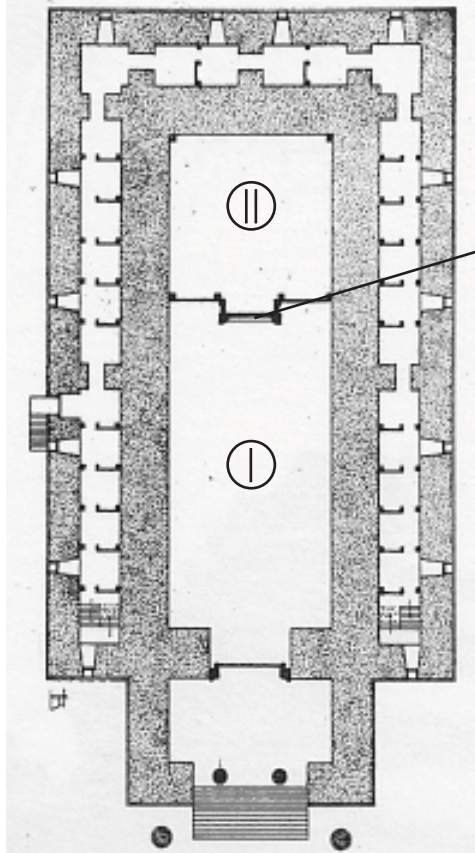


Fig5.5, Plan of Solomon's Temple

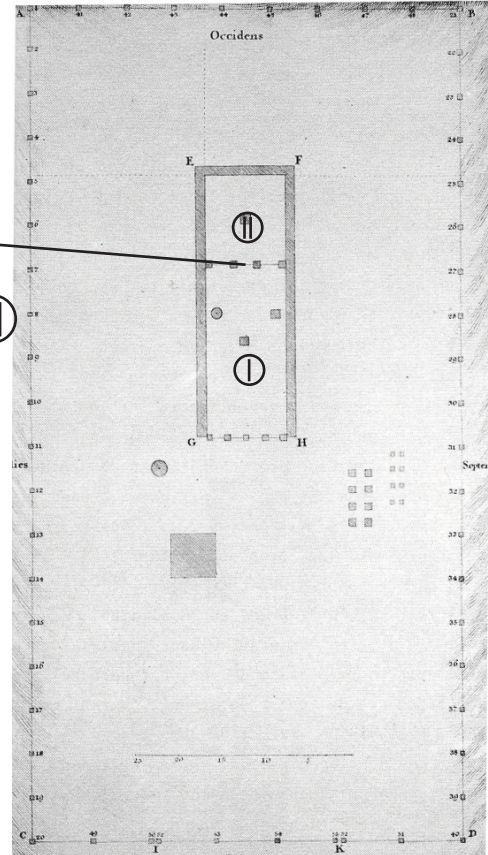


Fig5.6, Plan of the Tent of the Tabernacle.

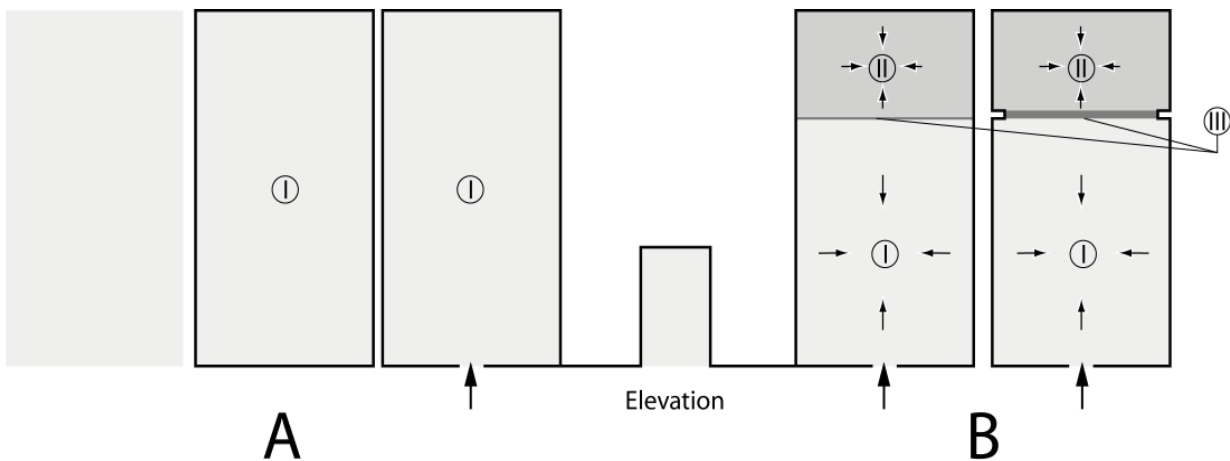


Fig5.7, The Hebrew Paradigm: A moment of time or an event can be captured and held in the materialization of a vessel that contains the space of the event, and is represented above by the grey area (it is a space in which an event may have occurred). This is one method the Hebrews used to make a place; another was to give a proper name to a specific location. The etymology of the name of a location related to the event that brought about its naming or spatial characterization.

In the Sequence above, the grey area on the far left represents a moment, event, or incident of time that can be held in a vessel, creating a place, that is place I. Within that single space/time vessel a second and third place can be created without distinguishing the space of the vessel. These are spaces II and III. Place II is a hierarchically superior space to place I and is separated by a void (place III). Each place shares the same architectonic space, but exist as hierarchically distinct and independent places. In the diagram on the far right, the architectonic articulation of threshold within the volume begins to prioritize the sequence of spaces as the generator of place and looks more like the Roman Catholic cathedral in its use of architectural form to organise space.

evational diagram. For figures C and D, the architecture of the portal is large in size compared to the footprint of the interior. The large portal accommodates for, and helps to conduct the ritual sequencing; which extends from outside, to the interior, from one space to the next.

Readiness

This thesis studied Catholic and Hebrew architectural paradigms and believes that these architecturally conditioned spaces can be used as exemplars of the implications of moving forward in space according to the phenomenological symptoms of a theology based on a cultural myth. Mythology teaches that the hero receives the adventure for which they are ready, and that “the landscape and conditions of the environment match the readiness and condition of the hero.”² Simulated ‘natural’ and architectural landscapes organise movement by ensuring that players who are not strong enough will be unable to access hierarchically superior spaces, or will be in extreme danger if they do so. The velocity of adventure and the acceleration of integration through the Hero Cycle takes player characters deeper into a game’s narrative and requires that they reach an adequate level of integration and familiarity with game-mechanics in order to advance in space, and thus, in their personal development. Architecture is used to assist players in their assessment of risk using the memory of corporeal sensibilities triggered by the images of the on screen paradigms.

The fixed rule system in-game cannot change or empathetically vary its conditions according to the needs of players as a Dungeon Master could. As such complex role-playing games like massively multiplayer online role-playing games rely on architecture to guide players to a place where they will be ready to confront and complete heroic challenges. Architecture is also used to promote exploration for players who are ready to adventure, while retarding the exploration of new spaces for those who are not ready.

2. Campbell Interview, The Hero’s Adventure.



Fig5.8 top, The Dome of the Rock now occupies the site which was part of the temple mount,

Fig5.9 bottom, The exterior side of The Western Wall, which surrounded the second temple is the most sacred (accessible) Jewish holy site in the world.



Fig5.10, A plan of the location of the first temple. The temple is highlighted, and as seen here, sits underground just south of the Dome of the Rock.

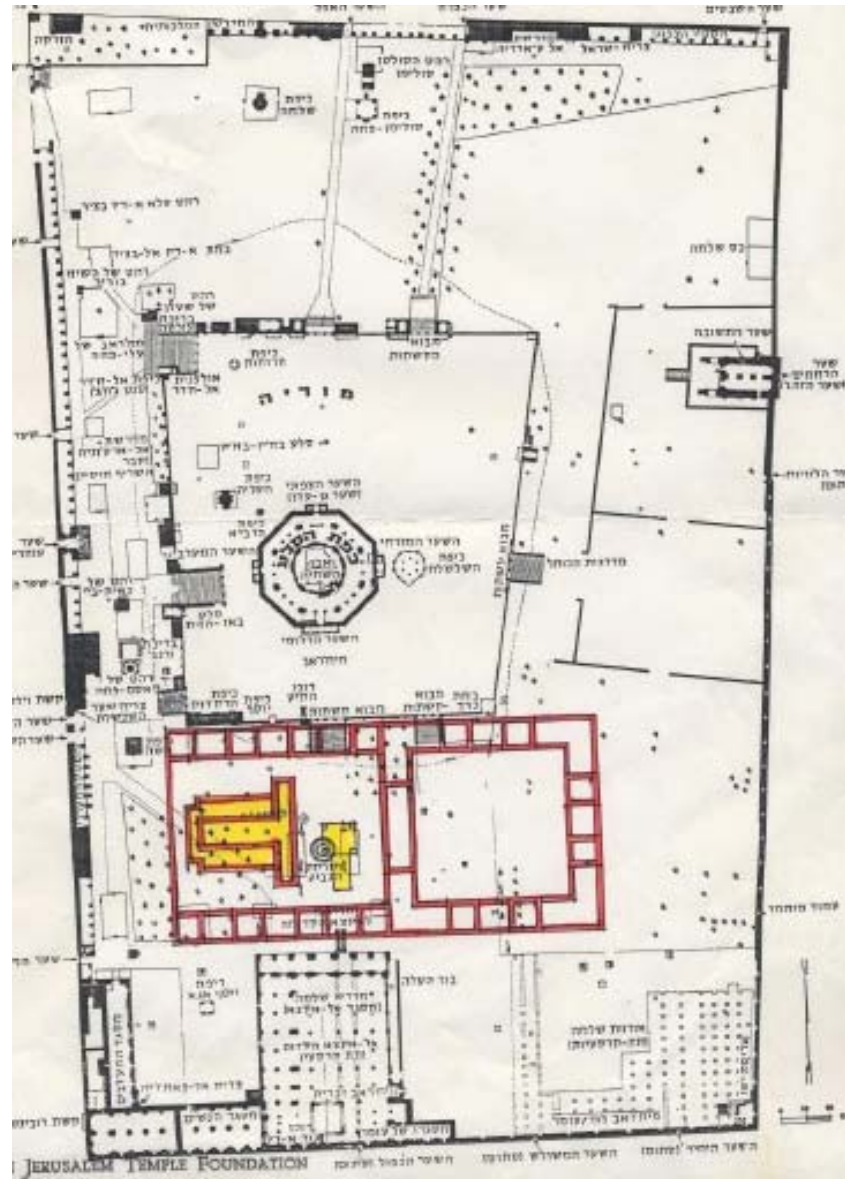




Fig5.11, 15th Century illustration of the world, showing human inhabitation within the vessel of the world God has created for us. Humans are bound to the space he has provided and cannot exist outside, as the outside realm is (the firmament) for the divine.

Fig5.12, Plan of Troyes Cathedral.

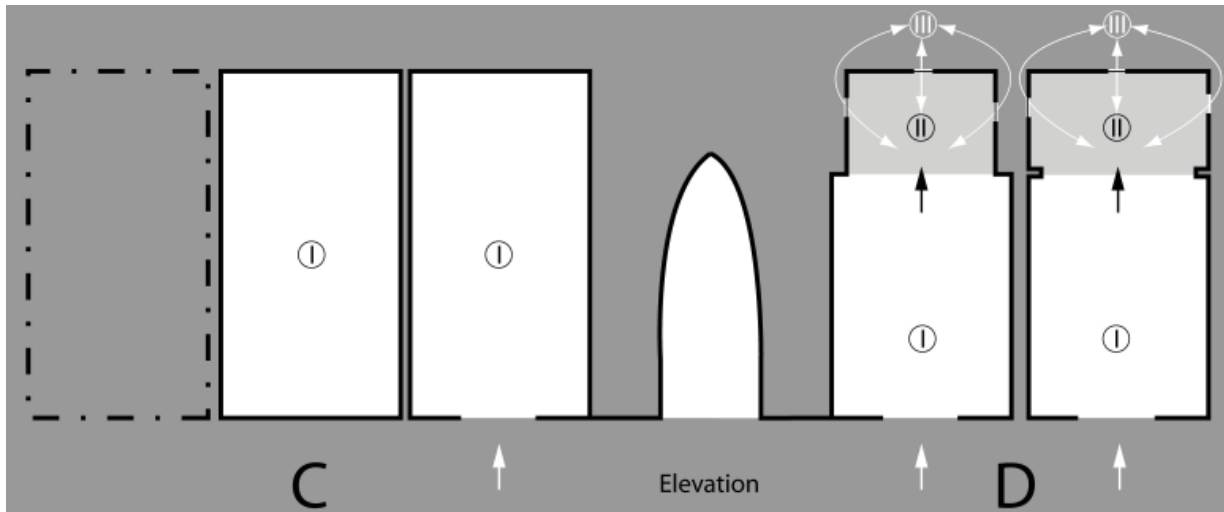
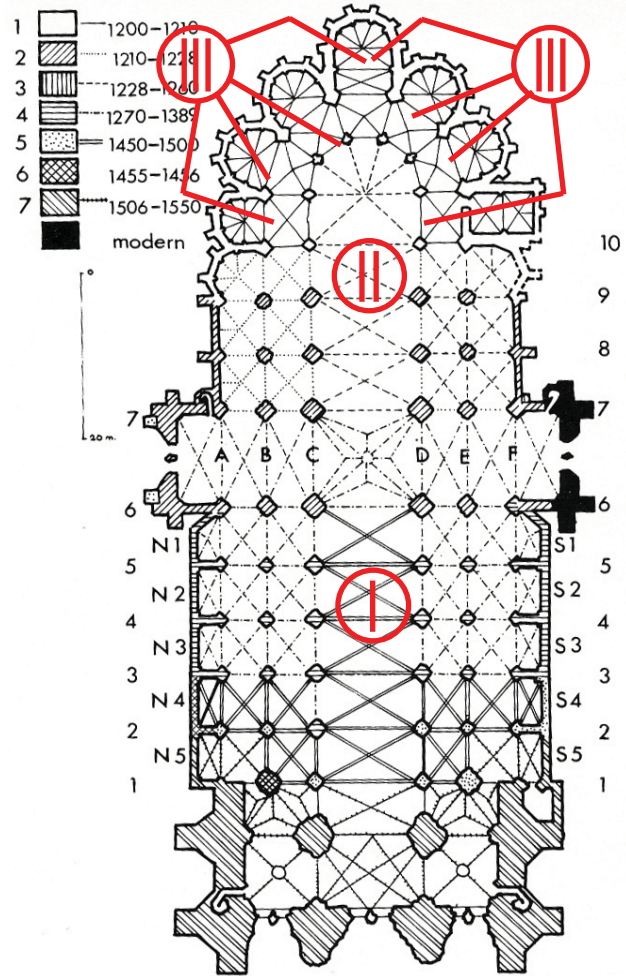


Fig5.15, Roman Catholic Paradigm: The space is made distinct by an architectural enclosure. Interiorization of space is also an act of sanctification of the space as it elevates its hierarchical prominence.

In the sequence above, space is contain by a vessel, making it distinct from the world outside (far left). Inside the vessel, space I has become hierarchically distinct. A further articulation of the architectonic form to create threshold and (tighter) volumetric enclosure is used to define spaces within the vessel while allowing a visual and spatial linkage to maintain the order of movement from outside to inside (from the grey space to space I), from space I to space II, and (through mental projection) back out to a to the invisible and holy space III.



Fig5.13, Ceiling fresco detail, Sant'Ignazio, Rome.



Fig5.14, Light entering St. Peters Basilica, Rome.

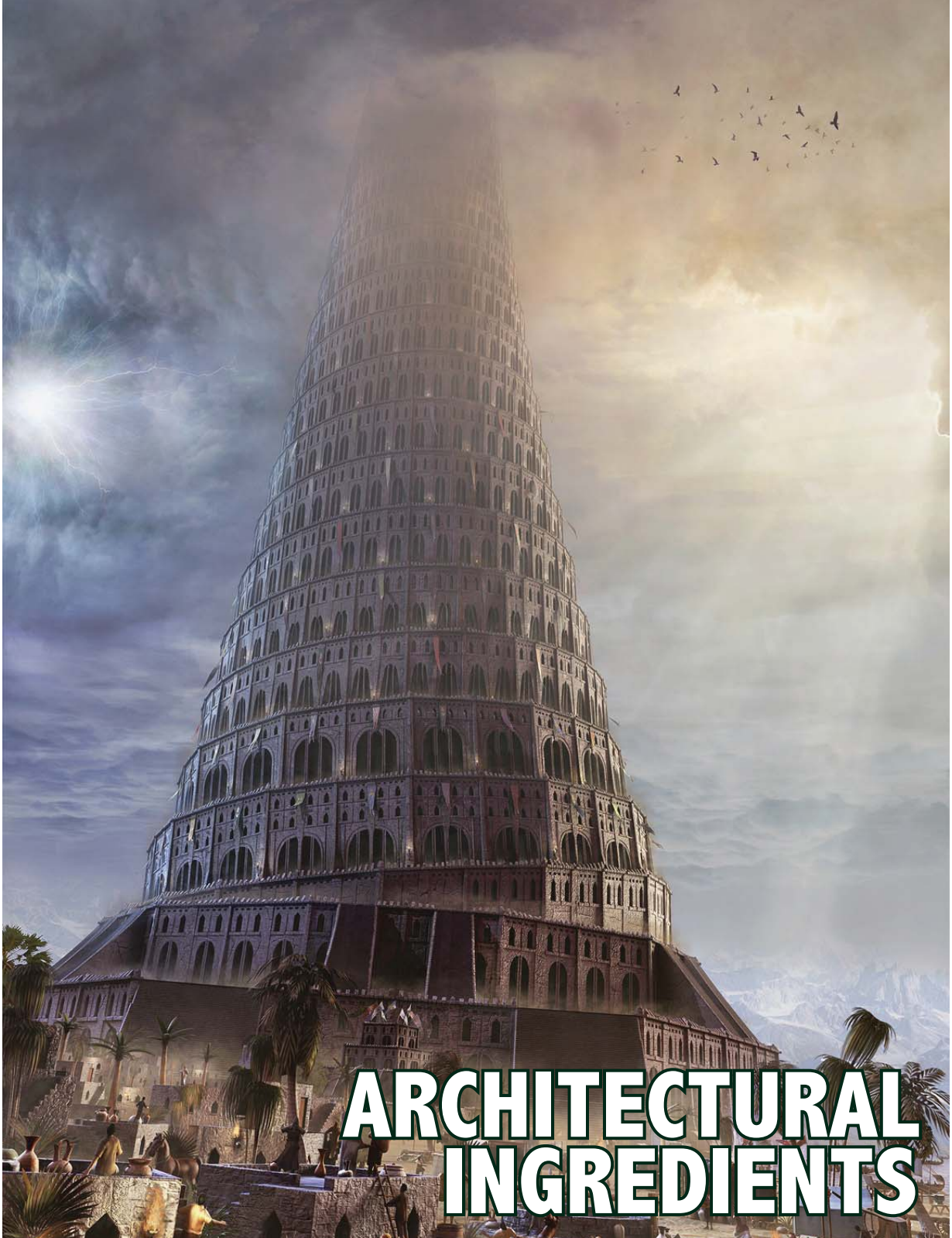


Fig6.1: Depiction of the Tower of Babel by Ziv Qual, 2007.

Space and Access

The architectural simulation affects the nature of role-playing games in three critical ways. First, it establishes the firmamental boundary of the volumes which is the progenitor of space and objects of the game-world. Second, it prioritizes spatial access to encourage or retard movement and avatar density to propagate the game's particular form of Hero Cycles and to link space that will integrate characters into the narrative. Thirdly the architectural simulation is carefully rendered to portray familiar typological places that assign value and credibility to the game-world. Architectural paradigms are used in the 'real-world' as well as in game-worlds to transform space into credible places. Place making in both real and virtual worlds assigns value to space through the iconographic recontextualization of its integrated parts.

“Our private, social and cultural undertakings depend on principles of perception, cognition and our use of space as a tool for thought. Proposals for the design of cyberspace must acknowledge the role that space plays in our thought and culture. Doing so will allow us to build upon our innate skills for managing information psychologically and somatically. This not only facilitates our internal processes but also our natural extension outward - to our world and fellow creatures. It is immaterial whether the resulting artifacts are physical or not. What matters is that they are created with respect for human use and aspiration. We cannot ask for less.”¹

Architectural space (in fact all space in-game is 'architectural' as it is all designed) is used to guide players on their Hero Cycles and to provide players with the knowledge they need to fulfill the challenges put before them. While the game-play mechanics and minutiae of Hero Cycles are highly idiosyncratic from game to game, the use of space as a vehicle that drives integration, as an indicator of status which brands identity, and as an instrument through which knowledge can be received, is consistent in role-playing games, mythology, and indeed, in many existing city spaces. The morphology of space becomes highly important in defining how and when one is integrated, what status is imparted in which space, and how and why knowledge is passed. The morphology of space is held in a relationship to the Hero Cycle which ontologically links its potentialities with a hierarchical organisation that binds personal identity with collective consciousness. The relationship of identity and consciousness to spatial morphology and the events that occur therein is activated not by the existence or form of the space, but by the movement one makes through that space.

There are two kinds of movement in-game, the first is a movement within a volume of space and the second is a transference from a volume of space to another volume of space. Both of these movements are curated architecturally by a topography of objects, hazards, or other dangers. In earlier levels this movement is only plano-metric, but can become more three dimensional as the player's abilities improve. Role-playing games are sensitive to the maintenance and health of their spaces by establishing flexible zones that players can grow in and become familiar with, while maintaining a more literal separation between volumes that are increasingly hierarchically discordant. As such, the movement in a volume should be less prescriptive than the movement between volumes and thus is easier to navigate - which is important for low level characters and novice players.

The organization of movement in role-playing games requires multiple and sometimes overlapping hierarchies to share space. While physical matter cannot share space at the same time, hierarchically discordant patterns of movement in a game space easily can co-exist. For example, a space that has many patterns of movement for low level characters might share the same plano-metric space as an elevated location that can only be reached by higher level characters. Other visual

1. Anders 1998, pg220-232.



Fig6.2, Map of Stormwind City from the World of Warcraft. Stormwind divides each precinct into a distinct zone, with a common space for trading, banking and access to the griffon riders (taxis) in the centre. The stone connections between each precinct are actually barrel vaulted open air corridors.

indications of a shift in hierarchy within a space is made with a threshold, a break in material form, or a fluctuation of form that distinguishes one space to the next.

While architectural precedents drawn from the real world are useful in generating a coherent plano-metric organization of space in-game, these spaces must still include hierarchically distinct places that are unique to themselves and reflect the mythology of the game-world. As such, traditional architectural analyses that reveal the formal articulation of material space will not reveal the invisible hierarchical characteristics supported by the architecture; this is also true of complex and distinct 'real-world' architectural spaces. For example, the Italian architect and surveyor Giovanni Battista Nolli drew an astoundingly accurate figure ground plan of the city of Rome in 1736 - 1748, referred to as the Nolli map/plan of Rome. Nolli's plan of Rome is an excellent source for reading the tectonics of material form in the city, but is also a misleading representation of the city's invisible space. Nolli's plan suggests a spatial continuum that extends through the labyrinthine city from its outdoor pedestrian corridors and piazzas to the interior spaces of publicly accessible piazzas and places of worship. While his map is an empirically accurate rendering of public and private spaces and reveals the labyrinthine morphology of the material city, it conceals the hierarchical distinction between the pathological and propelling permanences of the sacred, ancient, and living city space. For instance, Nolli's plan renders the empty space of an apse in a church in Trastevere the same as a piazza or alley, and is even the same as the piazza on the Capitoline Hill. The plan naturally misleads those who cannot envision the fluctuation in the scale of volume that is operating to support a hierarchy of sacred and public spaces, and who cannot imagine the framing of views, and interioration of spaces that is so strongly felt for residents or visitors to the city. Without considering the function of surface (which in plan reads only as an outline) and threshold that are used to link space but maintain

a distinction of hierarchy, the consistency of the hatched poché spaces and the empty white spaces will conceal the interiorated and hierarchically distinct spaces from the physical city. As well, Nolli's plan renders all solid matter with a dark homogeneous hatch, suggesting that the city is carved from a single piece of matter. While this is a helpful metaphor for understanding the morphology of the city's physical tectonics, the distantiating of space from place would require a mapping of the triggers which cause a shift in consciousness that allows one to conceive of place versus space, not just solid (filled) versus empty.

Spaces that are considered to be integral to the narrative and mythology in game-worlds such as major public spaces, unique social and training environments, the location (home, office, palace, or throne room) of notable non-player characters, government, economic, or administrative centres, and spaces which hold 'secret' or clandestine (perhaps countercultural) mythological knowledge must be carefully designed. A shift in the texture, scale, or surface type, of the architectural image can create a conscious shift that is unique to that type of in-game space, and should be reflected in plan. A plan of the world or cities in-game rendered with a distortion of scale and space that is common in Medieval cartography would be a more effective, than the orthographic plans often used.

Hierarchically distinct spaces should be articulated in-game using traditional architectural strategies that a player can understand. Gates, portals, compressed spaces, bridges, and even elevators can be used to indicate a passage from one kind of space to another. This shift is required to allow a character to advance beyond the scope of their current state of development by framing views which can engender the desire to explore.

Access, Movement, and the Hero Cycle

Architectural support for ritualized movement correlates a character's physical location in-game with their development, level of integration into the narrative, and status within any given game's Hero Cycle. As avatars move through space, their players are exposed to an increasing number of iconographic symbols and learn about the game's mythological past. Integration into this mythology is symbolised through the accumulation of artifacts and achieved by completing Hero Cycles and moving through space, not just being in locomotion in space. As such, avatars must reconnoitre personally to attain the symbolic attributes of their artifacts, equipment and the invisible powers, or passive skills that they learn. Some places can be accessed by simply walking into them, as is the case when a bridge is used to access space, while other in-game places require a more complex ritual, depending on the level of integration and experience of the player character.

Access points can deliver player characters to other zones or areas within a volume, as well as transfer them to another volume entirely. The location, arrangement, and number of access points are strategically situated to support the hierarchical organization of space by subversively enforcing a ritualized movement through the void between volumes, and within space to access the different areas and zones within a volume.

Access points should distribute the average accessibility of space according to a density trend that is supportive of characters' development in the Hero Cycle. Density is important because it allows for aid to be found when needed and because it provides the necessary audience to share boons with. It is important to note that travel within a volume to an access point creates visible dynamism and density of avatars, while an avatar's actual transference through an access point to another volume is invisible and reduces avatar density.

Ritual access in City of Heroes is comprised of a network of monorail stations that access almost

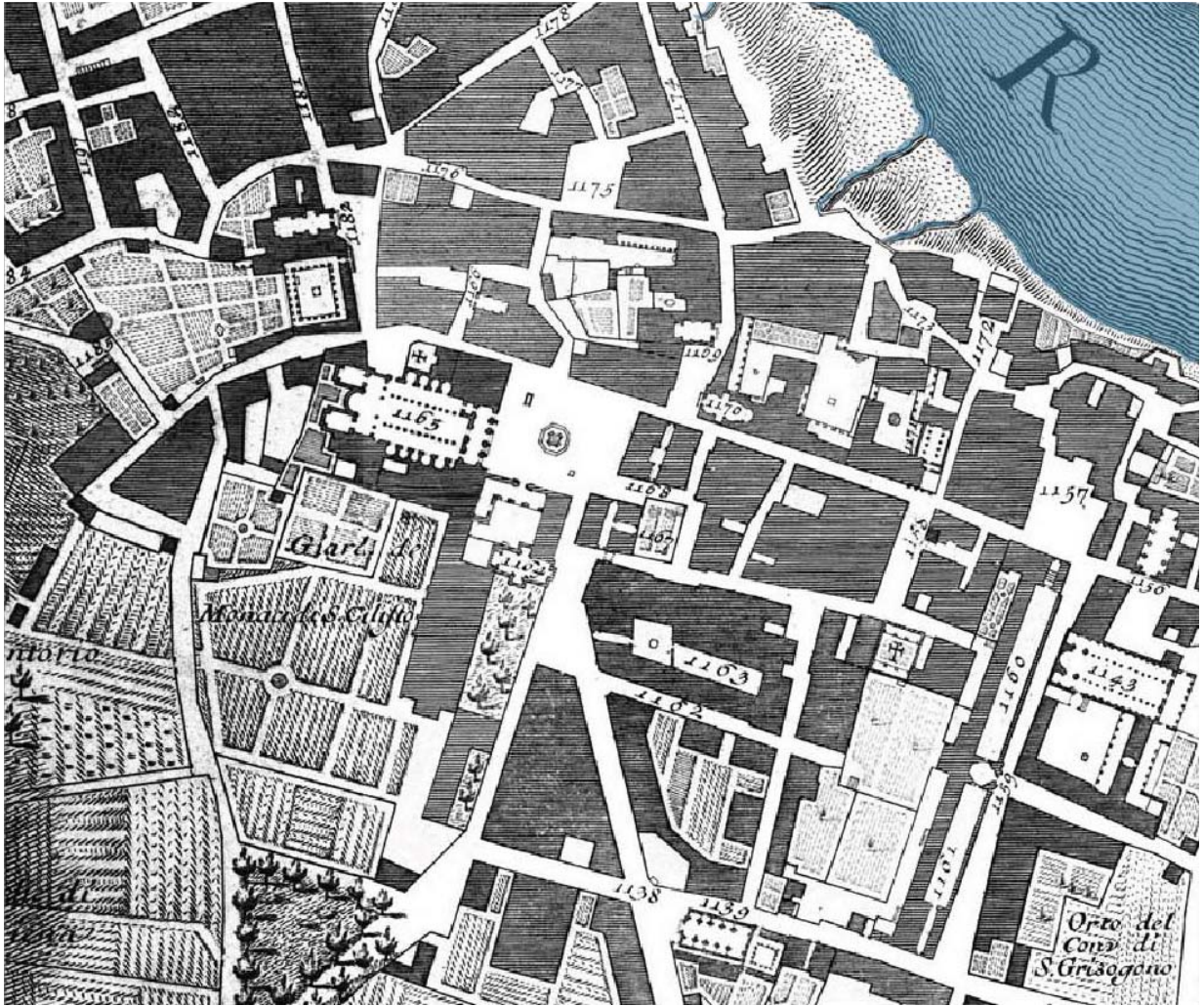


Fig6.3, Detail showing Piazza
St. Maria in Trastevere from
Nolli's plan of Rome

all the major volumes and a ferry that can access two island volumes, and one port. In other role-playing games, such as World of Warcraft, Guild Wars, Lineage II, these ritual access points include mounts or ships that taxi avatars to distant spaces, for a cost. Those who cannot afford the necessary costs will be unable to use the service.

Regulating movement is imperative for supporting the hierarchy of spaces for two reasons. First, it inhibits the movement of characters who are not yet ready or skilful enough to leave the areas they are in, while promoting their growth until such time as they are ready to advance. Second, a curated movement can help guide more skilled and experienced players to frontier and 'threshold' areas where they can engage in trials that are most significant for their character.

The combination of ritualized access with less prescriptive directional adjacencies creates movement patterns that coincide with the landscape to support the development of characters by increasing and decreasing access according to support the Hero Cycle.

City of Heroes

Using City of Heroes as an example, one can see by looking at figures 6.9, 6.10, 6.11 and 6.12, that as characters increase their level, more volumes and spaces will become accessible to them. The steady increase of newly accessible spaces peaks almost directly within the median levels and then gradually declines. Where the graphs show a positive slope, spaces are acting to thrust avatars out from spaces they are in, helping to promote exploration. Where there is a negative slope, spaces are working to inhibit travel forward on the graph. Where the graph lies flat, having no slope, spaces are functioning to retard character movement backwards or forwards as much as possible. It is no surprise that the median levels in City Of Heroes are the most difficult to overcome. Note that since these graphs are based on a rate of experience of average character levels, all indications shown represent a trend over time.

Spaces with higher percentage total access than the percentage of in-game spatial distribution will have a higher density than other areas. Since this is predominantly the case for lower to mid level spaces, sharing of boons is most likely to occur in these areas. Levels (columns in figure 6.7) that contain only two volumes can contribute to the curve on the graphs as strongly as other levels, with 3 or 4 volumes. The magnitude of their influence is strengthened by the increased number of access points. Since these spaces are comprised of fewer volumes, each volume is forced to support a higher density. The initial increase and subsequent yet more gradual decrease of access points across the levels promotes a fast paced thrust out to explore in the lower levels, while maintaining exclusivity to the higher level spaces. The arrangement and number of access points in these higher level spaces supports a natural tendency for characters to travel backwards to volumes where they can share their boons and experiences. This trend of distribution of character density and spatial accessibility over time is extremely desirable in an environment that aims to foster adventure modelled on the Hero Cycle.

Interpreting the use of access points according to the positive, negative, and zero slope of the distribution of spatial accessibility shows that access points promote exploration in the early levels, and prolong stability in the higher levels to maintain density, despite the higher number of accessible volumes. In-game, the forward and backward movement between volumes necessary to complete tasks and fulfill mini-Hero Cycles is tempered by movement that does not take player characters to other hierarchical levels, and is represented in the graphs by the inclination of the line to reach a zero slope, and in figure 6.7 as an up or down movement between the city precincts (volumes).



Fig6.4 top: Panoramic image of 'Atlas Park', with monorail station in centre. The Monorail station in City of Heroes is a ubiquitous symbol in-game for access to other volumes. Entering the open subway doors transports an avatar to their selected destination. The monorail supports a freedom of unrestricted movement within certain zones of the city, reflecting the virtues of freedom and liberty that the access to space in American cities stands for. Clockwise from middle, Fig6.5a,b,c,d,e, Screenshots from Atlas Park depicting different access points. Fig6.5e, When a player character enters the game for the first time, they are 'instanced' to a limited number of locations that can help to jump start their development, educate them on game-mechanics, and on projecting them into their first hero cycle.



Fig6.6 bottom, Map of Paragon City, in the MMORPG 'City of Heroes', with major access points shown. For complete map with all 'City of' volumes, see page 4_21.

Paragon City is organised through directional adjacency like a MUD, and contains many independent spatial volumes. Unlike the agglomerated cities depicted in fantasy themed role-playing games which are consciously trying to reflect the traditional forms of their precedents, Paragon City mixes icons of North American East coast urban typology without a unifying morphological structural or spatial organisation. For example, Skyway City is a zone that contains many freeways, overlapping raised highways and other major arteries. The roadways in Skyway City do not connect or correspond to the roads in any of the other city spaces, and are therefore part of the internalized stylization of their precinct.

Average PC Experience Levels Within the Volumes

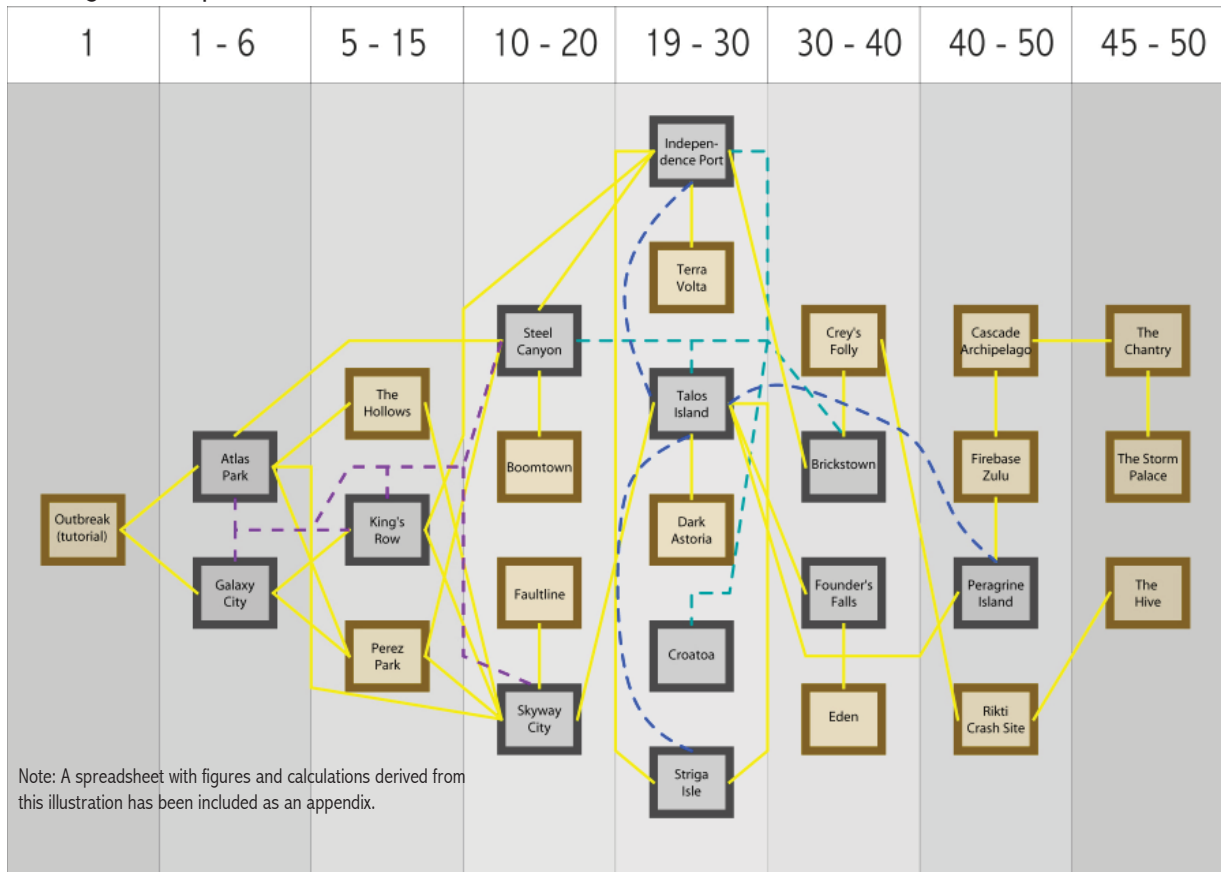


Fig6.7. Diagram of hierarchically similar volumes is shown. Yellow connections represent access points based on a directional adjacency, and the dash lines represent a ritualized connectivity that is part of the nature of the space, and is directly referential to the existing narrative and cultural identity. Note that PC levels are always in fluctuation, as new players are always joining, and existing PCs are increasing their experience. The graphs on the following pages are formulated from the figures generated by diagram and expose how the network of volumes and access between the volumes can organise and control movement and density of player characters in-game.

While access points are the glue which connects spaces together, it is critical that they also support the mythological past which is the primogenitor of the narrative. Architectural form is used as symbolic evidence of this past, despite the unnecessary recreation of its form. For example, the monorail which connects the major volumes in City of Heroes does not require the simulation of a track in order that it functions as the digital monorail car is only representational and instantaneously transfers player characters who access it (from the monorail station) to their desired location. The tracks run through the spaces in-game that the yellow, or green monorail line access to reinforce the character of the space and recall events in the founding mythological narrative. It also provides scale to suggest distance and visual activity (of the moving train cars that head into the station, then out around the city). Access points can sit as an object that is unique within the interior of a volume or exist as a break or variation in the firmamental boundary of the container. The formal representation of access points and the manner of engagement necessary to actualize their function must relate to the symbolic mythological associations that the object suggests. As such, access points are themselves part of the iconography that relates the mythological past to support the game narrative.



Fig6.8, Screenshot of the Red Robe standing on monorail track, many storeys above grade, looking at approaching train car. The presence of access points which exist as objects within interior portions of volumes are highly recognisable. These are iconographic symbols that reinforce the character of the space, and events in the founding mythological narrative of the in-game environment.

Form and Function

Access points are strategically situated to be encountered as one explores and are placed along a hierarchically organised system of possible routes. The form they take should directly relate to the ease or difficulty with which a player can make sense of their function while maintaining the integrity of their iconographic role to support the narrative. The architectural form of access points in early levels should be recognisable while more difficult levels can integrate forms that are vernacular to the game-world, to reduce the likelihood of confusing a novice player. For example, where a door or bridge might be appropriate in an early level, a magic portal, or a discordantly coloured vaporous geyser, or a pulsating wormhole in the sky may be appropriate in a more advanced level.

In City of Heroes a thick reinforced concrete wall with a shield extending towards the sky is present in almost all outdoor spaces and is used to define the perimeter of each of the city's precincts (major volumes). The wall provides security to the spaces and also defines a border for the distinct characteristics of each volume. The wall is breached where there is an access point. These spots are portrayed as large gateways that are guarded and fenced off to the general public and as motor underpasses. The walls are used to 'locked up' and sealed off any calamity from entering another city zone. Some areas that have been sealed off in the past are: 'Boomtown', 'Perez Park', 'The Hollows', 'Crey's Folley', 'Eden', 'Faultline', and others.

In World of Warcraft divisions of large portions of space as well as the divisions between the volumes of space are portrayed as part of a natural landscape of steep mountains, unnavigable terrain,

Top to bottom, Fig 6.9, 6.10, 6.11.

Within every quest simulated in game, it makes sense to force players to move through spaces in the manner that can project them out, and then slow down and increase in difficulty as they approach their major trial and ultimate return for that quest. Wilderness spaces could be used to do this very effectively depending on their directional linkages to other volumes of space.



Distribution of In-Game Spatial Access (suggestive of potential PC density within the volumes)

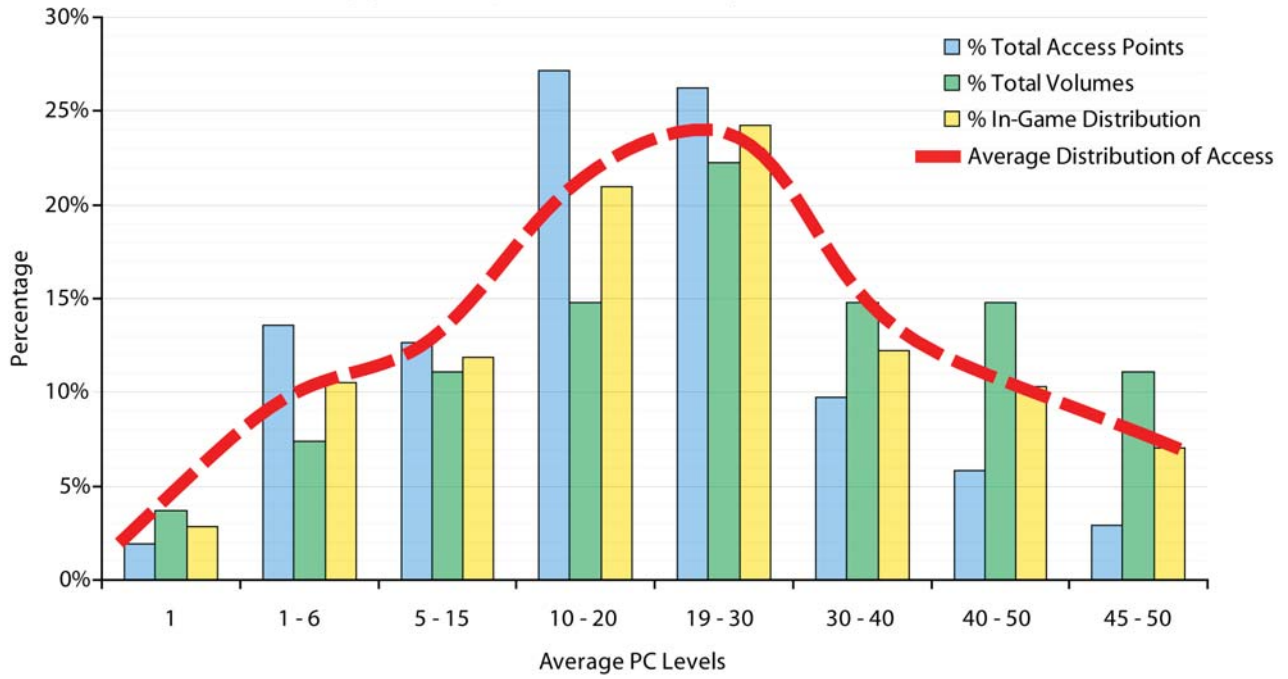


Fig6.13, The trend of the slope parallels the traditional perception that the ultimate trial in a Hero Cycle is the most challenging portion of a hero's adventure.

river and ocean. To 'cross' the ocean which separates major volumes one must take a taxi.

Depending on the symbolic correlation between the access point and the mythological past of the game, restrictions and costs may be enforced to engage with it. Player characters who cannot meet the cost, are not of a high enough level, or who have not uncovered an adequate amount of narrative detail may be unable to engage in an access point. Other access points may be inaccessible for characters without the boons or skills needed to reach it.

The mode of engagement in an access point and its level of visibility supports the hierarchy of the spaces it connects by suggesting the quality and characteristics of that other space. Access points create separation between distinct hierarchical spaces, and while they may be able to engender the desire to move forward, they do not always provide a view, or act as a window or frame that can heighten one's perception of the other space. This is because in-game visual linkages can only occur within hierarchically similar zones.



Fig6.14, Depiction of the tower of Babel, Pieter Brueghel the Elder 1563. The spiral form rises, like a mountain to access the heavens. Parsing the architectural form of mythological structures reveals a relationship to knowledge and space. The circular movement pattern around the Tower of Babel references a return to one's origin that is revealed in plan, while the section reveals a shift in elevation that signifies enlightenment and knowledge. Thus, it is expected that by moving in plan, the architectural form can naturally elevate one's hierarchical position relative to their starting point. Ultimately the tower was destroyed to teach that life cannot be led through a total dedication towards rational knowledge, and that doing so is self-destructive. The same dreamlike metaphors, such as the spiral which relates its plano-metric form to its sectional elevation as experience (going in a circle) to knowledge (rising up, which is equal to becoming enlightened, as positive light always comes from above), should be considered when conceiving of the architectural topography that guides one's movement in role-playing games' spaces.



Fig6.15 top, Screenshot of the Wicked Goddess running to an access point connecting 'Atlas Park' with 'Perez Park' in City of Heroes.
 Fig6.16a,b,c, middle left top to bottom, Screenshots showing the fenced off area in front of the access to Perez Park from Atlas Park and the Sanguine Warrior flying from the perimeter wall in 'Talos Island'.
 Fig 6.17a,b,c,d,e,f, counter clockwise from middle of page, Screenshots depicting the route taken in 'Peregrine Island' to access the Firebase Zulu. The Firebase Zulu volume is a high end game zone, and includes unique access point types. Access to the zone is made through an underground teleporter in the 'Portal Corporation' headquarters building.

Image and Credibility

Originality and credibility are often considered to be synonymous with artistic style in contemporary culture however the stylization of in-game content does not require that an original language be developed. The simulation should instead focus on developing a clear behavioural language that relates form and image to educate players on the mythology and theology in the game-world. Every architectural type used in-game must consistently relate its image and function in a convincing manner that coincides with the mythological roots of its cultural origins to establish credibility that contextualizes the events of the game's mythological past to credible places that players can visit and adventure in.

Images should also develop a strong tonal relationship between the performance of their functional objects and the typologies used whereby the typologies simulated will function according to the expectations of their type. The overwhelming presence of medieval typology in role-playing games is a testament to the credibility it provides for adventure, as establishing an appropriate tone to a simulated space provides the emotional validity (by triggering players' memories of real space) needed to support the narrative. The stylization of the game-world and the tone set by an architectural type can trigger subconscious 'in-fill' for players in the absence other senses that are normally required to relate credibility to one's experience. The subconscious recognition of credibility provides the mental indications that supplement for the missing corporeal senses that assist in relating experiences to place and context.

It is most beneficial to use 'real-world' paradigms as beginning or starting spaces, as they provide immediate legibility to a beginning space that can assist players in reading new or unfamiliar architectural or spatial types that they encounter later in-game. Such spaces should include amenities or access to amenities that are needed for any new player and can help with learning the basics of navigation and in orienting a player to the in-game environment. Examples of beginning spaces follow on the coming pages, and in the next chapter. Relying on the familiarity of form and type allows games to develop a range of complexity that builds on the functionality and behaviour of existing types that supports fulfilling content for casual gamers who can learn the basics with ease as well as avid gamers who invest more time and energy at uncovering the mysteries of 'high-end' game-play.



Fig6.18 left, Screenshot of the character Red Robe about to enter an underpass and transfer from Atlas Park to Steel Canyon, in Paragon City. Fig6.19 right, Manhattan at night, photo by Franz-Marc Frei.

Note the similarity of the representation of speed, time and movement in the image in these two figures. Simulations which utilize recognisable image based conditions can create experiences that do not exist in the 'real-world' outside of the reality of the image.

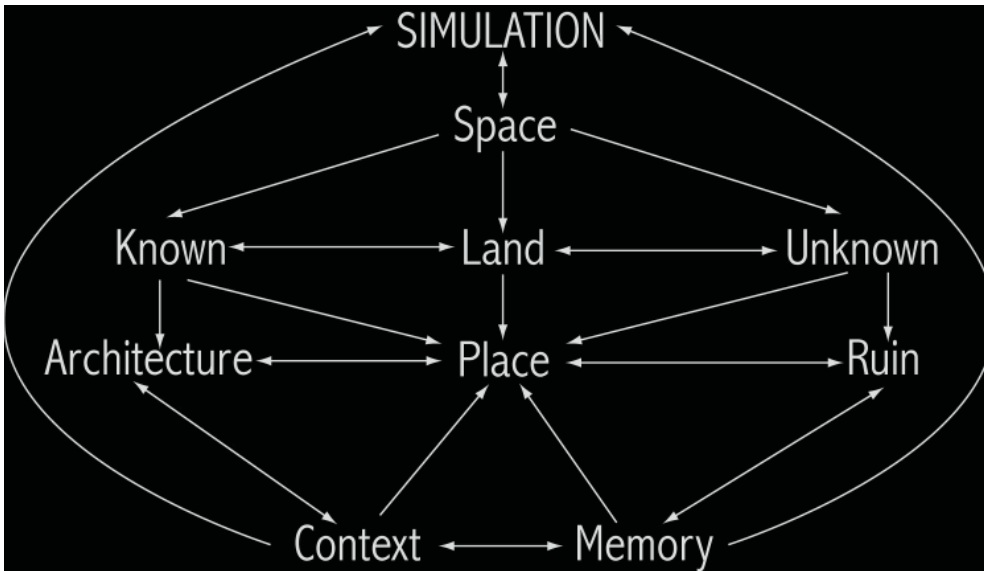


Fig6.20, It is vital that the game-world does not read as a collection of surfaces, textures and thresholds but instead as a landscape of places. Place imbues tonality and provides a natural sense of hierarchy and value to the simulation of the game-world. Place also prolongs the fulfillment of game-play by providing mental context where the memory of the experience can be stored and savoured.



Fig6.21 left, Washington poster, Eggleston, 1935. Fig6.22 right, modified Washington poster. Without the inclusion of familiar architectural type, movement in an uncontextualized space holds little value. However by naming a location that is credible as an image of a place, one can relate their movement to that place with their knowledge and experience of the image, whereas, without the image or place-like characteristics, movement in space will not carry the same significances (unless exploring a wilderness).



left, Panoramic screenshot of piazza in Founders Falls in City of Heroes. This place bears a striking resemblance to Piazza San Pietro in Rome.

City Hall in Paragon City

Most games use traditional (medieval) typology to establish an overarching in-game stylistic tone. However some games like City of Heroes use contemporary architectural types while maintaining their traditional mythological substructure. Despite the architectural and spatial tonality of Paragon City as a comic book interpretation of an East Coast American City; at the heart of the city sits a Neo-classical city hall that is highly similar as an image, to a Palladian Villa. This city hall is situated in one of the most important symbolic and functional spaces in the game, Atlas Park.

“Atlas Park is the City Zone at the heart of Paragon City. No landmark exemplifies the heroic nature of the City of Heroes more than the statue of the fallen hero, Atlas, that stands in front of City Hall. Atlas was one of the first heroes to respond to the Nazi sneak attack against Paragon City on December 7th, 1941. Almost single-handedly, Atlas kept the German attackers from gaining a foothold past Independence Port. It cost him his life, but he held his ground until the Freedom Phalanx arrived.

The statue of Atlas was dedicated by Statesman himself in a ceremony christening the heart of Atlas Park. Many heroes were inspired enough by Atlas’ sacrifice to volunteer for the Freedom Phalanx’s trek across the Atlantic to help reinforce the Dawn Patrol in England. To this day, Atlas Park is the safest area in Paragon City and many new heroes dedicate themselves to making sure it stays that way.

Throughout Atlas Park and the rest of Paragon City are even more statues of heroes that fell in battle while defending their beliefs. Newcomers to the City are always encouraged to look for the information plaques by these monuments to learn more about those who sacrificed themselves for the greater good.

From Atlas Park, heroes can travel South to Skyway City or North to Steel Canyon. The hazards of Perez Park are a short journey to the west, while closer at hand within Atlas Park itself, is an entrance to the trials of The Sewers. But be warned; both Perez Park and The Sewers are dangerous places for an unprepared hero.

One of Paragon City’s most well-known “Contacts,” Ms. Liberty, is seen frequently in Atlas Park providing information on her new venture, the Freedom Corps. Freedom Corps facilitates communication and coordination between Paragon City’s new heroes.

Recently, the streets of Atlas Park have been menaced by members of a new street gang calling themselves the Hellions. No one is certain why the gang numbers have swelled so quickly in such a short time or how they have taken over so much territory, but it is rumored that they have some kind of alliance with one of the more powerful gangs in Paragon City. Unfortunately, no one knows who. Yet one thing is for certain: the gang is just one factor dramatically increasing the workload of new heroes in Atlas Park.

Government officials in Paragon City are responding quickly to this new threat by hiring a number of new liaisons to aid heroes in identifying troubled locations within Atlas Park. These liaisons can be found in Paragon City Hall and are a vital addition to the heroic system that protects the City of Heroes.”²



2. http://www.cityofheroes.com/gameinfo/geography_atlas.html



Fig6.23 left, Villa Rotunda in Vicenza, Palladio 1566-71. Fig6.24 right, perspective looking north from the air above the southern end of City Hall plaza. The small blue text are avatars’ character names.



Fig 6.25, Screenshot taken directly over the city hall of Paragon City.

The truncated southern wing of the city hall disrupts the harmony of its square plan, however this missing wing is compensated by the dais to the south on which the statue of Atlas rests. The stance that Atlas is taking provides a framed view through his legs for new players in Atlas Park, as well as for those who are exiting city hall.

Note the white 'x' at the southern stair. This marks the 'beginning spot' for all new characters who begin in Atlas Park.

On the exterior, the city hall sits on a very wide double tiered podium with wide double sets of stairs in each of the cardinal directions. The building itself sits on top of the second tier of the podium which also has four sets of stairs each facing a cardinal direction, with the major stair to the south leading to the entrance. The podium contains no less than four oversized statues of characters from the game's mythology positioned in the four corners around city hall, with a fifth and hugely oversized statue of the Hero 'Atlas' to the South. The statue of Atlas in Atlas Park is the second largest statue in the game, the largest being the statue in Steel Canyon's Blyde Square's district - a statue as large as many of the skyscrapers in that precinct. Atlas is axially aligned with the entrance of city hall and always in view as players exit the building, or 'train' at Ms. Liberty on the south side of the podium. Although the building suggests a Palladian influence in its design, there are 'missing' elements that are obvious in plan. Classical Greek temples which oriented the entrance to their buildings to face a dip in the horizon and correlate the 'avatara', or descent of the God onto the Earth is hard to ignore when considering the placement of the statue (see images below) or the name and iconography of the Greek god 'Atlas'.

The city hall is highly successful as a functional city centre because it emphasizes the founding mythology of the game-world (the city) by relating it to the neo-classical language used in Washington and acts as a functional gathering place that connects access to the yellow monorail line, the in-game auction and consignment house, player training, non-player character buyers (for unwanted goods), a 'Hero Field Corps Analyst' that can adjust the difficulty settings for players' instanced missions, a portal access to 'supergroup' bases, one of the two 'bind' locations for all new players entering City of Heroes (the other being in Galaxy City), a supergroup registration and administration clerk, the city representative (who provides epic trials), and 'contacts' for new players. While many players may not be familiar with the origins or influence of its architectural form, the image of the neo-classical building that dominates the vast podium is a credible iconographic source in Western culture that the game has tapped, despite there being a total absence (apart from the colonnade in Founder's Falls) of Neoclassicism in the rest of the game. As a symbol, the city hall is used to set an important tone that establishes historicity and actualizes the simulation of the virtual city as a credible digital place.



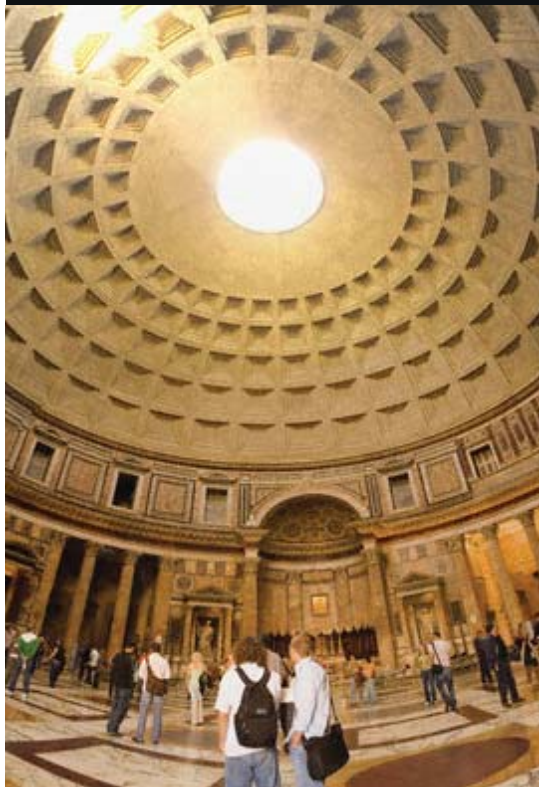


Fig6.26c left, Screenshot of players standing by Ms. Liberty.

Fig6.26a bottom left of facing page, view looking south from the doors to city hall.

Fig2.26b bottom right of facing page, view looking north at 'beginning spot' in Atlas park.

Clockwise from middle left Fig6.27, Interior of Oval Office at the White House; Fig6.28a,b,c screenshots of the interior rotunda space of the city hall in Paragon City; Fig6.29, interior of Pantheon in Rome, with coffered ceiling and oculus. The interior of the city hall carries strong neo-classical images that are also ubiquitous in western culture, such as the coffered ceiling and niched walls of the Pantheon in Rome, and as well as a strong reference to the U.S president's oval office, as a city official stands in the centre of the room.



Historicity, Permanences, and Wilderness

Psychological immersion in a role-playing game requires that there are credible places to propagate the mythology and that those places also function as programmable spaces for current narrative events and adventure. Games must also simulate the intangible pathology of architectural and spatial permanences that no longer reflect the propelling elements of an environment. According to Aldo Rossi, propelling elements “continue to function; condition the urban area in which they stand and continue to constitute an important urban focus... pathological elements, on the contrary, stand virtually isolated in the city; nothing can be added; and they constitute an experience so essential that they cannot be modified.”³

In role-playing games the spaces in which monuments sit should carry the narrative forward and provide social places for inhabitation and revitalization that are also the propelling permanences that should, as Rossi notes, “persist virtually unchanged, endowed with a continuous vitality” to ensure that the player is secure in relating their memories to these places. Permanences that have exhausted themselves to such a degree that “only the permanence of their form, their physical sign and locus remains” are the pathological elements that Rossi speaks of. Pathological permanency cannot be contrast, modified, or removed, as they maintain the psychological health of adventure and wilderness for the collective by existing physically as formal monuments that resonate with the mysteries of time, event and place that no longer exist, but once prevailed in that space. They are the articulation in built form of the community’s long term memory.

Ruins are created in-game to simulate a pathological permanence that contrasts the developments within propelling permanences and as a source for moral orientation to help navigate through the spaces of the mythologically structured adventure. Mythology teaches that without wilderness and the ability to pass from the known to an unknown space or place, the Hero Cycle would not be able to sustain itself.

Without the unknown, adventure cannot provide an experience of transformation because personal transformation mirrors the transformation of space the same way that the hierarchy of space mirrors the identity of those in space. Historically, mythology tends to differentiate between wilderness and non-wilderness by introducing alien and otherworldly forms and topographies that emphasize the crossing of a threshold into another space. As long as the ‘other’ space remains confusing and disorienting, it will maintain its status as wilderness. In-game wilderness environments tend to exhibit unfriendly, hostile and unknown forms that do not coincide with the formal or symbolic patterns of the other in-game spaces. Using alien forms and unfamiliar patterns inhibits player development, advancement, and growth in these spaces. In the wilderness, it is very easy for even the highest level characters to become disoriented and severely frustrated. Mythologically speaking, the risk required by adventure is announced in the form of anxiety from the inability to anticipate the context of cross-threshold spaces. While city walls have been used in the past to separate the interior city space from the wild ‘outside’ space as a metaphor for the struggle between chaos and order, and anxiety and desire, mythology teaches that this anxiety can be overcome safely by assigning recognisable features to the unknown, and as such, games must avoid simulating landscapes that are overly difficult to contextualise, or are nonsensical.

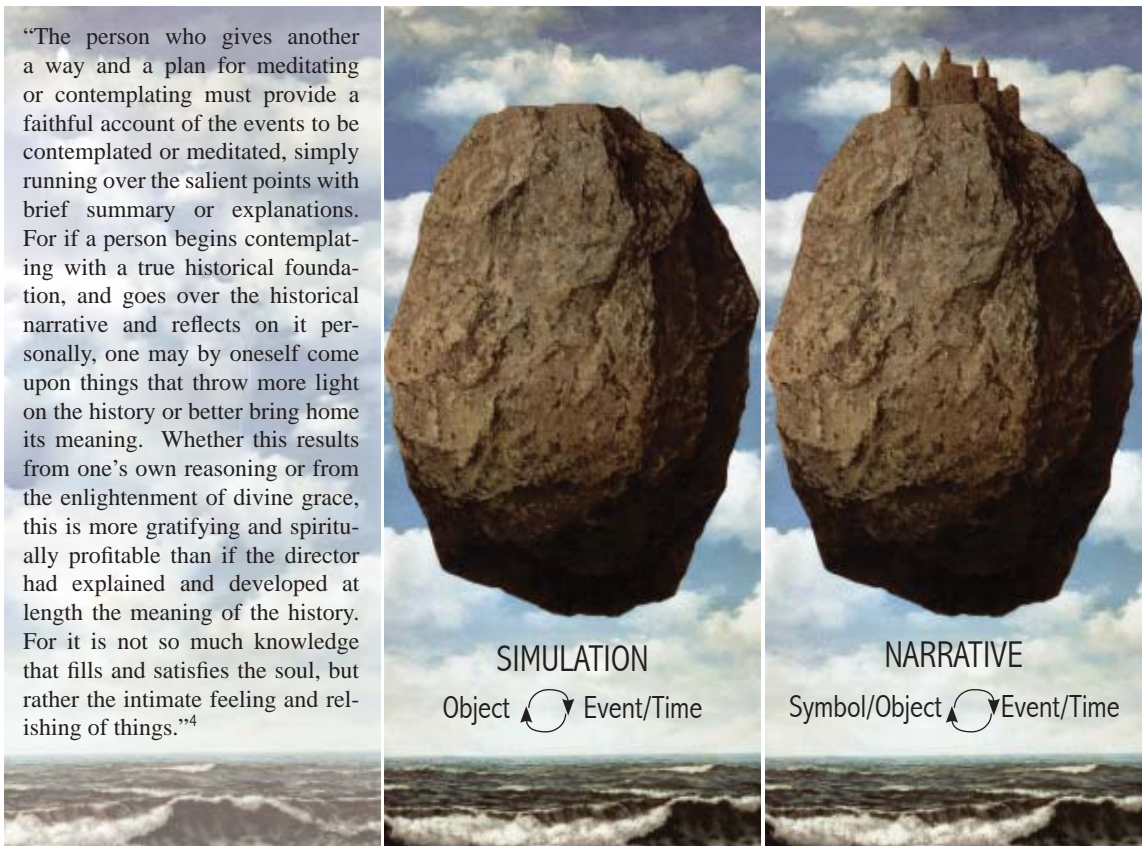
The persistence of wilderness in the ‘known’ landscapes take the form of the ruin. Ruins are also often heavily simulated in-game. Ruins are evidence of the dematerialization of context and are not rationally sensible. Their presence restores the qualities of mystery and unknown to ‘known’ and by contrasting (and not conforming) to the permanences which are in-tact. The ruin also suggests

From left to right on facing page:
Fig6.30, modified Fig6.31
Fig6.31, modified Fig6.32
Fig6.32, La Chateau Des Pyranees, Magritte 1959.
The Surrealists had a very strong sense for the relationship of image, form context and memory in establishing perceptions of reality, and in the generation of metaphor that is the subconscious precursor to conscious reality.

3. Rossi 1985:59-60.

unseen and untold events that occurred in that space. They hold the clues to historical and mythological events that may be rediscovered through education, or an exploration of the site. As such, the re-evaluation of a site that was previously assimilated from the wilderness can also play host as a wilderness to a new series of adventures when it is in a state of ruin. Some screenshot examples of in-game ruins are provided in Figures 6.33, 6.34 and 6.35.

'Known' spaces in-game should include the city centres, the 'beginning' spaces, and the immediate areas that surround 'beginning' spaces. As a player explores during the nascent stages of game-play, they familiarize themselves with the local area until they are strong enough to travel to another zone with its own variation of spaces. With travel, first-hand knowledge of the unknown space beyond is assimilated and transforms the beyond into the familiar. The spaces or thresholds which were previously approached with caution or fear may be approached boldly once a player becomes familiar with it. However games must be careful to preserve wilderness for the high level characters to explore as those players squeeze out their final few levels before hitting their level cap. This is often difficult in games where most high level characters have adventured in all the spaces the game-world has to offer. When there is no more wilderness, thresholds do not divide two spaces from each other as much they conceptually link them together. This makes it difficult if not impossible to physically leave one's 'known' space or reach an 'other' unknown beyond in which an adventure can occur. However games must ensure that they include pathologies of architectural morphology that is in opposition to the practical functionality of the simulated propelling permanences they use. Not doing



Magritte's works shows a strong understanding of architectural form as a mechanism to transcend representation and instead suggest a conceptual navigation of space by triggering our corporeal senses. Without architecture, the image is more a demonstration or simulation of natural or fantastic conditions, rather than a conceptual landscape that can be felt and can carry deeper spiritual meaning.

4. St Ignatius Loyola, The Spiritual Exercises, 1522-24.

Fig6.33 top, Screenshot in the city zone 'Faultline' in the MMORPG 'City of Heroes'. Faultline was "originally known as Overbrook, before the villain Faultline destroyed it with his earthquake devices. "
<http://cityofheroes.wikia.com/wiki/Faultline>



Fig6.34 middle, Screenshot in the city zone 'Boomtown' in the MMORPG 'City of Heroes'. "Originally called Baumton, the zone now known as 'Boomtown' was devastated during the end of the Rikti War. Now a ruin of toppled skyscrapers and damaged roads, it's a haven for Outcasts, Trolls, The Lost, Vahzilok and the ubiquitous Clockwork as well as a training ground for 5th Column troops."
<http://cox.stratics.com/content/wiki/index.php/Boomtown>



Fig6.35 bottom, In City of Heroes "The Hollows was once a residential area of Paragon City but, in an attempt to carve out a larger underground lair, the Trolls detonated a large amount of explosive under it, collapsing a major portion of the area. The inhabitants have since been evacuated, and the Paragon City Police currently have dispatched a special Trolls Task Force to clear out the Trolls. They have so far met with little success and the area has further seen invasions of Outcasts, Circle of Thorns and Igneous."
http://cox.stratics.com/content/wiki/index.php/The_Hollows

These ruins play host to many lower level characters who can play in this historically charged place. The difficulties of the trials in The Hollows has much to do with the challenge of negotiating the wild and unfamiliar ruins that take up most of the space of this city zone.



so will create an architectural sterility whereby the simulation of architectural form will less convincingly maintaining its authority as a credible place. Maintaining the historicity of architectural form by ensuring a balance of pathologies will assist the in-game places to feel more real and will possess a much stronger sense of place than if they were perfectly articulated and pristine in their rational and functional conceptualization.

While the ruin can help alleviate this problem, game companies often develop expansions to existing games which include new unknown and cross-threshold spaces. Since its release on November 10th of 2004, World of Warcraft has amassed a population of over 10 million active players. Blizzard Entertainment Inc, the game's developers, released a major expansion on January 16th 2007, and is following it up with the announcement of a second expansion (announced August 3rd 2007 - release date unknown, as is usual with Blizzard, it could take years). These expansions include among other things, an entirely new world continent. The excerpt from the World of Warcraft website below indicates major themes and features in their upcoming expansion 'The Wrath of the Lich King'. Note how the features added will extend and intensify the Hero Cycles for high level players, for whom it the majority of this new content was designed.

Fig6.36, The new map of Azeroth (the world) in World of Warcraft after the release of 'The Wrath of the Lich King'. <http://www.worldofwarcraft.com/wrath/art.xml?s=13>
Note that even mapping conventions are often borrowed from early Renaissance maps, and include the simulation of parchment, sea monsters and other symbolic icons.



"In the cold, harsh northlands...

The Lich King Arthas has set in motion events that could lead to the extinction of all life on Azeroth. With the armies of the undead and the necromantic power of the plague threatening to sweep across the land, only the mightiest heroes can oppose the Lich King's will and end his reign of terror for all time.

Blizzard Entertainment's latest expansion to World of Warcraft – Wrath of the Lich King – adds a host of epic content to the existing game-world. Players will achieve soaring levels of power, explore a vast new continent, and battle other high-level heroes to determine the fate of Azeroth. As you pit yourself against the dangers of the north, prepare to:

Features

- Master the necromantic powers of the Death Knight - World of Warcraft's first Hero class.
- Quest to level 80, gaining potent new abilities and talents along the way.
- Learn the craft of spell augmentation with the new Inscription profession.
- Brave the harsh new continent of Northrend, the icy domain of the Lich King.
- Engage in epic siege warfare, deploying mighty siege engines to lay waste to destructible buildings in your path.
- Transform your hero's look with new character-customization options, including new hairstyles and dances.
- Explore perilous new dungeons filled with some of the deadliest creatures -- and greatest treasures -- on Azeroth. "

<http://www.worldofwarcraft.com/wrath/>

Contextualization

Role-playing games use architectural typologies that are vestigially loaded with the real world cultural preoccupation for adventure and mythology to support the game's Hero Cycles and contextualize the spaces and places in-game. Contextualisation using architectural types provides legibility and accountability to the hierarchical organisation of space that the Hero Cycle demands. Medieval and Neo-Classical architectural typology is highly visible in role-playing games as a result of the tangible umbilical residue that links them to mythology, transformation and adventure. If games are sensitive enough to the underlying principals of space, movement and transformation that Campbell has organised into a universal myth he called the 'monomyth' of the hero, and recreate a highly rewarding adventure based on the Hero Cycle of the monomyth. Using the monomyth to structure the game narrative, any architectural typology used could be successfully implemented in a game-world. With that said, the behaviour and function of the architecture must be tailored to reflect the typology used in order that a credible contextualisation of space and place can assist players in anticipating the risks and rewards offered through the Hero Cycle.

Including brand-new (proprietary) architectural types developed for a specific game can enrich the experience if the new type retains enough recognisable paradigmatic qualities for players to recognise it as a proper type that correlates its form and structural functionality with symbolic semiotics. This will ensure that the architectural elements of a coherent type support narrative events and the hierarchical organisation of space in-game while maintaining the integrity of place in-game.





Clockwise from top left on facing page Fig6.37a,b,c,d,e,f, Screenshots from the Firebase Zulu in City of Heroes. The unusual geysers used to project players bodily across vast distances to other meteors are only encountered in this wilderness zone. Wilderness spaces have the amazing potential for games to be used as natural thresholds between other spaces. Wilderness as a threshold can be used to keep distinct spaces apart and to extend the process of the threshold crossing into a Hero Cycle of its own. In City of Heroes, the directional adjacency of the wilderness volumes do not contribute to travel or occupation of the spaces which potentially could become one of the most significant social places in the game as low, mid and high level characters will need to cooperate in order to move through it.

Fig6.37g left, Screenshot of the High Clerist lost in the vastness of The Chantry in City of Heroes.

It is very easy for even the highest level players to become disoriented and severely challenged in wilderness spaces. At times, death and resurrection to a friendlier environment is preferable to the frustration and time commitment required to travel within a wilderness. As well, in wilderness spaces it is extremely unlikely to have a serendipitous encounter with another player as these spaces are most often vacant. For a role-playing game that must maintain a high degree of social interaction between its players, having too many wilderness spaces or improperly displacing hospitable spaces with a wilderness can be counterproductive.

Fig6.38, Diagram depicting the 'Architectural Ingredients' necessary in role-playing games. The architectural ingredients support a core set of narrative elements that carry the stories of mythology to players during game-play. This model can be used as a checklist to ensure the integrity of the simulation and game-world.

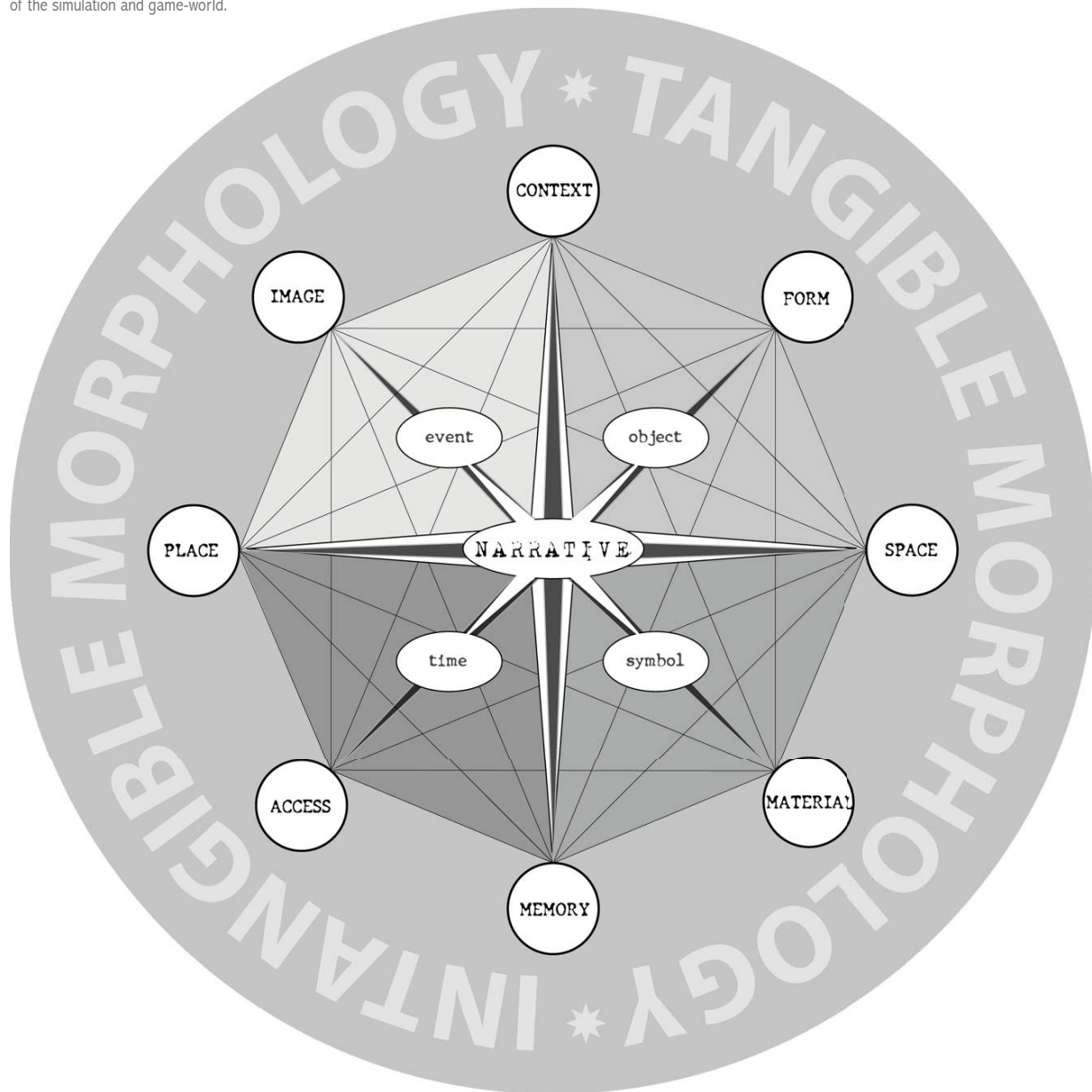




Fig7.1 top left, Ruins of the Roman Forum.



Fig7.2 top right, Concept art from the massively multiplayer online role-playing game Guild Wars. Believable morphology, material deterioration, erosion, and the passage of time are critical in establishing credibility of any simulated environment. Role-playing games rightly incorporate the ruin, wilderness, pathological and propelling architectural permanences to ensure a high degree of credibility for their in-game spaces and places.

THEORY AND PRACTICE

Game-Play Mechanics

Game-play mechanics are the most easily changed and highly semantic layer in a role-playing game, yet they are nonetheless critical to the experience of playing. Game-play should always be intuitive and quick to learn the basics, but more time-consuming and challenging to master. This allows all types of players, even novice or hesitant but curious players to enjoy the same game-world as avid or hardcore gamers, without creating any skill or economic imbalance in-game. In massively multiplayer online role-playing games the novice or casual player who does not confront difficult challenges and who is limited to a small number of skills or abilities will be at a disadvantage to the avid or advanced player who is more travelled and thus, more familiar with the functional operations of the game-world. Much of the impetus of game-play mechanics focuses on reducing the impact of this disparity. For instance, the developers of World of Warcraft built an in-game feature to help ensure that casual gamers can make progress in the same game as the hardcore (4-5+ hours/day) gamers by enforcing a fluctuating experience point system that reduces the percentage of points the longer a player is in-game (with a cap on minimum percent).

“Whenever you rest, online or offline, you accumulate a “rest bonus” for your xp [experience point/s], visible as a little mark on your xp bar. This bonus grows by one “bubble” of xp for every 8 hours rested in an inn or a city, but 4 times slower if you logged out in the wilderness. [Note that a greater reward is provided to players when resting in a public (urban) centre or space. Visible cues, which involve rest, are important in-game, as the more activities that are visible, the greater integrity player characters actions will have, because they are more directly influencing the development of the narrative.] The bonus is capped at 30 bubbles, which is 1.5 levels. Until your xp reach the little rest bonus xp marker on the xp bar, you will get twice as many experience points in combat. This rest bonus is obviously designed to help the casual gamers close the gap towards the power gamers, a bit like the “power hour” in Ultima Online.”¹

A more effective way to balance game-play is to ensure the viability and accountability of social interaction between players. Doing so can aid weaker players and more deeply integrate stronger players by encouraging them to assist those in need. For example, some quests could require that a ‘sidekicked’ or ‘partnered’ lower level character is present. The social interaction in game also allows for a sharing of the experience of game-play amongst team-members, thereby providing a powerful resource (of an audience with whom you share boons) that supports the narrative and the Hero Cycle. The presence of other players in the game-world provides the ability to share boons, receive aid, and also opens the possibilities for players to initiate calls for aid themselves. To activate this potential games should simulate architectural conditions that support and curate this kind of social environment.

Architectural Type: Implications

It is clear that one can tell what’s informing a society based on the program and contents of its biggest, or most iconographic buildings. As such, architectural typology cannot be underestimated as a source for developing appropriate game-play mechanics as well as provide credibility to the sense of place in the game-world. Well considered building form and type can ensure that games are developed to be fun and challenging, rather than frustrating or difficult. Type brings a concordance between the intentions for game-play mechanics and support for the mythology of the game that justi-

1. Tobold's MMORPG Blog - <http://tobolds.blogspot.com>

Fig7.3, A screenshot taken from the air, just above the dome of city hall captures the gathering place under the statue of Atlas, who is axially related to the entrance of city hall and the American flag. While there is a strong presence of American nationalism in City of Heroes, there are virtually no simulations of religious or non-secular symbols.



fies game-play. When game-play and the myth of the game-world is in accord, the players' trials can be complex and challenging without being frustrating. As long as game-play is kept from becoming a forced pedantic directive that has no theological relationship to the narrative, it should be a source of enjoyment and transformation for players. When game-play becomes mechanistic and no longer carries meaning behind the ritual of operations that are required, players may become frustrated and are likely to stop playing. The massively multiplayer role-playing games City of Heroes/City of Villains, and World of Warcraft, are two popular games that enforce a projection outwards to adventure in unknown spaces to participate in transformative trials as described by mythology and the Hero Cycle. While these two games are highly dissimilar in game-play mechanics, they both adhere to a principle that maintains accord between the architectural typologies they simulate as a framework for their game-play mechanics.

In City of Heroes, the game-world consists of the precincts within Paragon City, except for a few player versus player zones (where a player can target another player, in this case, a villain player, as they would an enemy non-player character), and several high level wilderness spaces. Paragon City is a "large, East Coast [American] type of city, with towering skyscrapers and desolate ruins, much as the urban settings of the comic book Marvel and DC universes. The city [is] large enough to accommodate several thousand players and not have super heroes bumping into each other on every corner."² As a North American city, Paragon City embraces the sharp separation between public and private spaces and the anonymity of program (behind the walls of buildings in its regularised city blocks and large skyscrapers) that supports its abundant use of instanced missions. Each door, sewer grate, or other threshold like form that exists in Paragon City can be used an access point for an instanced mission and reflects the continuity between morphology and hierarchical transmutation that is coherent in classical and traditional architectural forms, but absent in most North American urban spaces.

2. <http://archive.gamespy.com/interviews/october01/emmert/>

Unlike City of Heroes, World of Warcraft is a sword and sorcery fantasy world and relies heavily on the image of Medieval and primitive architectural typology. Many city spaces in-game are labyrinthine and there are very few instanced trials compared to the number of non-instanced trial spaces. It is interesting to note that while certain imperative tenets of Medieval epistemology are not upheld in the architecture in World of Warcraft, other more obscure beliefs are upheld. Medieval society believed that everything in existence exists because it was created by God. As such, attempts to create outside of the existing order established by God was considered blasphemy and against the laws of society. As a result, there are very few instance missions in World of Warcraft, and the access points to these missions are fixed to distinct locations that do not change for each player. This supports a game-play whereby a player has absolutely no ability to invoke or trigger the creation of an instanced space that is not already pre-assigned to an existing access point, and supports the Medieval apprehension towards man made (or triggered) creation, while the abundant use of instanced space in City of Heroes supports its contemporary tone based on American film and comic book worlds.

As well, Medieval cities organised their city space around a centre dedicated to trade and goods in reference to the idea that creation and God the Creator is at the heart of all material and corporeal life.³ In contrast, the divine and holy spaces of heaven and even spaces for death, existed outside of the city proper to relate the separation that those spaces have from the material plane of existence. As such, churches and cemeteries were originally built outside of the city to represent the hierarchical distinction between heaven and earth and between life and death; unlike pagan or Hebrew temples which held a central position in their cities' fabric. While the World of Warcraft includes a central marketplace in most of its major cities, it also places the religious section of its most iconic Medieval city, Stormwind, deep inside the city (see map of Stormwind on page 119). More in keeping with Medieval epistemology, World of Warcraft is absolutely consistent in placing its cemeteries outside of all city spaces. These cemeteries are used to easily and quickly resurrect the soul of a fallen character. A fallen character's ghost will appear at the closest cemetery to their body, and will be required to travel back to their corpse to resurrect it, or have the Spirit Healer (who is invisible to living characters) in the cemetery resurrect them. Since a ghost in the World of Warcraft is invisible, already dead, and can travel at faster speeds than a living body, a dead character often uses their ghost to scout dangerous lands. Unlike World of Warcraft, City of Heroes allows a player to be resurrected inside a city hospital; there are no ghosts, souls, or other religious or spiritual iconographic features in this contemporary American comic book inspired world. A fallen player will be sent to the hospital which sits in the last city volume that a player was in that has a hospital. This is because the void that separates each city volume in Paragon City eliminates distance between locations of the hospitals.

Even the persona of characters in these two games is supportive of the architectural typologies used. In City of Heroes, player characters are visibly individuated by a highly detailed set of parameters and costume options during the character creation process. As one develops, they gain the ability to alter the 'look' and skill-set of their character dramatically and can remake and store up to four sets of 'costumes' according to their level of integration with the narrative. The amazing diversity in look, feel, and playability of the avatars in Paragon City echoes strongly with the multiculturalism of coastal North American cities and with the personal individuation of 20th century North American values. Note that although each character in Paragon City is highly unique in look and feel, they are recognised as a citizen and hero of Paragon City first and as an individual character second.

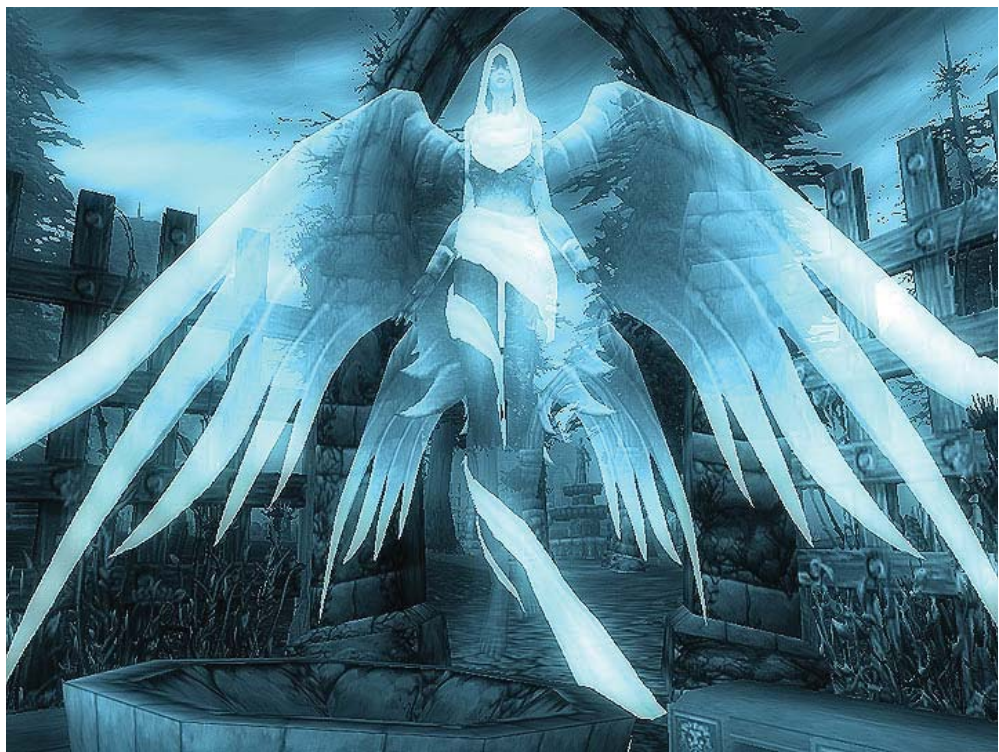
Unlike City of Heroes, World of Warcraft and indeed, most other role-playing games, include a character creation process that supports the epistemology of Medieval social order that limits the possibilities for its classes and does not support the individuation of a person. Players must develop

3. Author's interpretation from selected lectures given by Professor Robert Jan Van Pelt on the Early Middle Ages at the University of Waterloo School of Architecture, Summer 2002.

Fig7.4a top, Screenshot of the monument to the deceased Engineer who was a part of Blizzard Entertainment Inc's team who built the World of Warcraft. It is an over-scaled statue of the Spirit Healer who resurrects fallen heroes in game.

Fig7.4b bottom, Screenshot of a Spirit Healer taken in a graveyard while in ghost form.

World of Warcraft simulates the experience of being a ghost in the living world. The conditions imposed on ghosts and on the living are surprisingly in keeping with mythological and religious teachings, especially the non-interaction between the living, and in the need to sacrifice in order to receive transformation. Any character who 'releases' their spirit from their body upon death, rather than waiting for a resurrection from another character (Priest, Paladin, Shaman, or Druid can resurrect others, while only the Shaman and Warlock has the potential to resurrect themselves), a character's equipment immediately loses 10% durability, while a full resurrection at the graveyard site instead of at the site of one's corpse, will cause a 25% reduction to equipment durability.



"The world appears in black & white to a ghost.

- Ghosts are ethereal in appearance. Night elf ghosts are actually wisps, one of the night elf's racial bonuses. Wisps move faster than normal ghosts.
- Ghosts are unable to interact with most things in the world.
- Ghosts can neither see nor be seen by living players and most creatures, other than those that are in the immediate area surrounding their corpses.
- Ghosts can see other ghosts, including spirit healers, who can only be seen in ghost form.
- Ghosts run faster than their living counterparts, which makes it easier to return to where they died. They can also levitate over water.
- A few special creatures may be able to see ghosts (these will be apparent to players), and may even attack players in ghost form.
- If players somehow die in ghost form, they will be transported back to the original graveyard at which they appeared.
- Public chat channels such as General and Trade are not available to ghosts, but private chat such as /tells, /guild, and /party chat are.
- Players can't use ghost form as a means to travel to far off locations. Having a spirit healer resurrect you in a graveyard other than the one you appeared in when you died will always teleport you back to that original graveyard.
- When a player dies in an instance and then uses the spirit healer, the body in the instance turns to bones.
- When a ghost player is resurrected into an instance that has become full, they get teleported to the closest graveyard instead of appearing in the instance."

<http://www.worldofwarcraft.com/info/basics/death.html>

their character within the social order described by the rules and limitations of their chosen or assigned class. During the character creation process players are able to control little more than the race, class and gender of their character, and rely on developing professional skills and on the artifacts and physical instruments purchased, looted, discovered or created, to further individuate their character's playability, if not their identity. In World of Warcraft one's identity ends and begins with their level of integration with the narrative, there is very little individuation.

Any and all rules that govern the individuation or development of characters must support the narrative in a credible manner, relating the mechanics of character development to architectural typology. Additional complexities can be added in-game (provided that a balancing occurs during game development) whereby a class, race, or profession that is specific to a particular architectural type, functions radically different than others, to reflect its type. This is especially effective in real-time strategy war games (such as Blizzard's 'Starcraft'), and can be even more so in role-playing games.

Any changes or modifications made to game-play or to in-game content post release must relate to the mythology and the narrative to avoid making the game feel self-conscious of its artificiality. Game content (new/updated or original) can avoid triggering a critical self-consciousness that removes players from the mindset of the focused gamer by using typology that is vernacular to the game-world for any object, form, or content that is directly referential to the 'real-world', that would otherwise act as a trigger to jar a player's concentration. A successful example where in-game content has been used to memorialize 'real-world' events is provided in figure 7.4. In this example, only a highly integrated and knowledgeable character would be able to recognise the hidden meaning behind the statue.

When NC Soft and Cryptic studios gave players in City of Heroes access to a special mission at level 20 that could result in their ability to buy and wear capes, it was necessary for the developers to tie in this new feature to the existing narrative, rather than seem like a technological upgrade that had been enabled by new software programming that would have triggered an obvious self-consciousness in-game. Their official statement has been included as figure 7.5 on the facing page.

Architectural Patterns

Mattias Ljungstrom's paper on 'The Use of Architectural Patterns in MMORPGs' (massively multiplayer online role-playing games) was presented at the 'Aesthetics of Play' conference in Bergen, Norway, 14-15 October 2005, and identifies elements of formal architectural design theory used in-game. Ljungstrom's paper draws parallels between his observations of space and architecture in World of Warcraft to theories postulated by Christopher Alexander's 'A Pattern Language'. Chiefly, he recognizes that both Alexander's theories and the application of those theories support a framework for creating "healthy societies" using "traditional architecture" to "create environments which stimulate social interaction" and believes that the "similar focus on social interaction" in massively multiplayer online role-playing games is "interesting".

Rather than qualifying why or how this is "interesting", Ljungstrom states that "The aim of this paper is to show that many of the ideas presented in A Pattern Language are valid as tools and applicable when analysing the virtual world of online gaming, and more specifically the game World of Warcraft"⁴. Ljungstrom also states that the similarities found in 'A Pattern Language' and in World of Warcraft (WoW) may be "Intentional or not", but fails to discuss which similarities he believes are intentional and which he believes are not. His paper identifies formal architectural theory evidenced as in-game phenomenology, but fails to discuss the ontological implications of his findings.

4. <http://www.aestheticsofplay.org/ljunstrom.php>



CAPES RETURN TO PARAGON CITY!

Moratorium honoring Hero 1 comes to an end

By Juliana Nehring

Paragon City, Rhode Island, July 19th □ Almost two years ago, Hero 1 bravely led a team of heroes through a Rikti portal and brought the first phase of our war with them to an explosive halt. On that day Paragon City's premiere hero, the Statesman, asked all heroes to remove their capes to honor his memory.

A new age dawning

The recent increase in heroic activity has slowed the advance of villainy in Paragon City. Atlas Park and Galaxy City are safer than they have been in over a year, and dangerous areas such as Perez Park that were on the verge of being overrun have stabilized.

"When Paragon City is in her time of greatest need, heroes always answer. Hero 1 and the rest of Omega Team saved countless lives through their actions against those villainous Statesman's speech. The overall tone was optimistic. Synapse, the Phalanx's speedster, had this to say.

An honor to be earned

Several representatives of the Freedom Phalanx were among those attending Statesman's speech. The overall tone was optimistic. Synapse, the Phalanx's speedster, had this to say.

"The heroes I have been working with recently are top notch; as usual, States' is right on the money. These new heroes deserve the opportunity to become living tributes to those who have gone before."

Numina responded to Synapse's comments with the following.

"It is fitting that the young defenders of our city be given the opportunity to earn this honor. We must all remember, however, that it is unlikely they would have this chance without the heroes of our past."

As always, luminaries from all over the city turned out to hear Statesman's speech. Several high ranking representatives of Paragon City were on hand, including Assistant District Attorney Coleen Nelson.



Sketch by Juan Jimenez

This artist's rendering displays the distinctive cape of the British champion, Hero 1

Weight of a Legacy

The onslaught of the Rikti was one of the darkest times that Paragon City, and the world, has ever faced. It appeared that humanity was on the brink of destruction. The turning point came when the brilliant Dr. Science realized that the Rikti had to be cut off from their reinforcements. His plan to send heroes through the portal beneath Paragon City to the Rikti home world needed a field leader. Hero 1 volunteered without a moment's hesitation. Even knowing that he would likely not return, the brave hero led Omega Team into legend.

Shining hope

Statesman concluded his speech with remarks that filled all in attendance with pride. It is clear from his final words that Paragon City is good hands.

"My comrades and I needed help, that much was clear. What was uncertain is where it would come from. Now we know. It came from among you. From the streets of our own city, from the other great states of America, from countries both large and small, even other worlds and dimensions. You came, and you have helped in ways no one dreamt of, ways that cannot be repaid with mere words. You, the heroes of Paragon City, have prompted me to offer this new opportunity. I congratulate you and tell you with the utmost conviction: I could not be more proud. I look forward to speaking of your deeds far into the future."

After the speech the members of Freedom Phalanx quickly dispersed to attend to their duties. Lively discussion among the attendees continued for several hours.

Unfortunately, Ljungstrom missteps at the onset of his paper by assuming that in-game space is “nothing but arbitrary limitations imposed by the rules of the game.”⁶ It is an unfair equivocation to say that space is arbitrary, for while the precise form and exact dimensions of the volumes and zones may have a degree of arbitrary-ness at their edges, the actual form of the space as a shape is not significant and is not relevant when considering the function of space to hold events and act as vessel. In-game space cannot be understood as shape as much as a level of hierarchical order. A statement that bears an equivalent truthfulness to Ljungstrom’s assumption of space would be to say that Medieval maps are disproportionate and therefore they are rendered arbitrarily, when in fact, their spatiality depicts a hierarchical organization of form and iconographic significance, not of Cartesian or rational space. A rational analysis of the tectonics of space in-game will only mislead as rationality is not the progenitor of mythology. Mythology uses symbol and metaphor to reveal, and games do the same, as they are mimicking the mythological structure of the Hero Cycle.

Portions of text have been included from Ljungstrom’s paper to provide examples where the in-game simulation uses architectural theories to support a healthy and stable social environment that are positively contributing to the exposition of the game narrative and fulfilment of Hero Cycles.

Major Volumes - The Universe

Ljungstrom organises his paper by looking briefly at the world (and the volumes), then zooms into a region (a zone) and finally to two of the urban city spaces.

“The pattern 1.Independent regions describes how the maximum size of each independent region should not include more than 10 million inhabitants (Alexander et al 1977, 10). Since the total amount of players in World of Warcraft is much smaller than this partitioning, it has no purpose. However, future games might want to look into the difficulty of having more than 10 million players in one community, and the problems which arise in such a scenario. Furthermore, even though the total number of players in WoW exceeds 2 million, the next pattern discusses a much more important limit in the game.”⁷

Note that although WoW contained roughly 2 million inhabitants at the time his paper was written in 2005, by December of 2007 it held over 8 million, and by February of 2008, over 10 million active subscriptions.⁸

“Pattern 12. Community Of 7000 states that “Individuals have no effective voice in any community of more than 5,000 – 10,000 persons” (Alexander et al. 1977, 71). Interesting enough this corresponds closely to the size of a realm. A realm, or a server, is an instance of the game, and players cannot move to or communicate with players on other realms. A realm has a total population of about 10,000-12,000 players (Warcraft Realms 2005), divided into the two factions Alliance and Horde. Players from the two factions can not communicate with each other in the game except through visual emotes, such as “wave”, “goodbye”. This gives the single player a community of about 5000-6000 players with whom he can interact verbally within the game. This limit enables the players to be able to make a significant impression in the community, whereas if all players were on the same realm, they might feel lost. In conclusion, the server limit is not only an arbitrary technical limit, but also fits well with the suitable community size suggested in this pattern.”⁹

6. <http://www.aestheticsofplay.org/ljunstrom.php>

7. <http://www.aestheticsofplay.org/ljunstrom.php>

8. <http://www.mmogchart.com/Chart11.html>

9. <http://www.aestheticsofplay.org/ljunstrom.php>



Fig7.6, Concept art, ceremonial route to Hall of Heroes in 'Guild Wars'. Architecture that is borne from mythology reflects the dreamlike qualities of symbol and metaphor.

Having an impact in the community will affect the fulfillment players can feel when completing Hero Cycles, and will determine whether or not they feel their participation in game is a credible experience. An overly populated server won't make players feel 'lost' as much as it might make their involvement feel 'empty' or devalued.

Fostering Fidelity

The limitations of server sizes are also part of a greater strategy to develop stable (not overly large) social networks amongst players and are configured to maximize economic revenues, development and maintenance costs, and influence the price charged for user subscriptions. In fact developers have been highly active in community building for their games, developing and promoting social networks and resources in the form of online forums and chat rooms that provide a moderated place for those interested in discussing or learning about the game, or anything that may be related. These in and out of game institutions have been highly successful in generating a community of knowledgeable players and have fostered a sense of community. In-game the community building has strengthened the cooperative play-style that was absent in early online games but was integral to the gameplay in traditional role-playing games, and in contemporary hero stories told by narratives in comic books (teamwork is not as prevalent as 'aid' is in traditional mythology). Not only does this promote a positive experience for gamers; developers also know that a cooperative play-style "reduces system overhead", significantly reducing the amount of (server) lag an online player will experience.

“If a server can handle a maximum of 3.000 concurrent players and each player can fight one monster alone, the server must be capable of handling 3.000 concurrent beasts. This includes also for example their AI [(artificial intelligence)] routines, collision detection etc. If the number of players that are required to defeat one enemy instead increases to three, only 1.000 concurrent monsters must be provided”.¹⁰

It is important that the game-world naturally fosters this social environment (not forced by pedantic rules or inhospitable architectural design) to strengthen the fidelity players have towards the game-world and other players who are citizens of that world. During one play session in City of Heroes, the character 'Pixie Guardian' asked another character for help in a dangerous task force mission, however the other character, 'Azure Crystal', did not want the responsibility of teaming as the player (controlling Azure Crystal) needed more time to reacquaint themselves with their character. “Sorry I haven't touched this character in months, and wouldn't feel comfortable teaming until I'm used to her again”. (June 13th 2007 from Azure Crystal to The Pixie Guardian, on the Guardian server in CoH).

Developers of online games also want to maintain a captive audience of players who do not get bored with their games and for whom the game will not become mechanistic, as this will ensure a continued stream of revenue. For these developers, ensuring they have an excellent game that promotes cooperative game-play is essential. “Cooperative play modes increase a game's variability which in turn leads to longer time where players will reduce the likeliness of being bored. The longer time the players stay in the game, the more monetary gain the game will collect. Another thing that is worth mentioning is that players will probably bring more friends and family to their game-world, which will also benefit the game economically.”¹¹

The Zones

“Several guidelines regarding cities or larger towns are offered in pattern 2. The distribution of towns. Most importantly towns of different sizes should be distributed evenly across an area. For example, an area could consist of one city inhabited by 1,000,000 people, 10 towns with 100,000, 100 with 1000 inhabitants, and so on. The placement of these cities should be done in such a way that the cities of the same size are homogeneously spread out in a region. The purpose of this is to balance the access a person has to both smaller and larger cities from any point in the world (Alexander et al. 1977, 19). Figure [7.12a,b] show illustrations of the distribution of cities in the game. The placement and distribution of towns and cities in WoW adhere to the pattern very closely.”¹²

The distribution of architectural centres must also be organised to support the range of a player's ability to fulfill Hero Cycles in that particular space, and to guide them towards frontier thresholds when appropriate. The distribution of ritual and 'free' access points to these centres will either increase or decrease the difficulty for players in reaching these centres. Centres that are not made accessible by a ritual flight or travel path will require a 'free' access that may challenge novice players who will have to travel on foot.

“As players move through the world, they will want and need to move towards the larger cities in the world. This [should be] a natural process that can be observed both in the 'real-world' and in the game.”¹³ This process is an example of the inconspicuous nature of the arrangement of architectural, spatial, and non player character elements that precipitate and guide Hero Cycles and that support exploration.

10. Bogojevic Sladjan & Kazemzadeh Mohsen 2003, pg5.

11. Bogojevic Sladjan & Kazemzadeh Mohsen 2003, pg5.

12. <http://www.aestheticsofplay.org/ljunstrom.php>

13. <http://www.aestheticsofplay.org/ljunstrom.php>

14. <http://www.aestheticsofplay.org/ljunstrom.php>

15. <http://www.aestheticsofplay.org/ljunstrom.php>



Fig7.7, Cosmic diagram of the World of Warcraft universe, pre-Wrath of the Lich King release.

“The pattern 28. Eccentric Nucleus explains the necessity to place major cities on the edge of a zone, not in the centre. Furthermore, local centres should be created in the direction of the main centre in the world. This will allow people to naturally pass through this point, and thus enhancing the activity of the local centres (Alexander et al. 1977, 150). It will also help players to orientate in the world as they travel through it the first time, making the local centres natural checkpoints on the way to the main city. Figure [7.13a,b] show illustrations of the world in World of Warcraft with region borders, local centres and major cities marked.”¹⁴

Ljungstrom concludes his section on ‘zones’ by stating that “...these three patterns guide the designer on how to partition the world and provide an understanding of the size and number of cities as well as their general placement within the world.”¹⁵ What he does not say (or notice) is that the pattern of ‘Eccentric Nucleus’ strongly relates to the ability architecture has to assist in guiding the casual and novice players without detracting value from the experience of avid, hardcore players.

From left to right, Fig7.12a,b and Fig7.13a,b, <http://www.aestheticsofplay.org/ljungstrom.php>

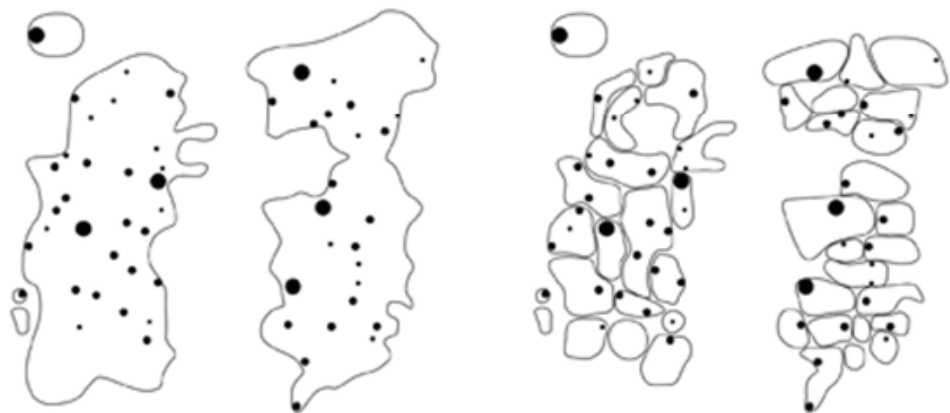




Fig7.8, Screenshot from World of Warcraft featuring a character ordering food from a Pandaren (still under development).

"Imagine you are on an instance run in Maraudon, Dire Maul, or even Blackrock Spire. Two long hours into the dungeon and you suddenly notice the hunter in your group feeding his pet. That triggers a rumbling in your belly, which reminds you that you haven't eaten anything all day! How can you satisfy your craving without abandoning your group?! Before, there was nothing for you to do but suffer in hunger. Now, thanks to Pandaren Xpress®, creators of low-priced gourmet meals, you no longer have to leave the group for a food break. In less time than it takes your party's casters to regain mana (even less if you don't have a mage), you can order Chinese take-out from the comfort of your chair! No more tedious walking over to the telephone! No more arduous pushing of unfamiliar phone numbers! Simply type "/panda" in the game, and a GM [(game master)] will take your food order through the use of our innovative in-game Pandaren Xpress® menu. Within minutes, a Pandaren Xpress® delivery person will arrive at your door with a veritable feast! With each /panda order, you will also receive an in-game Pandaren Fortune Cookie! The Pandaren Fortune Cookie not only tells you a fortune, but it also gives your player a random 30-minute buff (or debuff)!"¹⁶

16. <http://www.worldofwarcraft.com/info/underdev/pandaren-xpress.html>



Fig7.9, 7.10 above left and right, Concept art depicting Pandarens in World of Warcraft. It should be noted that the Pandarens (while part of the mythology), were more fully developed as a race in later installments of the game. At first, the Chinese market was offended at the depiction of the Panda wearing Japanese clothing and so the garment type was modified to reflect the more traditional Chinese garb. In the latest release, Pandarens were not offered as a playable race, so as to not offend the Chinese market, for whom the depiction of killing or hurting Pandas is taboo. Ironically Blizzard is comfortable with using the Pandaren non-player character as a 'take out' order person in-game.

Fig7.11 right, Photograph of a 'Pandaren Express' delivery man.
<http://www.worldofwarcraft.com/info/underdev/pandaren-xpress.html>

Fig7.14a, Continent of Kalimdor in the World of Warcraft showing the organizational division of land into major zones. The small houses represent towns, while the stone towers represent cities.

www.worldofwarcraft.com





Fig7.14b, Continent of the Eastern Kingdoms in the World of Warcraft showing the organizational division of land into major zones. The small houses represent towns, while the stone towers represent cities. www.worldofwarcraft.com

The Barrens

“The Region [zone of space]...I have chosen to focus on [is] one of the more interesting regions in the game ...[and is part of the Horde’s territory, and is called]... The Barrens. This is one of the busiest areas outside of the major cities. The patterns included in this section are 3. Country Fingers, 5. Lace of country streets, 6. Country Towns, 11. Local Transport Areas. The pattern 28. Eccentric Nucleus presented in the previous section is also closely connected to the design of the regions and is a good example of how the patterns are interconnected.

The players in World of Warcraft need to be close to their questing areas, and at the same time not be far away from the main city and the services that are provided there. Otherwise too much time will be spent on travelling. [This is especially important for the newbie, for the casual gamer, or novice player]. Pattern 3. Country Fingers discuss a similar dilemma. Many people experience the need to be close to the country side and at the same time have access to the density available in a city (Alexander et al. 1977, 22). The proposed solution is to create interlocking fingers of farmland and urban land. The urban fingers should never be more than 1 mile wide, while the farmland fingers should never be less than 1 mile wide. While this is not directly implemented in a region like The Barrens, it does have some relevance and could perhaps have been more strongly enforced. The roads in The Barrens create a certain urban density since this is where most people choose to travel and use as means of orientation. The areas that the roads encircle are the different quest areas. Although there are some quest points along these roads, most of the quests are picked up in the main village Crossroads. However, removing these quest points from Crossroads would probably not be a good solution, since it would make the village appear empty.”¹⁸

An absence of non-player characters from city spaces or resting spaces would make the sharing of boons difficult as characters tend to interact in areas that are populated by non-player characters from whom they can buy/sell, receive new quests, information, or other forms of aid. Congregation of in such areas makes the sharing of boons (upon return from flight) from Hero Cycles possible.

“Small towns need to have a vital local business to stay alive and be active. This is the essence of pattern 6. Country Towns (Alexander et al. 1977, 34). The same goes for the smaller villages in the game-world. Although the NPCs [non-player characters] might not move away, no player would ever visit a town he knows is empty, or at least not remain there longer than necessary.”¹⁹

This assumption is not true, especially for exploratory players and PKs (player killer types) and suggests that Ljungstrom has a minimal or a very analytical experience playing MMORPGs and World of Warcraft. This might also translate to some of the oversights he makes connecting the importance of the stylization and substructure of game-play that is designed to support Hero Cycles.

17. <http://www.aestheticsofplay.org/ljunstrom.php>

18 <http://www.aestheticsofplay.org/ljunstrom.php>

Two Big Cities

“Two big cities in the game, Orgrimmar and Ironforge, are the main centers for each of the two factions. This is where all high level trade and pickup quest groups are formed. They are both busy places with lots of different services, with the most important being the Auction House, the Bank, the Mailbox and the Inn. The city furthermore contains many of the trainers and sales points that are needed for trade skills such as tailoring, or for learning new class abilities (spells, weapon skills, etc).”¹⁹

It is not coincidental that a majority of the trading, auction, storage, and (popular, rather than arcane or exclusive high level skills) training centres in-game are found in the largest and most dense urban centres. This strongly emphasizes the role of return and character integration into the narrative

“The placement of the facilities in a city must be done with great care. Scattering services individually through the city does not enhance activity (Alexander et al. 1977, 164). Pattern 30. Activity Nodes instead tells us to gather the services mostly used together. The triangle created by the Auction House, the Bank and the Mailbox in Orgrimmar and Ironforge are prime examples. The mailbox is important because this is where items bought in the Auction House are delivered. The area within this triangle is the very focal point of activity in both cities. The placement of this activity triangle within the cities can be shown in figure [7.15a and 7.16a]. Figure [7.17 and 7.18] show the density of players in this area on a normal day. Interestingly enough, only a few meters away there is almost no activity at all. It has been indicated that the use of activity nodes is in fact a conscious design decision in World of Warcraft (Judgehype 2005).”²⁰

“A neighbourhood without a boundary is a weak neighbourhood. It will not be able to maintain its own identifiable character (Alexander et al. 1977, 87). The pattern 15. Neighbourhood Boundary discusses the importance of zone boundaries in a city, enabling each community to access most of the things they need within a small area. In terms of city planning this pattern has been implemented in both Orgrimmar and Ironforge. Both cities are divided into zones, mostly one area for each class with the most usual profession services needed within that small neighbourhood [Indeed, all of the major city centres in WoW are organised this way]. This placement makes it easier for the beginner of the game to orient themselves and minimize the time spent searching through the city. In practice the pattern is implemented by enforcing the borders and limiting the number of entry points into an area. These entry points can then be further emphasized by creating a gateway or portal as described in 112. Entrance transition and 53 Main Gateways (Alexander et al. 1977, 549, 277). An entrance transition enables the player to understand that he is moving into a different area of the city. These types of gateways are particularly present in Orgrimmar, see figure [7.22].”²¹

This traditional use of clustering activity and neighbourhoods provides credibility to the space of the city as a place and context for the activities that are encouraged there. In traditional preindustrial urban centres in the Western world, the agglomeration of similar architectural and programmatic types are evident in the texture, the scale, gradation and fabric of the entire city.

19. <http://www.aestheticsofplay.org/ljunstrom.php>

20. <http://www.aestheticsofplay.org/ljunstrom.php>

21. <http://www.aestheticsofplay.org/ljunstrom.php>



Fig7.15a above, Map of Orgrimmar with triangle indicating the activity node area.

Fig7.15b left, Orgrimmar with neighbourhood boundaries indicated.





Fig7.16a above, Map of Ironforge with triangle indicating the activity node area..



Fig7.16b right, Ironforge with neighbourhood boundaries indicated.

Fig7.17 left, Screenshot from Ironforge. The bank is to the left, the mailbox behind all the players in the centre, and the auction house is up the hill to the right.





Fig7.18 right, Screenshot from Orgrimmar, facing the bank. The auction house is behind us, and the mailbox is to the right of the bank.

Inspecting Artifacts

“Social interaction in World of Warcraft is supported by the way equipment is selected. Getting the best equipment is a considerable part of World of Warcraft. However, to do this the player needs to know what equipment to get, and the best feature to do this inside the game is to inspect other players’ equipment. The inspect ability only works on a very short distance so a player needs to get very close to another player to be able to do this. This behaviour opens up opportunities to discuss with other players where they found a certain piece of equipment. The pattern 100. Pedestrian street discusses the importance of making a street narrow enough so that people are forced to move really close and thus increase the shoulder rubbing that takes place there. This type of interaction is assumed to be an essential type of social “glue” in any community (Alexander et al. 1977, 489).”²²

This function of game-play is again supported by the architectural typology to promote a fertilization of experience through the clustering of ‘returned’ players in order that their equipment and acquired artifacts are put on display. Characters are likely to ask one another about their equipment and experiences when in such a space.

“On the other hand a narrow street is not everything. The pattern 121. Path Shape for instance explains the use of a bulge on a street to make people slow down and spend a bit more of time in this area while passing through (Alexander et al. 1977, 591). Evidently, this can be seen in Orgrimmar as the area just between the main entrance and the activity triangle.”

“A promenade is a place where you go to see people, and to be seen. Attracting people to the promenade is discussed in 31. Promenade. It is stipulated that the people who live less than 20 minutes away will use a promenade. People who live more far away tend usually not to use a promenade (Alexander et al. 1977, 170). Since no one is actually living in World of Warcraft, this translates badly into the game-world. We could however consider the Inn (see figure [7.24]) as the home location for all the players that have their hearthstones bound to this location. The hearthstone is a feature in the game that enables you to teleport home to a location you have previously visited. The hearthstone can only be bound to one location at a time. Most players end their play sessions by teleporting back to the home location. This means that the Inn will also be the starting location of their next play session. A small informal questionnaire carried out inside the game indicates that most high level players have their hearthstones bound to the Inns in Orgrimmar or Ironforge. Thus it is essential that the promenade is placed close to the Inn of the major cities. The promenade in Orgrimmar is in effect the very short distance between the Auction House and the Mailbox. Although it is important to keep these two services together this area sometime gets a bit too crowded, and could perhaps have been stretched out a bit more as has been done in Ironforge.”²³

In City of Heroes, congregation of players often occurs at the base of monuments or in the exterior forecourt of the iconographic public buildings. Non-player characters and other amenities are located at these locations. “It has been argued that vertigo is one of the foundations of play (Caillois 1961). The pattern 62. High Places ponders the significance of creating these high locations; “The instinct to climb to some high place, from which you can look down and survey your world, seems to be a fundamental human instinct” (Alexander et al. 1977, 316).”²⁴ This coincides with the precipitation of ‘self-motivated’ exploratory adventure from traditional mythology, and caters to a style of game play that suits the exploratory player type. In Paragon City’s major spaces of congregation large statues are used to support this activity; the game even awards bonus experience points for those characters who reach the top.

22. <http://www.aestheticsofplay.org/ljunstrom.php>

23. <http://www.aestheticsofplay.org/ljunstrom.php>

“High buildings give people a place that they can use to orient themselves toward, when they are on the ground. It is however, equally important as places from where to look down. The pattern furthermore explains that these high places should be spread out in the city with great care so that each can serve as a distinct landmark for its part of the city. Many of these settings are found in World of Warcraft. In Orgrimmar the most important are perhaps the flight tower, but even the roof of the bank that can be accessed from ground level on one side fills the same purpose. A location outside of the cities worth mentioning is the entire area of Thousand Needles.”²⁵

“Furthermore, the top of the bank in Orgrimmar is related to pattern 94. Sleeping in Public. This pattern argues that it is “a mark of success in a park, public lobby or a porch, when people can come there and fall asleep” (Alexander et al. 1977, 458). Players in the game tend to place their avatars in certain places when they know they will be away from keyboard for a while and the top of the bank is one of these places. According to the guidelines in the pattern these places should be made “relatively sheltered, protected from circulation, perhaps up a step, with seats and grass to slump down upon” (Alexander et al. 1977, 459). Some of these aspects are definitely missing, and could probably further enhance the game-world if they were implemented.”²⁶

Avatar emotes are also used to reference a player’s availability by mimicking the activities a player is engaged in such as, eating/drinking, waiting, typing, or anything else that would affect an avatar’s responsiveness. Pattern 94’s principles for ‘sleeping in public’ are extremely important in-game where ‘safe spaces’ are required to keep players from having to leave zones when they want to rest or are waiting for a triggered event or for other players. In games that use instanced spaces, a place to sleep could be at the access point of an instanced mission for those who are running a mission arc. Unlike World of Warcraft which binds a player to a location such as an inn of their choice when they log on/off, players in City of Heroes reappear where they were last. As such, those who go to sleep and logoff in Paragon City are more likely to seek a safe public zone or a highly discreet spot away from danger such the roof of a skyscraper, or the edge on the top of the perimeter wall (which is wide enough to stand or sit on). However the most ideal locations are public gathering spaces that are populated by other players with whom a character who has recently (re)logged in will likely want to team up. Since players are often waiting for others, or may be unsure of where to go next, another good ‘sleeping’ location in both World of Warcraft and City of Heroes is the ritual access point that can carry them to far reaching locations.

Fig7.19, 7.20, and 7.21 from left to right below, Screenshots of the High Clerist using in-game emotes: drinking, sitting and having a conversation with another PC at city hall, and ‘using’ a laptop to locate prospective teammates.



24. <http://www.aestheticsofplay.org/ljunstrom.php>

25. <http://www.aestheticsofplay.org/ljunstrom.php>

26. <http://www.aestheticsofplay.org/ljunstrom.php>

Fig7.22 left, Gateway in Orgrimmar.
Fig7.23 below, Inspect feature. "Where did you get this..?"





Fig7.24. Looking into the inn of Orgrimmar.



Fig7.25a, Promenade in Orgrimmar.

Fig7.25b, Top of bank in Orgrimmar.



Fig7.26 bottom left, Screenshot of the interior space in the city hall of Paragon City.
Fig7.27 bottom right, Screenshot while descending from the sky upon city hall.



27. <http://www.aestheticsofplay.org/ljunstrom.php>
28. <http://www.aestheticsofplay.org/ljunstrom.php>



Fig7.28, Screenshot at grade at the Southern end of the city hall plaza in City of Heroes. This plaza contains all the basics amenities players would need including training, buying/selling, access to supergroup bases, and instance difficulty adjustments. The monorail station and trading house are nearby to the immediate Northwest and Northeast.

Plans

“Navigation through a big city can be confusing to say the least. There are several patterns in A Pattern Language that try to reduce this problem. Pattern 120.Paths and goals stresses the importance to consider how humans behave as they walk through a city or landscape. People constantly scan the environment for intermediate destinations, and focus on the furthest visible point along the path. They will then try to walk more or less in a straight line toward this point. As new points are discovered these will become the centre of attention (Alexander et al. 1977, 587). This process is illustrated in figure [7.29] from A Pattern Language. Furthermore, the pattern provides the following design guidelines; place goals at natural points of interest, then connect the goals to one another to form the paths. The paths may be straight or gently curving between goals. As for the game-world, this pattern can be observed in two different ways in Orgrimmar and Ironforge.”²⁷

“Whereas Ironforge is very symmetrical in its layout, Orgrimmar has a much more organic style. In both cases it is possible to see how goal points have been placed at crucial positions as to help the navigation through the city.”²⁸

It should also be noted that the plano-metric organization of space in Human, Dwarf, Night Elf (Alliance) and Undead Human (Horde) cities is geometrically organised, while the cities of non-human species such as Taurens is more organic in organisation to reflect the mythology of the culture of that race.

It is also true that in hierarchically exclusive or challenging spaces, Pattern 120 ‘Paths and Goals’ is less evident in order to more strongly challenge a player by removing the architectural assistance they were previously receiving. Often hidden spaces within public or easily accessible places are concealed in this manner. Exploratory players enjoy discovering these places, while PKs (player killers) might wait in ambush there. Such places can be frustrating and unforgiving for the novice or unskilled player who accidentally finds themselves stuck or attacked there. As one progresses out from beginning spaces, the integrity of Pattern 120 is diminished with every additional threshold crossing.

Waiting

“Playing a MMOG [massively multiplayer online game] unfortunately involves spending a lot of time in the game waiting. In World of Warcraft in particular players tend to wait for quest groups to form or for enough players to enter the battlegrounds for these to start. Waiting is the theme of pattern 150. A place to wait. It is suggested that the process of waiting has inherent conflicts, and it is necessary to creating situations that makes waiting positive (Alexander et al. 1977, 708). The most obvious locations where players wait are outside the battleground entrances. Interestingly enough the players tend to duel each other outside of these locations. However this is also the only activity provided to the players as they wait there. Creating spaces that offers more opportunities for free play in this area might reduce the amount of complaints the battleground queue system receives (World of Warcraft Europe 2005). Anyone who spent some time outside the Warsong Gulch knows that the players there are highly frustrated. Other locations worth mentioning are the Zeppelin platform and the Deep Run Tram stations. They both serve to increase the number of casual encounters a player makes in the game, although the Zeppelin platforms seems to serve this purpose better by providing a much smaller and denser waiting area.”²⁹

Waiting also provides a worthwhile opportunity to communicate with other players about their experience online and to ask questions about their character development. The call for aid that players put out when forming teams, or when asking for help in completing quests, is the most effective and credible manner for precipitating Hero Cycles and sharing boons and has made ‘waiting’ commonplace in most massively multiplayer online role-playing games. Waiting, or avatar inaction, is also an opportunity for players to more closely inspect architectural details, as well as ‘play with’ or adjust the configuration or constitution of their skills and equipment.

Finally, Ljungstrom’s paper becomes critical of the presence of ‘non-functional’ architectural elements in-game. He believes that architecture that does not assist in or provide the resource to act as a social meeting place is used by the game as ‘mere decorations’. While he is correct in saying that non-functional architectural elements are decorative, it would be incorrect to dismiss their value for being ‘decorative’. In truth, none of the architecture is structural or necessary for game-play, and could, if the developers desired, consist of a white field that contained objects that were destylized and purely functional, maybe even wireframe. In a sense, all architecture in a digital simulation is, to use Lungstrom’s word, ‘decorative’. Dismissing the value of architectural decoration, or rather ornamentation, reduces the credibility of architectural place-making that supports the integrity of virtual spaces, especially mythologically derived game-space. The ornamentation, material simulation and stylistic representation of object in-game are part of an iconographic topography that upholds the narrative to support the mechanics of game-play, which the ‘functional’ aspects of architecture are actually subservient to. An overly rational (Modernist) approach to architectural analysis in games is irresponsible and misleading. The high degree of stylization and the abundance of architectural detail provides justification for the functionality of otherwise unimportant and coincidental formal arrangements of space and shapes and constitutes a large portion of the energies spent by developers in building and maintaining games.

29. <http://www.aestheticsofplay.org/ljungstrom.php>

Fig7.29, Illustration from A Pattern Language, p.587.

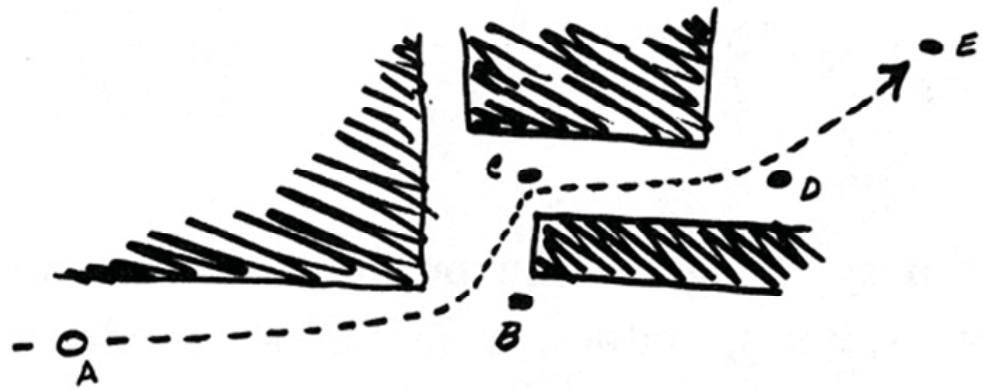


Fig7.30, Screenshot of Thunder Bluff, the Tauren city in World of Warcraft.



Fig7.31, Plan of Thunder Bluff in World of Warcraft.



Fig7.32, City of the Undead in World of Warcraft.





Fig7.33, Night Elf city in World of Warcraft.



Fig7.34, Human city of Stormwind in World of Warcraft.

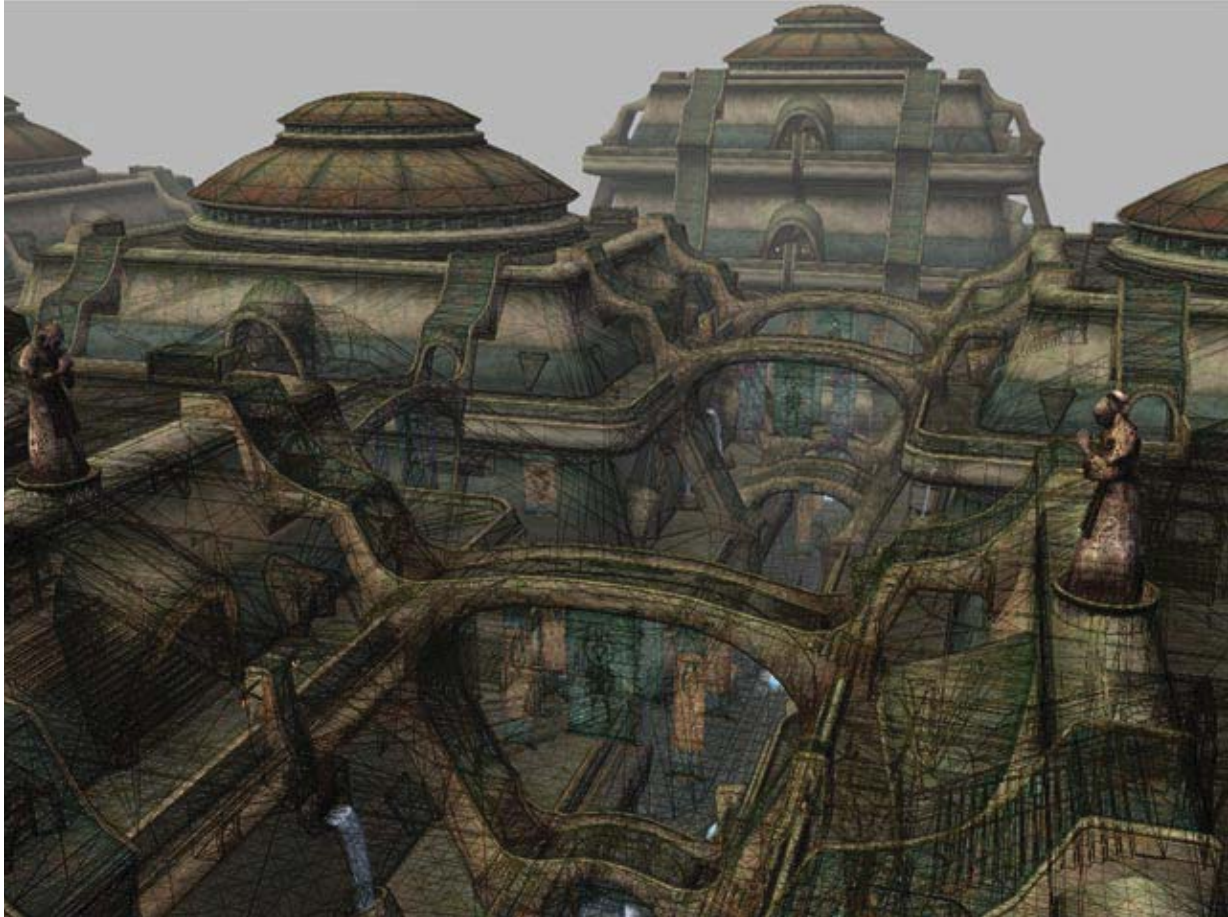


Fig7.36, Image of Vivec City with wireframe exposed beneath the textures. Unlike other cities which are designed to appear to have grown from the agglomeration of built form into a Medieval urban fabric, Vivec appears to be a planned city. Most of its spaces are part of large interior pyramid shaped volumes.



Fig7.35, Image showing a decomposed rendered simulation, with wireframe underneath from Elderscrolls Morrowind.

The 'wireframe' assemblage of polygons are wrapped with simulated colour, texture, to create material, and is referred to as texture mapping. Without the added texture mapping, even simple wireframe environments become extremely difficult to understand. In the complex environments of digital role-playing games, texture mapping and 'decorative' elements are critical.

Outside the Game-World

Mythology teaches that changing one's consciousness can lead to a change in social consciousness. The conditions of the outside world can thus be effectively altered by the changed consciousness of gamers.

Experience

Mainstream popular culture has been critical of the veracity of the experience had in virtual settings for many years. In the television show 'Star Trek The Next Generation' the simulations run in their 'holodeck' were often the source of ethical debate. The holodeck was a sophisticated room powered by specialized hardware and software that could generate 3D tangible visualizations in space, and could function in any manner. Though the holodeck was commonly used as a recreational facility, it was much more impressive when portrayed as an educational or instructive tool. While the veracity of the experience in the holodeck and the nature of the simulation was questioned when it was used to simulate socially taboo or inappropriate conditions, skills and lessons learned through acceptable simulations and methods of problem solving or physical training, were considered valuable and significant personal experiences. The lessons gained often saved the crew of the Enterprise and the lives of characters on the show. The exploration of veracity of experience in simulated environments has a strong relationship to the credibility of the simulation as an environment. In the holodeck all spaces and objects are successfully created to be as real as possible in every physical and material sense, if not in soul or spirit. The experiences in the holodeck were thus taken as valid sources for contextualization of new ideas, theory, and as a direct reflection on the values of the individual who designed the program being run.

While on a functional level, role-playing games simulate the interaction of objects and space, they symbolically integrate users into a narrative that reverberates with a theological system of values and ethics that can be projected into the 'real-world'. The lessons and directives embedded in the narrative will carry forward beyond the game. An article published in Issue 14.04 of Wired Magazine's April 2006 edition by Chris Suellentrop and titled 'Global Gaming Crackdown' (Article 1 on page 177) provides an example of the impact that activities performed in-game can have on the 'collective consciousness'.

The corporate and business world is also beginning to recognise the veracity of in-game experience, and actively hire candidates who perform well in-game, for 'real-world' employment that may not involve game development, or fall within any category of work that is directly related to gaming or computers.

Whereas the experience of integration and transformation was previously ritualised in traditional and primitive societies, such rituals are not found in the contemporary secular consciousness of modern culture. Unlike the commonly shared stories and myths of the past, today's stories are highly individualised according to one's personal experience, and are most valued when there is a coincidence between the experience and the benefit it provides the individual. While in the past, the commonly held myths were part of a moral compass and were accessible in all aspects of life from political, religious, and domestic spheres, today, the intimation of one's personal values is often felt to be necessary and provides evidence, at times, for the high regard with which players hold for their in-game adventures, and the positive influence that experience can have on their daily lives.

Article 1.

Online role-playing games have begun to more strongly impact policy making and belief structures in the 'real-world'. There is enough reality simulated in the game that seems to demand a 'real-world' response when it is required.

"Last fall, a group of World of Warcraft players in China committed mass suicide. They wanted to draw attention to the latest restriction on their liberty: The same government agency that censors newspapers and bans books had just mandated a system of disincentives to limit the number of hours per day they spent playing online games. Hardcore Warcrafters decided they would rather pull the plug than, er, pull the plug. But Fox News and CNN weren't on hand to cover the protest because it took place in the game. The players' digital representations martyred themselves; their fleshy masters kept breathing. These were virtual suicides in response to a crackdown in a virtual universe. Still, virtual isn't the same as unreal. If the Chinese government can monitor World of Warcraft players, then Azeroth (where the game takes place) is in some sense a little bit totalitarian, too. And it wasn't the first time Beijing intervened in a massively multiplayer game: A few years earlier, a Chinese court ordered a game company to restore virtual biochemical weapons someone had pilfered from a player. Other governments are taking an interest in massively multiplayer online role-playing games as well. Players in South Korea have been prosecuted for stealing virtual property. More than half of the 40,000 computer crimes investigated by South Korea's National Police Agency in 2003 involved online games. American gamers aren't likely to face dictatorial decrees to limit their play time, but within the next few years the courts will begin to examine how laws relating to taxes, copyright, and speech will apply in virtual worlds. In the near future, the IRS could require game developers to keep records of all the transactions that take place in virtual economies and tax players on their gains before any game currency is converted into dollars. "It's utterly implausible that it won't happen," says Dan Hunter, who has coauthored law review articles like "The Laws of the Virtual Worlds." A trickier issue is whether an avatar can be defamed: Will we see potion merchants suing for in-game slander, much like eBay sellers have litigated over negative feedback? In the United States, virtual worlds could eventually have the same legal status as another lucrative recreation industry: pro sports. The NHL isn't exempt from federal legislation like labor, antitrust, and drug laws. But inside the "magic circle," on the field of play, sports leagues are given great latitude to make judgments, even though jobs, endorsement contracts, and the value of team franchises hang in the balance. For example, the government lets referees police behavior in a hockey rink that would normally be the purview of local prosecutors. (Try high-sticking your mail carrier to experience the difference.) But the government still reserves the right to get involved. It should be the same in games. If your thief character picks the pocket of a nearby avatar, the local district attorney won't prosecute. But if you hack into the player's account to loot his virtual goods, you end up in the slammer. But don't surrender your in-game civil rights without protest. In January, in the aftermath of the public outcry (and virtual die-ins), the Chinese government announced that adults could play massively multiplayer online role-playing games for as long as they like. If the IRS doesn't let US players off so easy, will they respond with a virtual Boston Tea Party?"³⁰

Article 2.

Skills honed during online role-playing are being recognised as strong interpersonal capabilities that are desirable in the work-place.

"What we've found is that success as a business leader may depend on skills as a gamer. Smart organizations are recognizing valued employees who play online games and apply their skills and experiences as virtual leaders to their "real-world" jobs," said Jim Spohrer, Director of Services Research, IBM Research Center in Almaden, Calif.

Online games and the future of work are found to have various similarities in terms of required skills and challenges tackled. According to the report: today's gamers are learning collaboration, self-organization, risk-taking, openness, influence, and how to earn incentives linked to performance and be flexible in the way they communicate.

Here are the features of game environments that businesses should adopt:

- Incentive structures that motivate workers immediately and longer term
- Virtual economies that create a marketplace for information and collaboration
- Transparency of performance and capabilities
- Recognition for achievements
- Visibility into networks of communication across an organization"³¹

30. <http://www.wired.com/wired/archive/14.04/law.html>

31. IBM study says MMO gamers can be future corporate big wigs, <http://mmorpg.qj.net/IBM-study-says-MMO-gamers-can-be-future-corporate-big-wigs/pg/49/aid/96404>

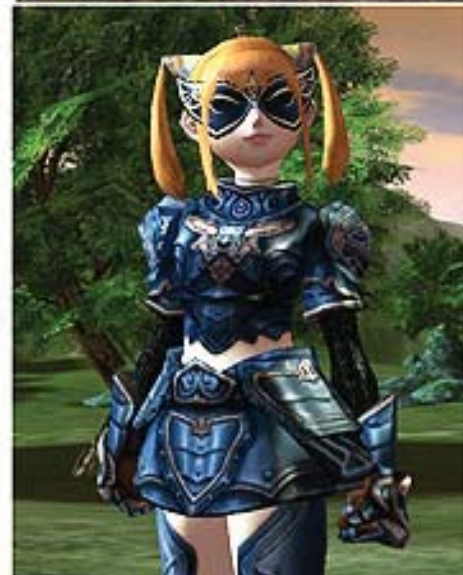
In a publication for the BBC, photojournalist Robbie Cooper took images of players, and their online avatar characters and wrote on the impact of their experiences in-game to enrich their daily lives and personal wellbeing.

http://news.bbc.co.uk/2/shared/spl/hi/picture_gallery/05/technology_online_gamers_unmasked/html/1.stm.

Bae Kyun-Eun is Persia
"Bae plays a man because she thinks that male avatars have more charisma, she wants to 'project strength', and all the 'masters' in the game have male avatars. She says if she had to play the game alone she wouldn't bother. Initially, she was attracted to it because she thought it looked beautiful, but the social element has become part of her life. Her guild meets up regularly."



Seang Rak Choi is Uroo Ahs
"Choi is a professor of public policy and law. His character Uroo Ahs buys and sells item in the game-world, even when he isn't there, running on scripts he writes for her. He makes spreadsheets analysing different variables within the game and believes that using a little girl avatar helps in negotiations. So far he's amassed game items worth 150m Adena, the virtual currency in the game."





Yoon Yae is Yahin
“Yoon Yae works as a TV agent. He’s one of the 33 kings of Lineage. There are 33 kings because there are 33 servers running duplicate versions of the game-world. He says his managerial skills in the ‘real-world’ help him maintain control of Aden castles, which is the seat of power in every instance of the game. He sets taxes and controls his supporters through five ministers. His people buy seeds from the castle and out and grow them then come back with the product.”



Bill is Shipwreck
“Bill transports gold bullion for the federal reserve. In the evenings he logs on at wi-fi enabled truck stops and travels across virtual galaxies in his virtual space ship. He says the game involves learning to use the ship to the best of your ability, building a multitude of skills to help you survive in a hostile universe. So far he’s been lucky and he’s making so much money that he’s planning on just putting in a couple more years before retiring.”

Chris is Blakkphire
"Chris lives in New York city and is a member of a lan (local area network) club that meet a couple of times a month. He plays City of Heroes from home and met his last girlfriend that way. Online he tries to make his character as much like himself as possible."



Mark is Marcos Fonzarelli
"Mark is a graphic designer and in his spare time creates robot avatars for sale in Second Life. He makes steady side income of \$200 a month. It's a niche market. If he was producing clothing for female avatars he'd be making much more. But he isn't looking to make a living from it just yet. He believes that the skills he's learning in the game will one day be very valuable as more and more of the internet becomes 3D."





Lee Eun-Sol is Freelancer
 "Lee is studying magic at university. He enjoys being on stage and entertaining people, teaches magic, and works part-time as a magician. He doesn't distinguish between reality and illusions, saying they're 'both the same'. He sees his online character as another self in the virtual world. 'I enjoy communicating through the virtual world. It's another world where people gather and live together'."
 Legends of Knights



Legends of Knights
 "Legends of Knights is one of many guilds that populate the Lineage game-world in Korea. Lee Hyun-Joon is the master of the guild. Every month he organises 600 people to help defend his virtual castle. His avatar is riding the dragon (right). Around 20-30 of the top members will play together in the same cybercafe, shouting instructions and information to each other."

T is War Catalyst

"T was brought up in what he describes as post industrial ghetto America, where opportunities were scarce and many around him were on drugs. He remembers completing Super Mario Brothers was a significant moment in his life. He'd been getting involved in petty crime, but the game gave him a sense of accomplishment. He says that if it weren't for computer games, he probably wouldn't be alive today."



Matt is Mattokun

"Matt lives in Chicago and plays Final Fantasy. He's using the game to learn Japanese, which he's also studying at university. He writes in Romaji and gets responses in Japanese text. He says it helps him learn much faster, and when he travels to Japan he's able to hold his own much better in conversation. He has Japanese friends through the game and is hoping to travel back to Japan in the summer. Eventually he's planning on moving there to become an English teacher."



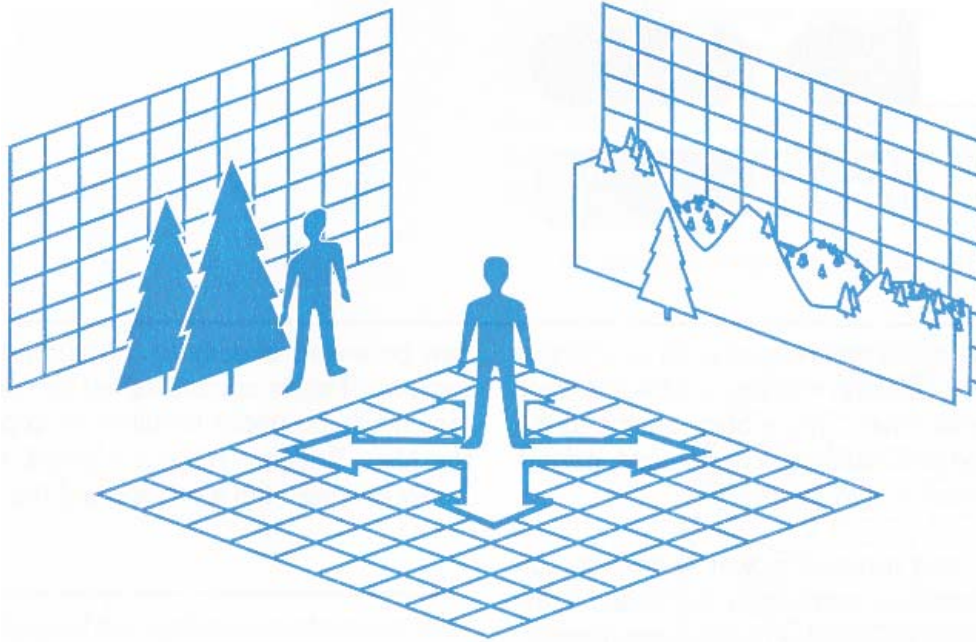


Fig7.37 right, : Illustration of a Holodeck. Arrows represent a 'treadmill' like ability that can allow for infinite locomotion within the room.

Fig7.38a,b, below, Pictures of the interior of an inactive holodeck. The door in figure b is referred to as an 'arch' and is commonly used to access the exit or computer controls that remain hidden during an active simulation.

A holodeck operates like a volume in a role-playing game; it is self contained, and finite in size, but able to simulate an infinite number of spaces and places. It is not a coincidence that access from this space to the space of the rest of the starship is negotiated by calling for the simulation of an arch, as this arch acts to pronounce a threshold crossing for anyone entering or leaving the simulation and is meant to trigger a shift in consciousness.

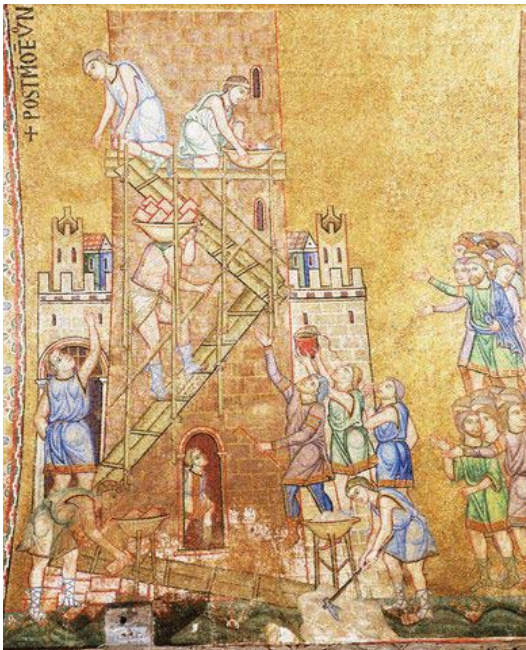
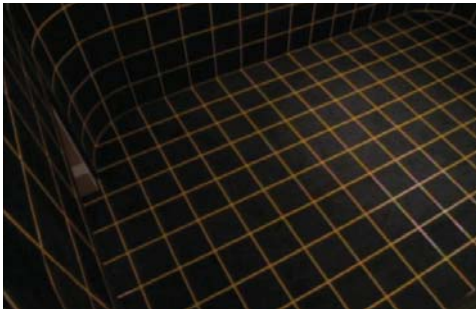


Fig7.39 left, Building the Tower of Babel, unknown 1210.



Fig7.40 middle, An Orc Brute from World of Warcraft.

Fig7.1, A picture of a player tattooed with the image of a World of Warcraft character, possibly their avatar.



Fig9.1, Concept art depicting the shoreline of Northrend in World of Warcraft.

SUMMARY

The Role-Playing Game

Role-playing games were first developed in the late 1950's and early 1960's as an iteration of table top war games that shifted focus from combat and martial strategy onto character development and social interaction. Despite the anti-conservative liberal secularism of the gaming milieu at the time role-playing games were first developed, Counterculturalist high-school and university students who were the major demographic of players, responded favourably to the institutionalisation of rules and guidelines which regulated game-play mechanics. Despite their secular lifestyles gamers were indifferent to the enactment of experiential models of transformation in role-playing games that primitive society and religious institutions had been recreating in their own practices for eons. The models of transformations in-game are based on traditional mythology that provides "clues to the spiritual potentialities of the human life"¹ this is the function of mythology and the rituals that come from it, including theology and role-playing games. Role-playing games have grown to include tens of millions of players, all of whom are likely "seeking an experience of being alive, so that the life experiences [they] have on the purely physical plane will have resonances within that which are of [their] innermost being and reality. So that [they] actually feel the rapture of being alive, that's what it's all finally about, and that's what these [mythological] clues help [them] find within [themselves]"², this is the ultimate contribution a role-playing game can have for a player.

While the game can be considered a 'fun' activity, serious gamers and even those who are more casually gaming are likely aware that they are not participating in simple simulations of right and wrong or of choosing left from right. These games respond to the actions of players with deeply ingrained mythological truths that have to do with the transformation of consciousness of the individual to affect a transformation of the collective, and vice versa. To engage on the level of the myth a role-playing game must challenge its players to perform prosaically in the 'real-world' while focusing their consciousness to engage a simulation that exists purely as a dreamlike construction of images in which their character must perform as a hero. Mythology teaches that projection of consciousness from its interiorated space of the body can be a life affirming experience that reconciles the disparity between the needs and wants of the mind or body with reality.

Underlying all mythology is its dreamlike constitution of symbols and metaphor. Parsing the relationship of its symbols reveals universal truths about the human experience that are concealed by the complex idiosyncrasies of the cultural semiotics. When parsed, clear overarching similarities between myths emerge. A parsing of in-game content reveals the same set of similarities and correlates the narrative and game-play structure of role-playing games to the structure of the narrative in traditional mythology. Like mythology, the elements simulated in a role-playing game function as a system in which the meaning of the whole is greater than the meaning or significance of any individual part. The simulation of space does more than provide room for players to act about or fight and 'have fun'. The 'fun' is actually a function of the relationship of space to place and architecture in-game. If assembled correctly, the simulated elements can charge the game with the same intensity of life affirming resonance that reverberates in traditional mythology. This will ensure that the experience of role-playing will extend beyond the immediate time of the game session into a player's real life, and is the critical component that will bring them back to the game evermore.

The universality of the underlying mythological conditions in role-playing games ensure that the content and experiences in these games are accessible to the consciousness and subconscious of young and old players from all over the globe.

1. Campbell, Interview: The Hero's Adventure.

2. Campbell, Interview: The Hero's Adventure.

The Simulation

Parsing the simulation of the in-game environment reveals that key architectural and narrative elements are at work recreating the universal mythological recipe for personal and collective transformation; this recipe is called the Hero Cycle. Hero Cycles relate event with space and activate memory and context that assigns credibility to the mythology and the development of a narrative in the game-world, and teaches that the transformation of the individual will lead to a transformation of the collective, which is itself made up of individuals. The closer a game can come to ensuring that credibility for each event in the cycle is achieved or the more meaningful and rewarding the player's experience will be.

The transformation of a player's consciousness occurs when they enter the game-world and as they develop their character's identity by participating in events that expose narrative details and by accessing and becoming skilled in the use of game-play mechanics that relate to the mythology of the game. A character's identity is correlated to the hierarchical level of space that they are presently inside and assists players to further develop their character.

The spaces which are themselves created by the simulation of surfaces that 'interiorate' volumes of distance, are related to one another through directional adjacencies that keep each volume distinct. The number and placement of directional linkages and access points which allows players to engage in a transference from one volume to the next, creates a pattern of character movement inside the volumes that supports character development by correlating the ritual of patterned movement to the hierarchical arrangement of space. Players access spaces they are able to access, meaning, they must possess the skills, knowledge, or level of narrative integration that enables them to engage an architectural access point that will transfer them to a desired destination. Thus movement, character development and integration, are linked with the organization of space and the mythology of the game and must increase in difficulty as one moves from (ritually accessible) space to space. It is also imperative that space is organized to naturally bring players back from the 'threshold' or cross threshold spaces to their beginning or starting places, in order that they fulfill the return and sharing of boons required by the Hero Cycle. This also mandates that places of return must maintain a density of character population in order that there is someone to share with.

The Architecture

Architecture provides guidance by linking its form and function with the hierarchical variability within any single space, and acts as a symbolic measure for assessing (and announcing) risk associated with a given space. As such, architecture serves a functional purpose to regulate movement to expedite or retard their development depending on the risk a player is willing to take. To ensure that players are able to make sense of the architectural clues in-game, the 'beginning' space they are placed into when they first enter the game-world should clearly represent the relationship between its form and function; unless the game is thrusting players into an adventure - though this is not advised as it sets the player into a scopic narrative that they may not want to follow, and can be a source of frustration or resentment. Whichever the case, the 'beginning' space should use a very clear architectural language to help immediately familiarize players with the basics of game-play mechanics and to provide the in-game context with which they can compare other unfamiliar or new types that they discover on their adventures.

The sense of risk which mythology teaches is absolutely required for all heroes is established by simulating traditional relationships of natural law such as gravity, along with recognizable architectural paradigms that provide credibility to the behaviour of in-game objects. By simulating the relationship

of 'real-world' conditions, players will be able to judge the cause and effect of any action they may take and assess the risks involved in any line of action. For obvious reasons, players are unwilling to take the physical risks in real life that they demand of their avatars in-game, yet they are willing to take psychological risks by immersing their consciousness in the game's environment. As such, games should offer the opportunity for players test their limitations to psychological risk, and announce those risks inconspicuously with architectural typology and iconographic symbology. Players who can adequately assess risk and fulfill trials will have achieved a level of integration and reward above and beyond the superficial pleasure of having fun. Instead, players will share in the heroic transformation of their characters and will retain the memory of that experience in their real life. For this reason, games that are 'rewarding' will always sustain a higher fidelity from its players than games that are simply 'fun'.

The incorporation of architectural typology is used to stylize the game-world and establish a mood to correlate the spatial hierarchy with the simulated architectural morphology. Ironically, the mental projection into this game environment removes players further from the material world while bringing them closer to the mythological experiences and lessons that have shaped the morphology of architectural paradigms in the 'real-world', where symbolic efficaciousness no longer registers in daily lives.

The architectural paradigms used in role-playing games resonate with profound spiritual value that underlies the idiosyncratic symbolism of its primary iconography and reminds us that the "distinctions between the real and virtual vanish when we realize that what we take to be reality is, itself mentally constructed."³ Recontextualized paradigms establish credibility and coherence in the simulation which is born out of graphic symptoms of perceptible spatial phenomenology that is without context. When an architectural type is used in a foreign context it loses the residue of epistemological association to its original mythology and transforms from being a cultural artifact of mythological belief, into a crystalline object that is symbolic of the identity of its new context. It will exist outside of the propelling permanences that are responsive to new and changing mythological metaphor. As such, the meaning behind the recontextualized symbols will in time, fail to address the changing identity in progressive society and may be rejected by society as an invalid iconographic type if they cannot transcend as pathological permanences or valued ruins. Unlike adopted paradigms in the 'real-world', the digital fabric of the game-world can responsively massage the characteristics of a paradigmatic type, including its iconographic ornamentation, materiality, and scale, in order that it reads as part of a morphology borne from the in-game mythology and not another source. As well, online role-playing games can issue updates that are responsive to any cultural or mythological shift, and can reflect these shifts in their responsive morphology.

A critical contribution to the integrity of architectural paradigms as generators of context is made by the architectural ruins that are also simulated in-game. The ruin establishes a sense of historicity that contextualizes time and event by sitting as an 'incomplete' object within the interiorated space of the 'known' game-world, where time and event do not affect architecture; architecture can only respond to triggered actions or events when programmed to do so. The reality of the built architecture in game is defined through a contextualization of the ruins (unknown) according to what is already known, or understood. The state of the ruin and the absence of the totality of its form, shape, space and material, require imagination to rebuild its complete image to make it recognisable and thus present in one's consciousness as a type against which other ruins and architectural form can be compared. Without the ruin, existing built form will not have a sense of past or future against which it can be contrasted, and will lose its integrity as a credible type.

Architecture that relates space, time, movement and event to mythological values and cultural ideals establishes ontological roots that allow it to transcend its function as a physical shelter, into a

3. Anders, 1999.

symbol of life affirming human belief and value. Despite its primary function in the 'real-world' as shelter, architecture plays a critical role in digital games where shelter is not required as there are no true physical dangers for the player. Instead, architecture justifies the catharsis of heroic transformation by revitalizing our sensitivity to architectural ontology which no longer has a voice in contemporary society, and can teach players who carry their experiences with them that "the influence of a revitalized person revitalizes, there's no doubt about it."⁴

CONCLUSION



Fig9.1, Collage of documentation from author's installation 'Consecrated Site'.

PART ONE

Space and architecture in simulated environments such as role-playing games are rarely designed or influenced by architects, or those trained in architecture or urban planning, and yet, these environments somehow maintain a coherent architectural language and historical context. Studying this language brings to light questions on the nature of our perception of architecture and reality. While the simulation of virtual space contains conditions which mirror the praxes of our conscious reality, it also resonates with testimony of past and forgotten beliefs that no longer have a presence in daily life. This testimony is buried in our unconscious and provokes questions on the nature of architectural ontology and the relativity of the virtual and the real.

No matter how well rendered or photorealistic an image based simulation may be, it cannot recreate the corporeal sensibilities which are lost through disembodiment; it can only suggest that the memory of a sensibility is recalled by the user or player. These sensibilities are absolutely necessary to qualify a virtual setting, as they are the primogenitors of awareness, cognition, and understanding and are the first step in transforming the virtual experience into a real experience. Rendering recognizable features that guide a mental amelioration of the participant's disembodied state includes the use of texture mapped¹ surfaces to suggest characteristics of different materials, the establishment and maintenance of a clear and consistent ground plane on which objects sit (to simulate gravity), and the configuration of distinctly architectural surfaces to suggest the agglomeration of urban fabric, physical decay, and natural settings. For example, the urban fabric of medieval cities which was built up over time through an agglomeration of built form bears little resemblance to urban fabric derived from the renaissance tradition of city planning, which axially refined and rationalized movement and views in new and existing cities. Despite the stark and obvious formal differences between planned and organically agglomerated cities (Paris being a prime example of both medieval agglomeration, and then massive planning interventions), the material qualities of agglomerated fabric are often texture mapped onto the surfaces of virtual planned spaces to poorly simulate a planned medieval-esque city. Generally speaking, the greater the coincidence between the spatial morphology and materiality of places in virtual simulations to their archetypal predecessors, the more directly they can engage players' corporeal senses. This is because while the player will still have to compensate due to their disembodiment from the virtual, they will be presented with enough information to reinforce any mental supplementations that are made, as the original archetypal spaces were themselves based on the very real corporeal sensibilities that are being recalled as memory that is projected into the virtual world.

A major investment must be made for virtual simulations to trigger a mental projection (or recollection) of corporeal sensibilities, and is the reason for this thesis' preoccupation on the avatar, as the avatar represents the body from which these senses are derived. As such, questions arise on the limitations of virtual simulations to recreate existing experiential potentialities, or if they are indeed able to facilitate for the creation of new and unique conditions that cannot be experienced as a result of the limitations of our bodies in the physical world. Evidence extracted from the games studied in this thesis suggests that virtual reality more strongly reflects our perception of the 'real-world' by simulating conditions that are in practice, rather than attempting to simulate new conditions that have been postulated. It would be extremely challenging to create a simulation that renders new experiences in a disembodied state, as the disembodied participant would have no memory of similar corporeal sensibilities with which they could make sense of or use of their experience. Like a dream that is indecipherable and fades from one's mind, the experience of a virtual simulation will remain virtual and

1. "A texture map is applied (mapped) to the surface of a shape, or polygon. This process is akin to applying patterned paper to a plain white box." http://en.wikipedia.org/wiki/Texture_mapping

inconsequential if there is no realization or transformation of consciousness that is drawn from it.

Even the depiction of virtual spaces and simulated environments in film and television are portrayed to support prosaic activity as often, if not more often than fantastic and unexplored experiences of the physical world. For example, in 'The Matrix' trilogy the most unusual spatial simulation represented is the generic looking corridor that links distant and unconnected spaces together while the online virtual realm, called the Matrix, merely presents a reflection of current day Manhattan, and the offline 'construct'² is used as a platform to run training simulations, to store virtual objects (such as weapons to be used in the Matrix), and as idealized control rooms for city workers to digitally manage traffic and infrastructural systems.

In the television show *Star Trek The Next Generation*, the holodeck³ was used to depict laboratories, historic city and interior spaces, forests, jungles, training simulations, and a plethora of other environments, none of which were fantastical or even unusual. The simulations often depicted alien or foreign environments, but these too were simply dressed by unexpected surface textures that made up an otherwise normative space. It would seem that the vitality of simulated environments does not lie with its (as yet unrealized) potential for creating fantasy, but in its ability to recreate the familiar. The discovery and appreciation of principles which underlie the familiar can come from a critical analysis of these virtual spaces.

If the simulation works primarily by recreating the familiar, how then can a person who is not familiar with classical architecture or medieval urban space, for example, be expected to adequately make sense of the environment if these architectonic types are present in them? One simple answer is that they cannot, and will be at a loss. However in role-playing games where movement and space can be highly reflective of one's identity and level of integration, unfamiliar architectural type can become contextualized according to the identity of self that is drawn from the experience of movement through space and locomotion between spaces. Another answer looks to the similarity of form, function and material quality that an architectural paradigm maintains with respect to its affects on the human body. This answer suggests that there is a common efficacious compatibility that primary architectural paradigms have with the human body. The registration of potential affects that are visible to those who are unfamiliar with a given paradigm suggests that there are inalienable corporeal predispositions to understanding and relating to built form.

It is common for players who have no first hand familiarity with a paradigm used in-game to experience the same range of emotions and feelings (of relief, awe, fear, triumph, or defeat, during game-play) that other gamers who are familiar with a paradigm can feel. Triggering these emotions requires that the simulation is able overcome the problem of disembodiment through the establishment of credible architecture places that are tied to the ritual activities of game-play, but also equally reliant on the integrity of a vicarious emersion into the virtual setting through an avatar. Assuming that the problem of disembodiment is overcome, it is still necessary to question whether or not the experiences are real, considering that the simulation only provides suggestions in the form of images, and not the real sensory conditions. Are players enacting an effective invocation of their senses and emotions merely because the game has suggested that one should or ought to? Does it matter if the simulation is actually reliant upon the supplementation of its participants to complete the incomplete virtual world by projecting vicariously through their avatars? Are emotions felt in the virtual world an

2. A platform to run any virtual simulation imaginable. Note that even the construct which is not running any specific program will maintain an invisible ground plane. This ground can only be recognized due to the act of gravity it has on objects that are in the construct.

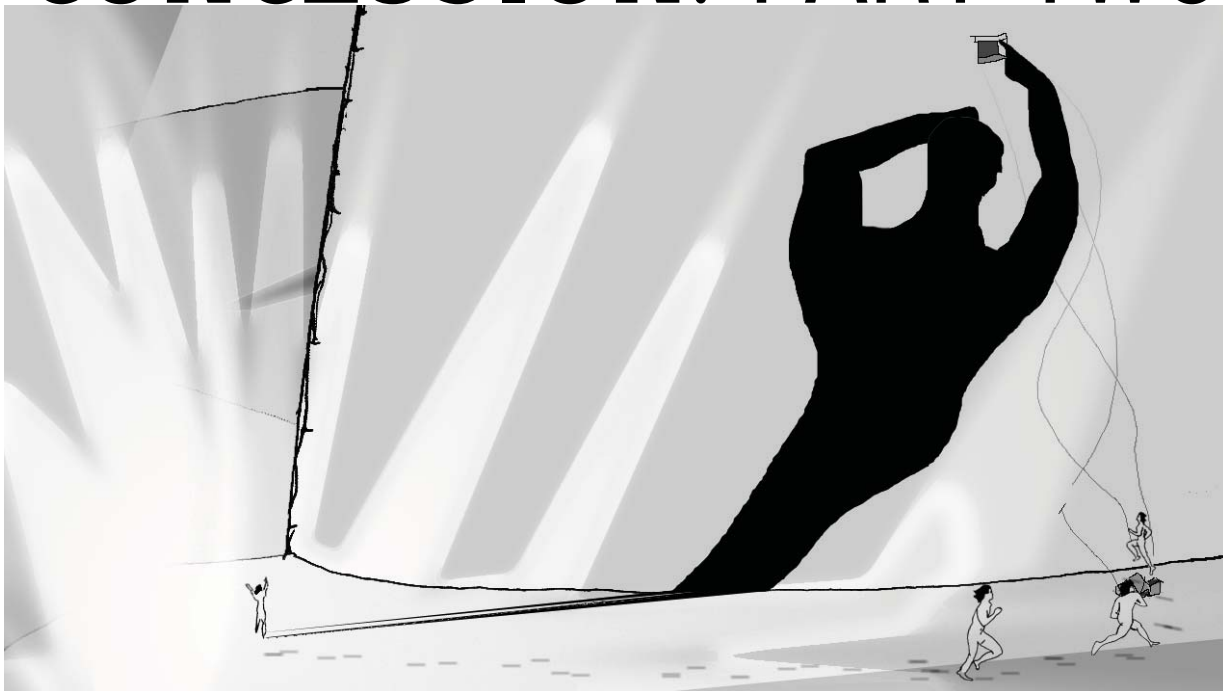
3. "The holodeck is an enclosed room in which objects and people are simulated by a combination of replicated matter, tractor beams [particle beams that can push, pull, and translate matter in space], and shaped force fields onto which holographic images are projected. Sounds and smells are simulated by speakers and fragranced fluid atomizers, respectively. The feel of a large environment is simulated by suspending the participants on force fields which move with their feet, keeping them from reaching the walls of the room (a virtual treadmill). Perspective is retained through use of sound damping fields and graviton lenses, which make objects, people, and sounds appear to be more distant. The effect is an ultra-realistic simulation of an environment, with which the user can interact." <http://en.wikipedia.org/wiki/Holodeck>

indication of its reality, or is it still an unreal and virtual experience? To be fair, the answer to these questions is both yes and no. Yes the emotions felt are real and yes they have been triggered by the simulation, however no, the experience did not contain any of the corporeal sensibilities that actualize the mental or emotional processes that took place, it merely triggered the recollection of the memory of pre-existing sensibilities that have helped to triggered an emotional response. Hence, is the actualization of the virtual simulation sustained through the reality of the emotions and experience of participants? Or is the temporality of their very real emotional responses contributing to maintaining the unreal qualities of the experience?

Reconciling the virtual and the real requires permanent constants like the corporeal senses, or physical matter that can begin a transmutation of virtual properties into an actualized reality that is both tangible and perceptible. The body satisfies both of these things, providing the physical object as well as the senses which operate in and around its boundaries and is again, the reason for the preoccupation with the avatar. Architecture can also participate in this reconciliation, as it acts as a body as well as a regulator of metaphysical phenomenon that reveals otherwise unknowable and invisible conditions of the universe and space. To sustain the transformation of the virtual into the real, there must be a physical action or concrete formal presence that shadows or memorializes the transformation. Memorialization will generate a formal object or ritual that is imbued symbolically with the intangibility, temporality and ineffable nature of virtual reality. Historically this is how humans have reconciled with the invisible and intangible world, the earliest rituals consisting of cave burials dating back to pre-historic times. It is critical that we can recognise the architectural and spatial paradigms that are uniquely configured to engage with the invisible conditions of the world to make them visible and thus accessible to us.

Any development of a truly unique and newfound potential for virtual space must first acknowledge whether or not virtual reality can extend the range of human experience, as say, architecture or adventure can. If it can, it would be sensible to begin any such development by studying the blueprints of architectural paradigms as exemplars that have revealed invisible potentialities in the past, in order that a new paradigm can be developed to expose the undiscovered potentialities of virtual space.

CONCLUSION: PART TWO



Prostitute-Mother-City

A graphic narrative inspired by the story of Jericho

Introduction

This story incorporates the integrity of the mythological narrative with online role-playing game conventions by contextualizing the events in the narrative with architectural and spatial typology. In role-playing games personal identity is highly connected to the shared cultural identity which is inter-related to the narrative. This sharing of cultural and narrative identity is achieved by virtue of the collective exposition of narrative mythology that players participate in and are sharing through the symbols and skills they possess.

There are two central characters portrayed in this story, Spie-Grass/Mancier, and Mom/Jericho, the city itself. The character of Spie-Grass/Mancier represents the relationship of the conscious ego and its unconscious counterpart. Mom/Jericho is derived from the conscious or literal, and unconscious or spiritual meaning of Biblical Hebrew homonyms and homophones. She is Rahab, from the book of Joshua, and can also be considered an iteration of the Babylonian Dragon Goddess Tiamath. Below is an excerpt from a letter written by Victor Groves, in September 1942 which describes this relationship:

“Dear Patric – Here are the notes I promised you on the symbolism of Rahab and kindred matters.

The word Rahab occurs in a good many places other than in the story of the fall of Jericho. I therefore assume that the use of the name Rahab in the latter is not fortuitous and has wider connections. Rahab means “dragon”; this can be seen, for example, in Isaiah li, 9, which reads, “Art Thou not it that hath cut Rahab, and wounded the dragon?” This is the usual Hebrew style, in which the second co-ordinate clause repeats the substance of the first in different words, so that “cut Rahab” means the same as “wounded the dragon.” The idea of “cutting Rahab” or of “wounding the dragon” is in itself very interesting, because it is obviously borrowed from Babylonian mythology. So much of the Old Testament mythology is taken from Babylonian sources. The bones are borrowed, so to speak, and they are clothed with what I consider to be the living flesh of Divine inspiration.

“Cutting the dragon” is part of the Babylonian myth of the creation, in which the god Marduk (or Merodach) cuts in half the female dragon Tiamath and then stretches half of her body across the sky and lays the other half in the earth. She has water in her veins, so this is the Babylonian version of the division of the waters under the firmament from the waters above the firmament. It is clear that Rahab, Tiamath, the dragon, the “face of the waters” and the pre-creation chaos are all the same thing. They all represent the unformed mass out of which new things are created.

Just as in Genesis it is God who divides the waters (that is, brings order out of chaos), so it is God who is shown in various places of the Old Testament to have cut or slain or brought low Rahab the dragon. Job ix, for example, treats the inconceivably great power of God and one of the examples of His power is that “the proud helpers do stand under Him” The Hebrew word here translated “proud” is Rahab! So this is clearly a reference to the subduing of the Rahab-Tiamath-dragon by God. Also in Job xxvi, which similarly treats of the immense

power of God, it says (verse 12) “and he divideth the sea with his power.” This had a double reference, it refers to the separation of the waters by cutting the dragon and also to dividing the waters at the crossing of the Red Sea. Whether the crossing of the Red Sea did actually take place in the way described in the Old Testament I don’t know, but from a symbolic point of view it is a very fruitful idea. For Egypt was, for the Israelites, the place where they lived an informed, undifferentiated existence, and their national meaningful existence did not come into being until God brought them out of the Egypt-chaos by dividing the waters. This double meaning of “dividing the waters” is also seen in Isaiah li, where, as I pointed out above, Rahab and the dragon are equated. The passage from this chapter quoted above goes on, “Art Thou not it which hath dried the sea, the waters of the great deep, that hath made the depths of the sea a way for the ransomed to pass over?” This follows immediately after the sentence, “Art Thou not it that hath cut Rahab, and wounded the dragon?” So it is evident that the ideas of creation by cutting the Rahab-Tiamath dragon and the escape from Egypt by the division of the waters of the Red Sea are the same. It fits in with this interpretation that commentators agree that the word Rahab means Egypt in a number of passages in the Old Testament (Isaiah xxx, and Psalm lxxxvii, 4, for example).

There is one passage which shows the connection of ideas quite well. It is in Ezekiel xxix, 3, where God says, “Behold, I am against thee, Pharaoh, king of Egypt, the great dragon that lieth in midst of his rivers.” It could scarcely be clearer that Egypt stands for the unformed pre-creation mass in the same way as does the Rahab-dragon.

The Babylonian word Tiamath, which, as I have indicated, equates with the Rahab-dragon, is interesting in itself. It is connected with the Hebrew Tehom (plural Tehemoth), which is the word used for the waters in Genesis. So that again the dragon is connected with the formless mass out of which things are created. This connection occurs in other passages also, as in Psalm civ, for example. This psalm treats of the creation, and the words “the deep” in verse 6 are Tehemoth in the Hebrew.

What the Israelites did in their preoccupation with this complex of ideas, was, I should say, to turn a simple Babylonian myth into a fundamental view of life; a view of life which is sadly lacking in the modern outlook. They were tremendously impressed with the idea of creation and could never cease talking about it. I feel sure that for them creation was continually taking place, making order out of chaos, giving form to the formless.”¹

To strengthen an argument for the Rahab in the story of the book of Joshua to other instances where she could represent a Rahab/Tiamath dragon, consider the meaning of the Hebrew word 'רחב', 'Rah-Chav', Rahab. 'רחב', 'Rah-Chav' is a common Hebrew word, and like much of Biblical Hebrew, it acts in the nature of Hebrew Homonyms to carry dual meaning (Gertzbein E.J, pg3-4). The literal meaning of the word as it is spelled is: 'wide', 'broad', 'extended'. Homophones which differ only in the articulation of the vowels (with no modifications to the letters) mean: 'to open wide', 'to broaden', 'to make wide', 'to extend', 'to make wide room for', 'to provide wide [width]'. This meaning coincides with the cutting and opening, then stretching of the Tiamath dragon across the earth and sky.

The name of the whore in the book of Joshua is Rahab ('רחב'). In the story, this woman grants access for the Hebrew spies, she hides them, lies to her king and is spared in the destruction of the city. Interestingly, her house is evidenced in recent archaeological findings which indicate a late bronze-age house connected to part of the exterior wall of the city. The house is correctly dated to coincide with the story in Joshua. It was intact, and contained rations and dried food, as though the inhabitants had been preparing for a siege (Bienkowski P).

1. Dickinson 1944, pg 6-10.







...Inside the Ligh-Druid Village, in The Temple





I've never played with a Dark Diviner, they're usually very dangerous, always player killing; its their forte. I'd much rather do this with a Paladin or even an initiate monk, at least they're predictable.

Mancier: Spie-Grass! I have been whispering to you, trying to find you, I presume you have received the mission notice already.

Spie-Grass: Silent Whisper? You mean private tell? I can't receive tells in the marketplace, its disabled in order to preserve a fair trade between players. Although, if you're at level 12 and have a jacked up perception, its possible. Are you ready for the mission?

Mancier: Almost, I am making preparations to join you shortly.

Spie-Grass: Good, I'm ready to get going. I'll meet you at the river, outside of the Ligh-Druids' temple, sound good?

Mancier: I will send a puppet to meet you there.

Spie-Grass: Why can't you meet me yourself? This will be a hard mission, and I don't want a veteran avatar dying on me, I don't mean to be rude, but a summoned puppet won't be enough support Mancier.

Mancier: I do not want to die either. This is not a summoned puppet, its a puppet avatar, my temple forbids me from leaving its confines, we have no exits to leave. I will act through my puppet, think of him as me, and know that I will suffer the same fate as the puppet, any injury or death placed on him will translate to me.

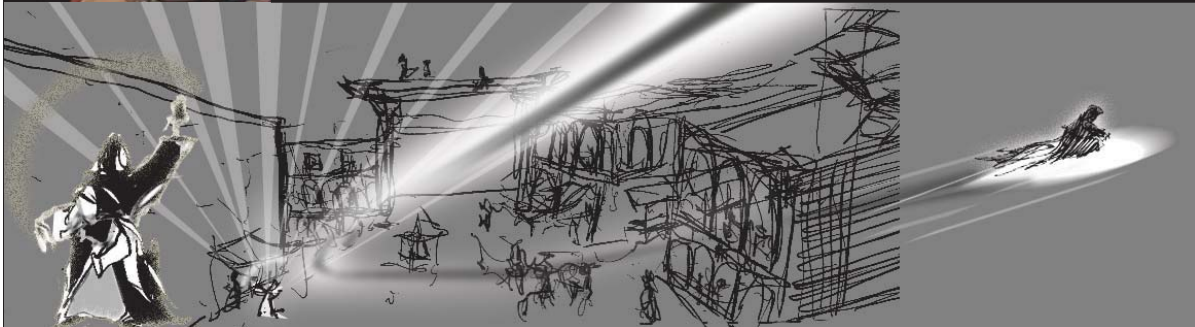
Spie-Grass: An avatar sending an avatar? You're not a Da

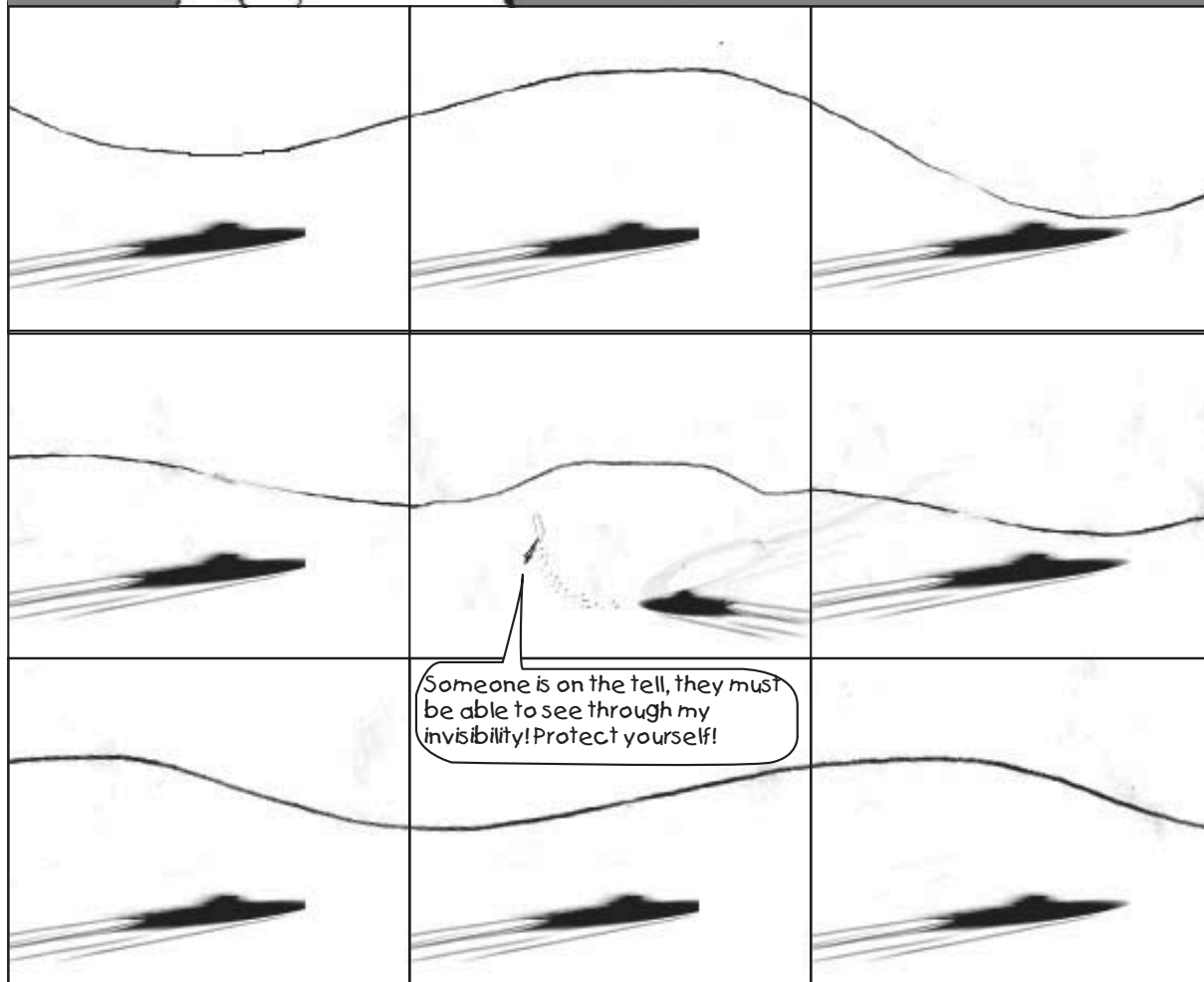
Mancier: A Dark Diviner, yes, I am. I trust that won't be a problem for you, I know that most Light Druids wouldn't mistreat another avatar based on their orders' reputation.

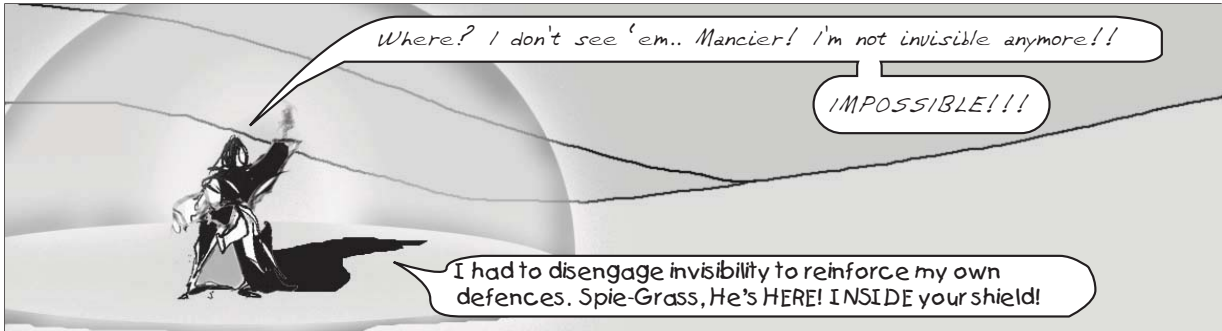
Spie-Grass: Mancier, I don't understand why we need to team for this, but I'm willing to do it, and to work together. Why don't we meet in the desert, farther from the Temple here. Send me your puppet's location and I will meet him there, it might take me a while, I can't fly in the desert as it makes me too vulnerable to attacks from Dar



Mancier: Dark Diviners? You need not worry about that for now, I have broadcast your position to those of my order who lie in ambush in the desert, they are aware you are en route, and will not harm you. I will see you in the desert!







[Whisper]: I know you are approaching Druid. You may have been invisible, but I could see your shadow.

Spie-Grass: I do not want any trouble with you.

[Whisper]: You will be given no trouble from me. Your mission is trouble enough, however I have not yet decided if you will complete it.

Spie-Grass: Where are you? I can't see you. Let me see you, then we'll talk.

[Whisper]: I have on a special cloaking power, you must close your eyes to see me.

Spie-Grass: ajihaoufhna
HAHAH, the eyes on your avatar moron!
There, can you see me now?

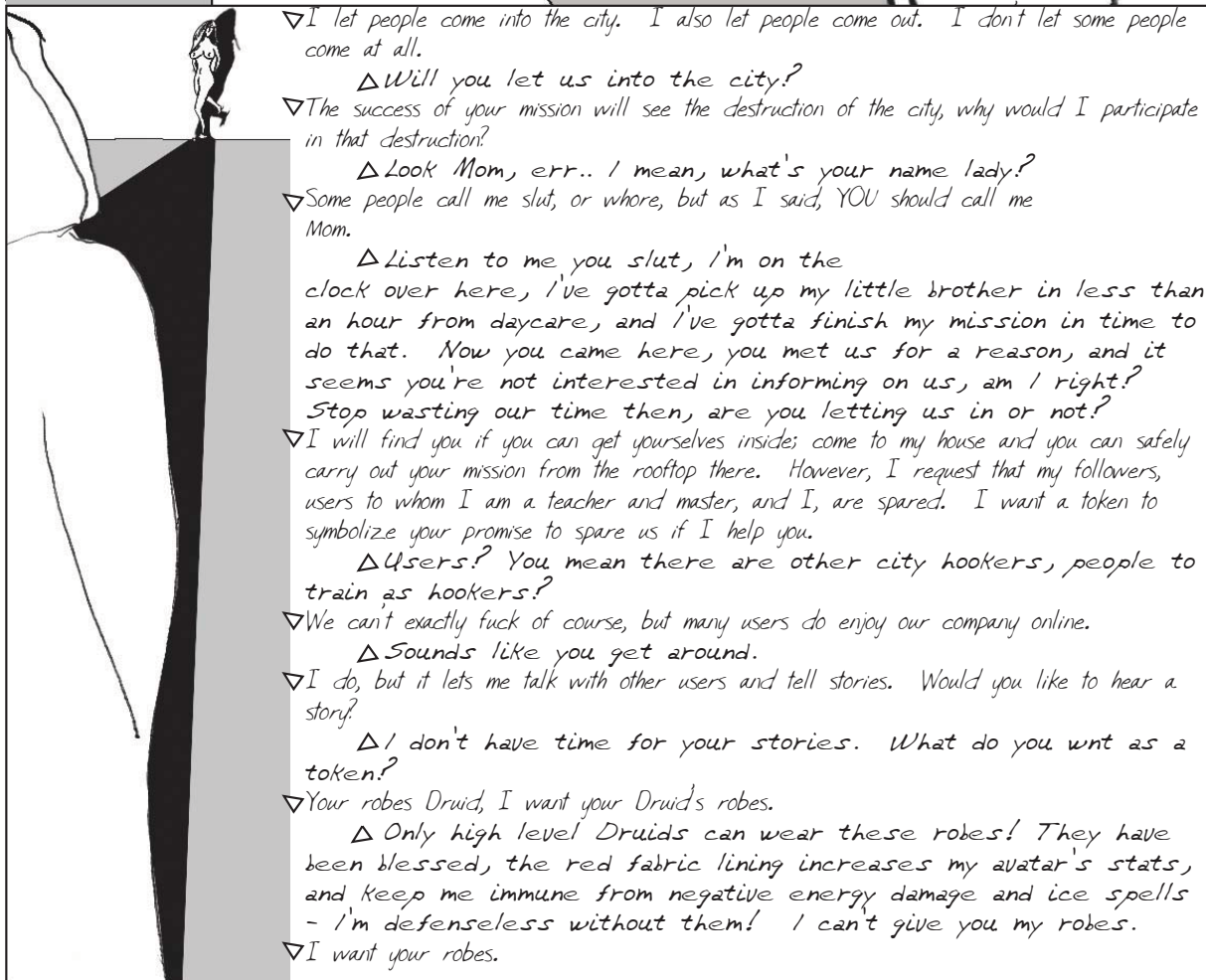
Spie-Grass: I see something, I guess it's you, but you are very pixelated.

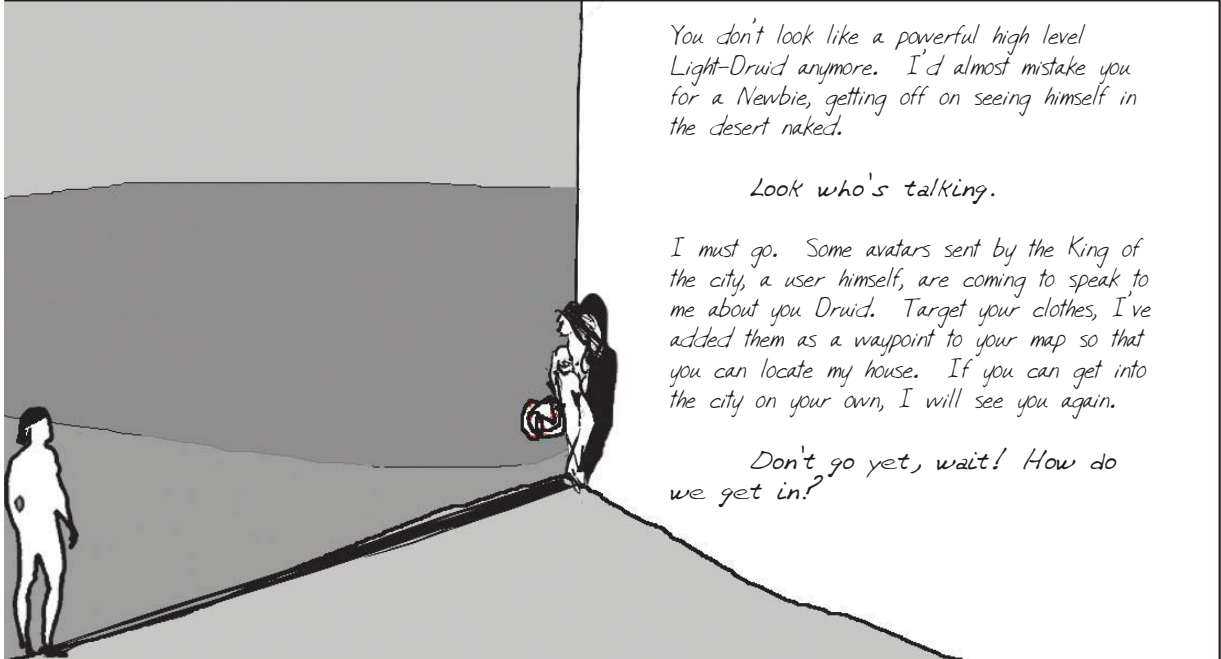
[Whisper]: Disable your parental censoring, in the options menu.

Spie-Grass: I don't have the password.

[Whisper]: Most parents are inept, try password', or password123





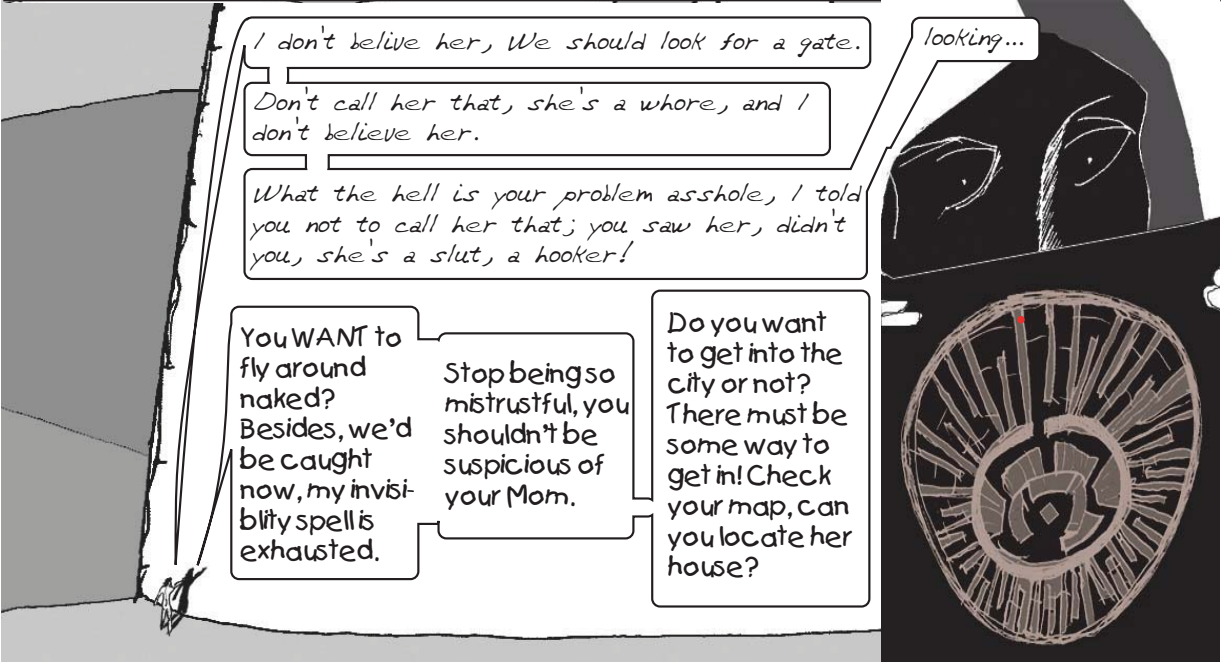
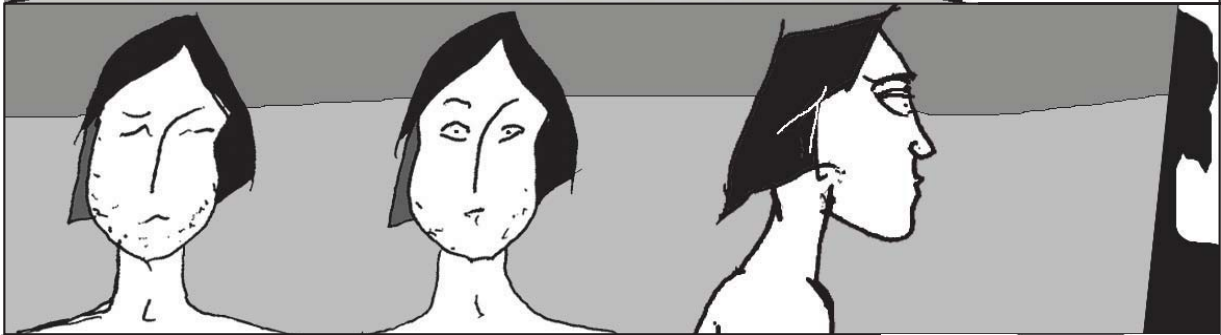


You don't look like a powerful high level Light-Druid anymore. I'd almost mistake you for a Newbie, getting off on seeing himself in the desert naked.

Look who's talking.

I must go. Some avatars sent by the King of the city, a user himself, are coming to speak to me about you Druid. Target your clothes, I've added them as a waypoint to your map so that you can locate my house. If you can get into the city on your own, I will see you again.

Don't go yet, wait! How do we get in?



I don't believe her, We should look for a gate.

Don't call her that, she's a whore, and I don't believe her.

What the hell is your problem asshole, I told you not to call her that; you saw her, didn't you, she's a slut, a hooker!

You WANT to fly around naked? Besides, we'd be caught now, my invisibility spell is exhausted.

Stop being so mistrustful, you shouldn't be suspicious of your Mom.

Do you want to get into the city or not? There must be some way to get in! Check your map, can you locate her house?

looking...

It looks like there are actually TWO walls that are blocking us. Her house isn't even inside the city core!

Her house is between the two walls. It's a part of both walls, it stretches between the two walls. The whole city is built like a maze! To get to the centre you have to walk virtually all the streets. If we had gotten in through a gate we'd have been caught for sure!

Maybe that will work! Let's try it! The house is behind this high portion of the wall. Its weak there too, I see cracks. We might be able to punch our way through somehow. Any ideas?

What do you mean?

If we could find a way in through the first wall, we could get into her house, get to her roof. Her roof will take us right above the inner city, we could see everything!

I can cut through that wall. I just need to get up there. Cast one of those brilliant light spells you Druids are good at, and stand directly in front of the illumination.

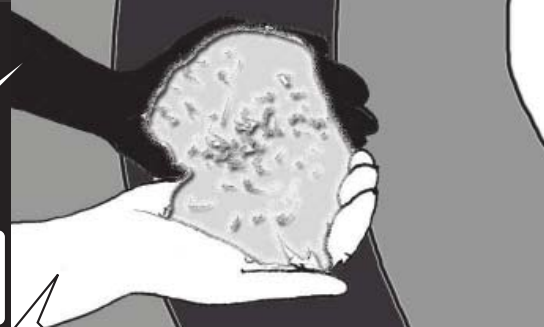


If you can get into that window, we'll be inside her house. The wall looks like its made of stacked polygons, not a smooth curve. Its cheating, but you should be able to jump up it - a hint from the 'dark side'. I'm still on follow mode, and will resize as your spell dies down, GO! before anyone sees us, or is alerted by your spell.



I can see over the second wall, right into the centre of the city!

I need something reflective to conduct the recon; my robes had my spell components. Damn!



Take this, its enchanted glass powder. We use it when creating gateways for summoning. Cast your spell on the glass.

We create our sites as part of the actual summoning ritual, we use the glass to inscribe a place in the desert.

Thanks. Don't you need a temple site to summon a gateway?

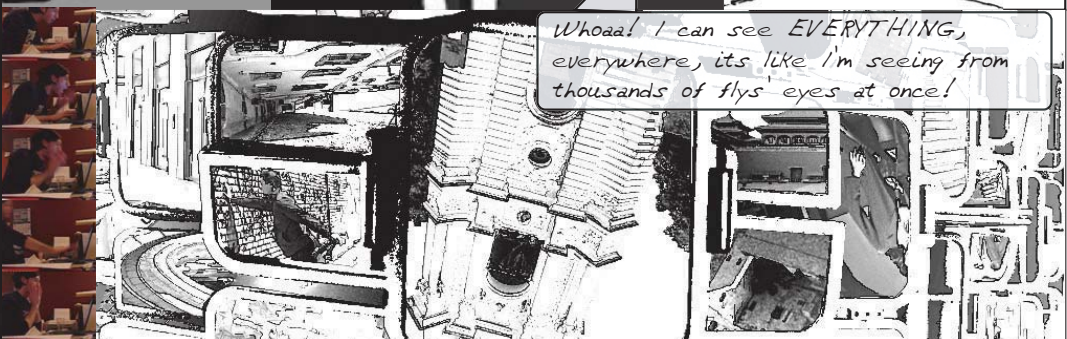
We're not worried about having to recreate our sites if they are destroyed. We're constantly creating and destroying, its what we do. Our ability to create and destroy and remember events are what makes Dark Diviners powerful, its how we make our sites, its why we can summon.

But don't they get destroyed easily? Swept away by the wind, or by someone who might disturb the glass?

Hmm.. Well, I'm ready, stand back, I'll call a gale to carry the glass into the city. Then, I'll look through the glass.



The city is revealed to us! We must go...We should go, now!



Whoaa! I can see EVERYTHING, everywhere, its like I'm seeing from thousands of flys' eyes at once!



I have your robes here Druid. I will keep the lining to cover that hole you cut into my house. When you return you may choose to have it back. For now I need it to keep me safe.

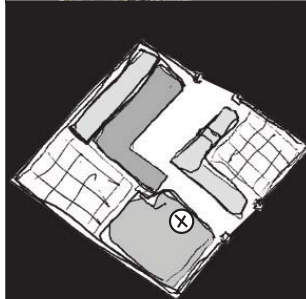
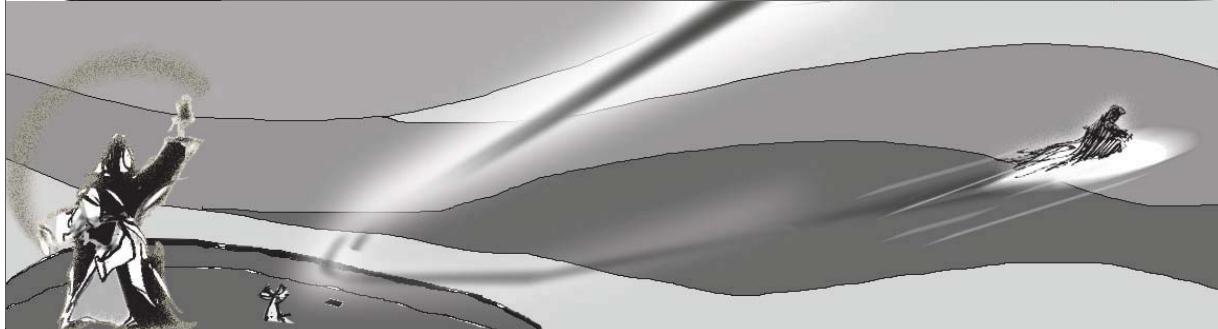
It ensures that you'll return.

You will keep me safe. Now go.

Mancier, I'm not leaving without my robes. I need them to get back to my temple!

Keep you safe?

How will it keep you safe?



Visiting the Arch Druid in the Temple...



+ 1 level up!!!
+ 1 level up!!!

You are now a level 14 Light
Druid.

You may study level 15 spells

You have received a copper staff
of the Light Druid.

You have received a new mantle,
which will enhance your powers
when equipped.



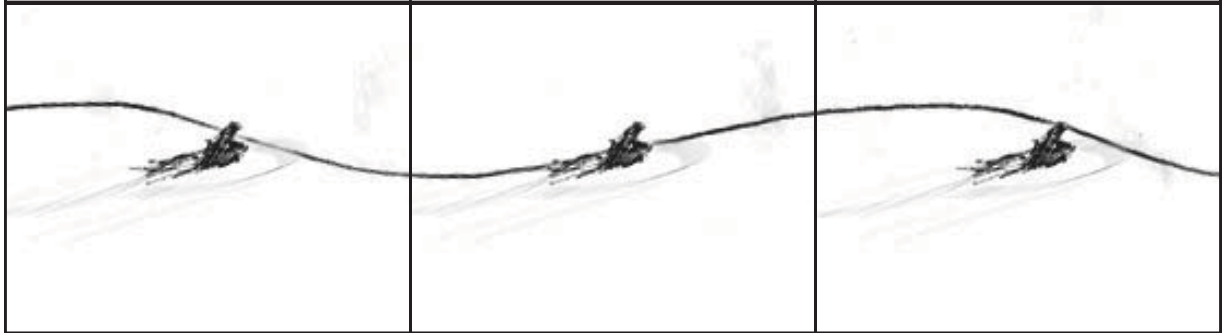
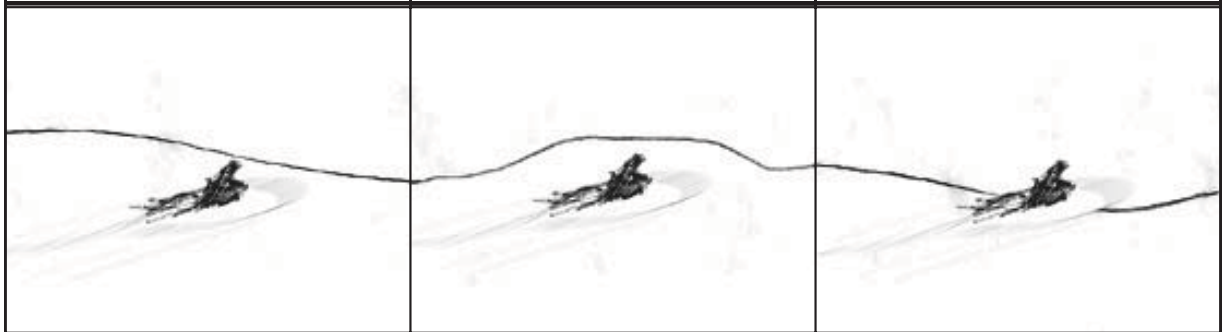
Spie-Grass: Mancier, can you hear me?
Mancier: Yes.
Spie-Grass: I'm logging off, going to get my brother, good work today, maybe I'll see you around, we could team up again.
Mancier: Perhaps.
Spie-Grass: Do you have any idea what the whore had been talking about before we left?
Mancier: Her city will be destroyed, our recon has helped plan for a massive user attack. You played well today, so I'll do you a favour and warn you; don't go back to the city. Goodbye.

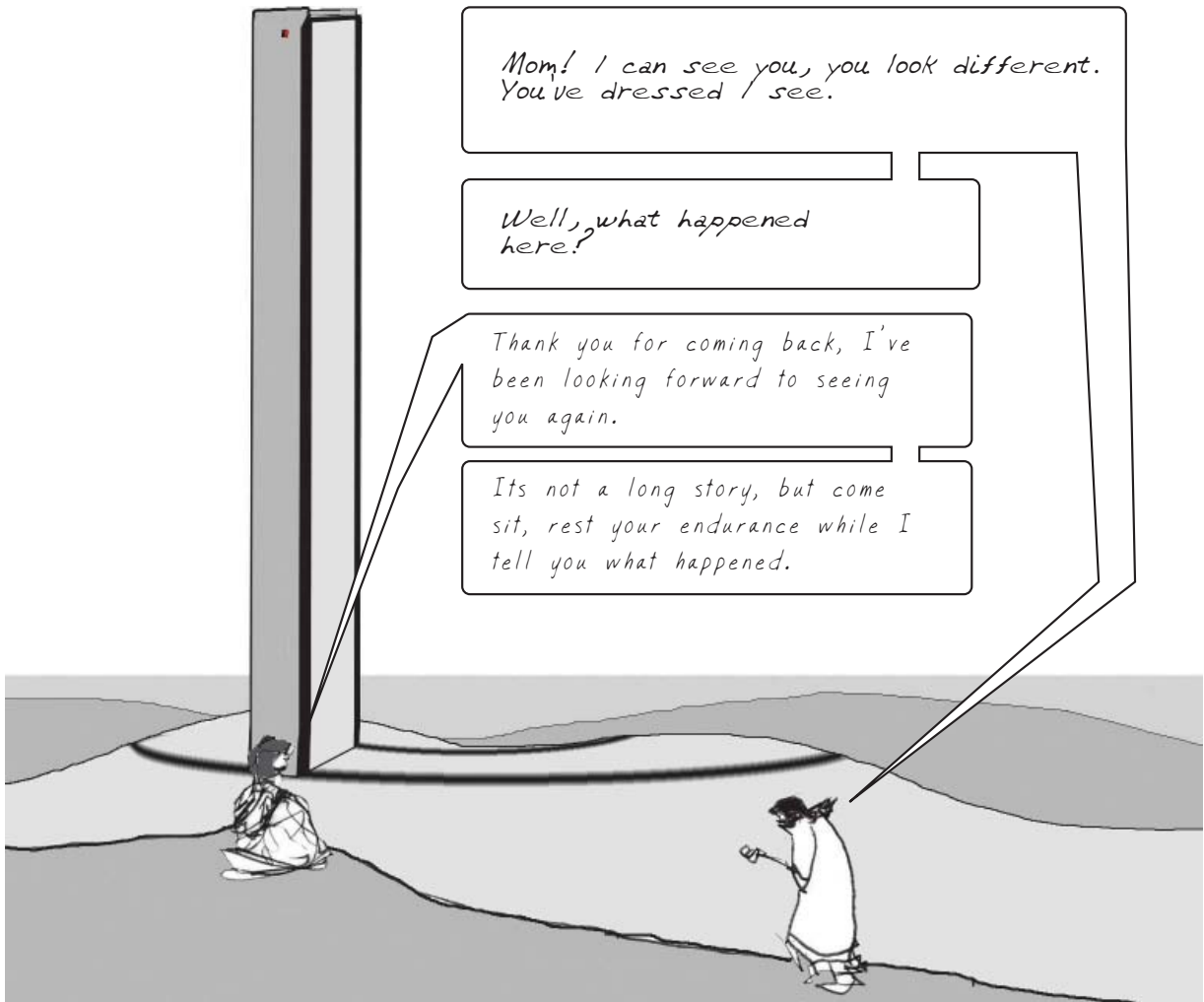


The next day...









After you left, on that same day, shadows began to pour into the city. By the evening, they were everywhere, in the streets, and all our outdoor spaces. Some ventured outside to attack them, but they were slaughtered. We soon realized that the shadows could not penetrate into our buildings, and so, those of us left, some scared low level Newbies and a handful of higher classed rogues and Ninjas who logged on late in the day, began to smooth out the space of the city. We cut through buildings and created avenues to move through. I instructed my followers to lead people to my house, through which I would allow them to escape into the desert, for I feared that as the day got late, more shadows would be sent. I was correct, and as the sun set I could see even more shadows. It was almost impossible to find a spot in the city they hadn't taken over, and started to destroy. This made it more difficult for those in the farther areas of the city to reach my house, to escape. Most of them died. The Shadows looted what they could, stealing valuable digital resources to be taken back to their temple for their masters and avatars. Eventually they converged on my house, the last piece of the city still standing.

The shadows were tired and angry from the difficulty of entering and destroying the buildings of the city. They didn't need to waste their time or energy on the walls, because all our buildings created a piece of the wall, so as the shadows moved through the city destroying the buildings, a portion of the walls would collapse with it. With the walls gone they began to attack those still trying to escape into the desert. I called out to the shadows. I told them that I would let them enter my house, as long as they would allow those who remained within to escape unharmed. They agreed, and the last of the city's inhabitants escaped. The shadows demanded to enter, and I knew they wanted to loot the house, and to destroy it as they had the rest of the city, but I couldn't let that happen too much was at stake.

As you so aptly pointed out before, I DO get around. I have stored all my stories and valuable information here, in my house. I have things, items and gifts that were kept within.

What happened when they got to your house?

What do you mean? What is so important about your house?

What kind of information, what kind of gifts?

Then why would I have been asked to do this mission with Mancier?

The mission was given me by one of the Arch Light-Druids?

They're the ones who can give avatars of my level these kind of missions.

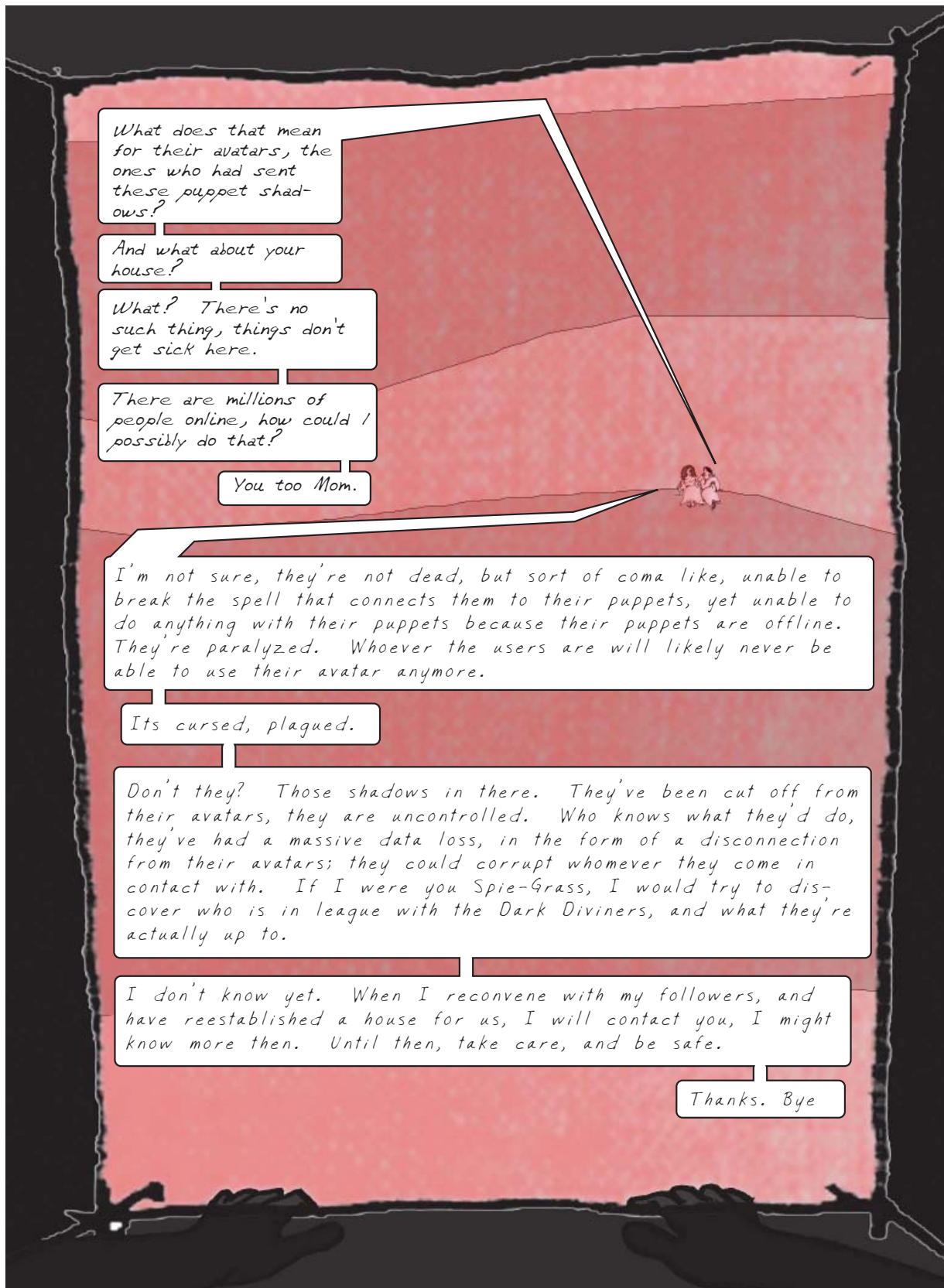
What did you do? What happened with the shadows?

Stories, codes, and maps of many online places near and distant. The tokens left me by customers, and others, like yourself can be made into gateway anchors that can allow one to travel instantly to the location of their origin, just as you can travel instantly to your temple. So too can I travel to the major centers and locations online. It means that I also have a portion of code, represented in the redlining of your robes that can allow me to also hack into your temple, in fact, that's sort of how I make gateways out of these items. Maybe they'd use what they could to hack into a bank with a pen of a banker I entertained last week, I don't know.

Sounds like some users are teaming up, not really playing for fun anymore. Here, everything, everyone is very vulnerable. The ancient Hebrews believed that architectural interior spaces were vulnerable as we are now. They understood the great importance of a sanctuary, but they also knew how easy it was to desecrate that sanctuary. To protect it, they built thresholds to keep evil outside, so as to not contaminate what was within. Online, access is everything, however in theory, everything here is accessible. This place is like a living rhizome. How can anything ever be truly protected? I sacrificed my home to keep the data within from being accessed by the shadows' avatar users.

As I said, they had the house surrounded, but allowed those within to come out. With each of my followers I gave a portion of my reservoir of data, in the form of a hair pin, or a sash, or even a pair of sunglasses. The rest I began downloading into a private offline hard drive, but the shadows grew impatient and entered finally, after ripping an opening at the base of the house. As they entered, I cast an illusion of myself, my illusion withdrew, scared to the roof, while I lay down on the floor, to allow the shadows to walk on me, and as they did I was able to incorporate their data into the download already in progress. In a sense, I caught them in my house, they are there still, and the house is sealed up, they cannot escape.





What does that mean for their avatars, the ones who had sent these puppet shadows?

And what about your house?

What? There's no such thing, things don't get sick here.

There are millions of people online, how could I possibly do that?

You too Mom.

I'm not sure, they're not dead, but sort of coma like, unable to break the spell that connects them to their puppets, yet unable to do anything with their puppets because their puppets are offline. They're paralyzed. Whoever the users are will likely never be able to use their avatar anymore.

Its cursed, plagued.

Don't they? Those shadows in there. They've been cut off from their avatars, they are uncontrolled. Who knows what they'd do, they've had a massive data loss, in the form of a disconnection from their avatars; they could corrupt whomever they come in contact with. If I were you Spie-Grass, I would try to discover who is in league with the Dark Diviners, and what they're actually up to.

I don't know yet. When I reconvene with my followers, and have reestablished a house for us, I will contact you, I might know more then. Until then, take care, and be safe.

Thanks. Bye



LEXICON

In-game language compiled from online sources, and added to from my own experience in game and during online forum/chat-room discussions.

AE Area Effect : Used to describe the space of an active, or activated power, skill, or attribute's effect. Eg – the radius of illumination given off by a candle or flame. (see also AoE)

AFK : Away from keyboard. Used to let other players know when an avatar still present in space is indeed, 'non functioning' because the user is away.

Aggro : It refers to a hostile mob (of NPC's, or other players) that are actively attacking another player or group of players. It also refers to potential for attracting or generating active hostility, or aggro. This second meaning refers to the outcome from an action an avatar, whether that be moving closer in spatial proximity to a mob, or through the use of a power or skill. Here are two examples: as a verb – "don't aggro them!" or as a noun – "our tanker will take the aggro"

Alt : Short for "alternate", and is used as a noun to refer to alternate characters a player may have. Often used to distinguish between a 'main', or most played character from other, less important, or less developed ones.

AO : Short for the MMORPG 'Anarchy Online'

AoE, or AOE : Area of Effect, see also AE

Attribute : Component of the matrix of qualities that constitute a character's abilities. Eg – intelligence, strength, dexterity, stamina, perception, etc.

Avatar : A graphic representation of a character or person used in computer simulations and virtual environments.

Bind : Locations that avatars are bound to during log-on, resurrection, or software controlled (event triggered) teleportation. In some cases, bind locations can be predetermined by the user, but is dependant on the rules of the game-world, and the abilities of their character. Most often, bind locations, and the manner in which binds operate in the world are determined by the game creators.

Bio : Short for 'biological'. Most often refers to the need to use the washroom, for a smoke, or getting something to eat or drink. Eg – "I need a min for a bio break" or "bio, afk 4amin". Note the irony in the contradiction

of terms of the use of 'bio' as as prefix for break, when in fact, one is returning their attention to their biological needs, not breaking from it.

Bio break : see bio.

BoE : 'Bind of Equip' A term used in World of Warcraft to describe an item or virtual object that becomes spiritually attached to an avatar once it is equipped (held in hand, or worn on the body). Once bound to an avatar, such items cannot be traded or shared with other avatars.

BoP : 'Bind on Pickup', same as BoE, but when picked up, or possessed by an avatar. These items are often sources of conflict between players who when sharing in the spoils of an event or task.

BRB : 'be right back'

Bot : Short for 'robot'. Used to describe automated avatar action, defined by the user. Use of an avatar as a robot, rather than say, a doll which requires the user's presence and control, is illegal, and highly discouraged. If suspected of being a Bot, a GM (developer employee 'Game Master') can suspend or remove membership to the community for a given user.

BRT : 'be right there' – refers to one's avatar 'being there' in space.

Buff : A temporary boost or boon to a character's attribute or ability.

Cake Walk : Refers to the lack of difficulty in performing tasks.

Camp (ing) : Waiting in an area for an event.

CoH : Short for the MMORPG 'City of Heroes',

CoV : Sister community to CoH, 'City of Villains'

Class : Professional archetypes, first developed by D&D. Currently, classes use various nomenclature for the following set of archetypes: close-range damage (damage dealing and damage taking), ranged damage, buffing, debuffing, and control.

Clear : Refers to the elimination of all enemies in an instanced area.

Corpse : In some MMORPG's, a corpse of the avatar rests where they are killed. Sometimes personal virtual property (which is carried by the avatar) can be lost as a result of having one's corpse looted by other players, or after time, from decay.

Corpse Run : The act of retrieving your corpse after you have died.

Crafting : A general category of skills that allows a player to manufacture objects from raw resources, as part of propriety software.

D&D : Short for the text based RPG series 'Dungeons & Dragons', or the MMORPG 'Dungeons & Dragons Online'.

DAoC : Short for the MMORPG 'Dark Age of Camelot'

DC : 'Disconnect', refers to losing one's online connection status.

Debuff : The opposite of a buff. A debuff is a skill, ability, action or spell that one player initiates (either actively or passively) on an opponent. A debuff is a temporary reduction or weakening to a character's attribute or ability.

Devs : 'Developers' refers to the creators and official moderators of an online community or game.

Dirt Nap : Slang for being dead.

DKP : Dragon kill points. Part of an elaborate score-keeping system used by some guilds to fairly distribute loot based on participation and contribution to the guild. (see also Prestige).

DM : 'Dungeon Master'.

DoT : 'Damage over time', Eg — the effects of being burnt or poisoned will often leave one suffering, over a period of time.

DPS : 'Damage per second'

Druid : Hybrid class that is part buff + debuffer, and

part close combat character.

EQ : Short for the MMORPG 'EverQuest'.

Experience : A unit of quantity to represent deeds, actions or events that a character has participated in. Often called Experience points. When enough points have been accrued, a player can 'level up', or 'train' to improve or enhance their abilities, skills, or attributes.

Farm(ing) : The act of accumulating a specific item or currency by repeatedly hunting a mob or by performing a series of actions repeatedly. Similar to being a bot, but in a legal, and more acceptable method because the user is present and in control of the avatar.

FTW : 'For the win', this refers to the act of final kill of an enemy or an object that is being slayed. Can also refer to 'Flavour of the week' referring to a trend in game-play that has quickly become popular.

G : 'gold'.

Gank : A verb. To gank, or rather, to be ganked refers to being ganged up on by a group of other users.

GM : 'Game Master'. GM's are avatars in MMORPGs who act as a physical online presence for the devs. They act as customer support and enforce lawful play within communities. They have absolute control and power within the game-world.

Griever : A player who enjoys tormenting other players for pleasure (and not experience points).

Guilds : In-game player created and organized federations. Guilds are self-governed.

GTG : 'Good to go' or 'got to go'. Usually understood more clearly depending on context.

Hazard Zone : Same as 'Trial Zone'

Herding : Luring an enemy or group of enemies.

Health : A base attribute of characters.

Hold : A power or ability to immobilize another charac-

ter, or group of character so that they cannot move or perform any actions while held. Holding will also disengage the held character's automatic, toggle, or default powers that had been running passively.

IMHO : 'In my humble opinion'.

Immob : Short for 'immobilize' or 'immobilization', and refers to the 'rooting' of a character. When a character is rooted, they cannot walk or move, but can perform actions that do not require movement in space.

INC : Short for 'incoming'. Usually used to inform a team or group member when something or someone is coming within spatial range of their avatars where skills, powers, or abilities might be activated.

Instance/s An event triggered teleportation or access to a space, similar to a 'bind', or 'bind spot'.

Instanced Space Areas in game that generate a private volume of a given space for every avatar, team, or grouped avatars that enters.

IRL : 'In real life'

J/K : 'Just kidding'.

Kite : Same as herding.

KS : 'Kill stealing' killing off an enemy to usurp points or loot that would otherwise have been given to the player who originally initiated combat.

LARP : 'Live Action Role Play'. LARP constitutes the part of game play whereby players are actively engaged by considering their actions or deeds to coincide with the actions and deeds of their characters.

LD : 'Link dead', same as DC

Leet : Slang for elite.

LFG : 'Looking for [a] group', meant that a user is trying to find others to form a group, or to join a group for gameplay.

LFT : Looking for [a] team', similar to LFG

LMAO : 'Laughing my ass off'

Lock Down : Same as 'hold' or as being 'held'.

LOL : 'Laugh out loud'

LoS : 'Line of sight'. LoS is often required for ranged skills to be successfully performed.

Macro : Programming term applied to user-made scripts that can perform automated tasks.

Mage : From 'magician', but meaning 'magic user'. There are many kinds of magic users who specialize in different kinds of magical emphasis. Some of these mages are: Battle Mages, Pyromancers, Necromancers, Illusionists, Elementalists, Alchemists, Diviners, Summoners, etc. Mages are not to be confused with druids, shammen or mystics, as mages are pupils of a pedagogical order.

Medding : Resting in order to regenerate expendable (but regenerative) attributes. Also referred to as 'rest'.

Mez/[being] Mezzed : Short for 'mesmerize', when an avatar is made to be disoriented, or otherwise non-responsive the its user's commands. Also See also 'ZZZ'.

MMOG : 'Massively multiplayer online game'.

MMORPG : 'Massively multiplayer online role playing game'.

Mob : Short for 'mobile', describes a mobile enemy or group of enemies which are mobile. The term is most often used in text based MUDs.

MOO : 'Mud Object Oriented'. Users in MOOs are able to create their own content, be it static or dynamic. Similar to Open Platform.

MT : 'Mistell'. A 'tell' is private text communication between players. When one sends a 'tell' to the wrong player it is referred to as a mistell.

MUD : 'Multi-User Domain'. These are text based online games and communities.

Mule : A mule is a character created specifically to scout or travel in order that a user can assess different areas

without endangering or wasting time with an alt. One can use a mule to scout unknown territory, as well as for checking out auction houses or banks for the storage of virtual property.

MUCK : Multi-User Collective Kingdom, also, Many Unemployed College Kids — a self-deprecating joke that many MUD creators made use of, as they were in fact, unemployed college students.

MUSE : Multi-User Shared Experience.

MUSH : Multi-User Shared Hack, Habitat, Holodeck, or Hallucination.

MUX : 'Multi-User Experience'.

Nerf : To reduce the effectiveness of a power or skill. Nerfing is only done by the devs.

Newbie : A new players or.

Noob : Slang for newbie.

NP : 'No problem'

NPC : 'Non player character' (controlled by AI).

Nuke : Refers to a power, ability or skill that has the greatest damage potential within a set of skills or powers.

OMG : 'Oh my god'

OMW : 'On my way', refers to one's avatar traveling, or otherwise in motion, in space to another location in space.

OOO : 'Out of character', usually refers to OOC chatting.

OOM : 'Out of mana'. Mana is one of the expendable, but self replenishing (over time) attributes consumed in the casting of spells, and execution of certain skills.

ORPG : 'Online Role Playing Game.'

Own : To own refers to the domination of a player or NPC character over another.

PB : 'Point blank', refers to the proximity of an avatar

to the effect or power they are activating. Also short for 'Peacebringer' a character type, in City of Heores.

PC : 'Player character'.

PK : 'Player killer' or 'player killing'.

PnP : 'pen and paper' — refers to traditional RPGs, as they utilized paper and pen as the instruments to record, communicate and capture the experience of gamers in an empirical and non-ephemeral mode.

Port : Short for teleport. Though, not as common as 'tp'.

PL(ing) : 'Power leveling' or 'Playing leveling'. The act of shepherding a character of a much lower level. This act advances the accumulation of experience points of the lower level character dramatically. PL'ing is not illegal, but is usually frowned upon by most players as an indecent way of developing ones' character.

Prestige: Similar to DKP. Prestige is a point system accumulated by avatars that funds the activities of a guild or supergroup to which they belong.

Pull : Common term which describes a strategy of kiting a single target or enemy from a larger group to one self.

PvE : 'Player vs. environment', or 'player vs. enemy'.

PvP : 'Player vs. player'.

Pwnz : Same as own.

Race : Refers to the race of one's avatar. Eg — Human, Troll, Dwarf, Elf, etc.

Raid : A substantial engagement involving a large, organized group of players.

Regen : Short for regeneration (of health, mana, or other replenishable attributes).

Respec : Short for 'respecification'. Refers to the act of recreating a character from their first to most current level. Usually, a respec is made available only at high levels, and only after accomplishing a difficult task, or

series of tasks.

Rez : Short for 'resurrection'. Refers to the ability or act of bringing a dead avatar back to life.

ROFL : 'Rolling on floor laughing'.

RPG : 'role play game', also 'role playing game'

RPGing : 'role play gaming'

RPGer/s : 'role play gamer/s', also 'role playing gamer/s', ie – those who play role playing games.

RL : 'Real life'.

RMT : 'Real money trade'. This refers to the trade of virtual property for real currency, Eg – U.S dollar etc.

Roll : The act of 'rolling' asks the servers to generate a random number for an avatar. This is often used to settle disputes or distribute virtual property.

Root : An ability that immobilizes a target, same as immob.

RvR : 'Realm vs. realm'.

RW : 'Real world'.

Server : The infrastructural nodes which support game-play for a certain number of users. MMORPGs often have multiple servers to support all their users.

SL : Short for the MMOG 'Second Life'.

Solo (ed) or (ing) : Act of playing alone, without a group or teammates. Ie: "I'm soloing" or "I soloed"

SP-RPG : 'Single Player Role Playing Game' A game type. A single player, graphic based, computer RPG.

Spawn : The automatic reappearance of enemies in space. Can be used as a verb or a noun. Eg – 'They will spawn' or 'He is a spawn'.

Spec : Short for 'specification', refers to the attributes of characters.

Stack(ing) : Stacking refers to the superimposition of a buff or debuff on a character.

Stun : A verb which describes a type of immobilization.

SWG : Short for the MMORPG 'Star Wars Galaxies'.

Tank : As a noun, it refers to a character type which is most suited to taking damage from other characters. As a verb, it refers to the act drawing aggro and the taking of damage from characters.

Trial Zone : A finite area where a trial or particular challenge will be faced in game. These zones are generally static, and often include thresholds to instanced spaces, or are themselves an instanced space.

UO : Short for the MMORPG 'Ultima Online'.

Uber : Slang for super.

WB : 'Welcome back'.

Wizard : a specialized magic using character class, also the title used for administrator, moderator, or operator of an online community, forum, or game.

Woot : Slang for 'hooray'.

WoW : Short for the MMORPG 'World of Warcraft'.

WTB : 'Want to buy'.

WTS : 'Want to sell'.

XP : Short for 'experience points'.

YTY : 'Why thank you'.

Zone : Different in game areas, spaces or places are referred to as zones.

ZZZ : *Used to let others know that you have been or are 'mezzed' See 'Mez'*

APPENDICES

AVG PC LEVEL	1 1 to 6	5 to 15	10 to 20	19 to 30	30 to 40	40 to 50	45 to 50	
Vertical ritual (transit) access	0	2	0	4	4	0	0	0
Horizontal ritual (transit) access	2	6	4	14	14	5	1	0
Total ritual (transit) access	2	8	4	18	18	5	1	0
Vertical Directional Adjacency	0	0	0	2	3	2	2	1
Horizontal Directional Adjacency	0	6	9	8	6	3	3	2
Total Directional Adjacency	0	6	9	10	9	5	5	3
Total connections	2	14	13	28	27	10	6	3
number of volumes	1	2	3	4	6	4	4	3

AVG PC LEVEL	1 1 to 6	5 to 15	10 to 20	19 to 30	30 to 40	40 to 50	45 to 50	
Vertical ritual (transit) access	0	2	0	4	4	0	0	0
Horizontal ritual (transit) access	2	6	4	14	14	5	1	0
Total ritual (transit) access	2	8	4	18	18	5	1	0

AVG PC LEVEL	1 1 to 6	5 to 15	10 to 20	19 to 30	30 to 40	40 to 50	45 to 50	
Vertical Directional Adjacency	0	0	0	2	3	2	2	1
Horizontal Directional Adjacency	0	6	9	8	6	3	3	2
Total Directional Adjacency	0	6	9	10	9	5	5	3

AVG PC LEVEL	1 1 to 6	5 to 15	10 to 20	19 to 30	30 to 40	40 to 50	45 to 50	
Total ritual (transit) access	2	8	4	18	18	5	1	0
Total Directional Adjacency	0	6	9	10	9	5	5	3
Total connections	2	14	13	28	27	10	6	3
Total Volumes	1	2	3	4	6	4	4	3
average connectivity	2	7	4.333333	7	4.5	2.5	1.5	1

AVG PC LEVEL	1 1 to 6	5 to 15	10 to 20	19 to 30	30 to 40	40 to 50	45 to 50	TOTAL	
Total Access Points	2	14	13	28	27	10	6	3	103
Number of Volumes	1	2	3	4	6	4	4	3	27
Average Access Points Per Volume	2.0	7.0	4.3	7.0	4.5	2.5	1.5	1.0	3.8

AVG PC LEVEL	1 1 to 6	5 to 15	10 to 20	19 to 30	30 to 40	40 to 50	45 to 50		
% Total Access Points	1.9%	13.6%	12.6%	27.2%	26.2%	9.7%	5.8%	2.9%	100.0%
% Total Volumes	3.7%	7.4%	11.1%	14.8%	22.2%	14.8%	14.8%	11.1%	100.0%
% In-Game Distribution	2.8%	10.5%	11.9%	21.0%	24.2%	12.3%	10.3%	7.0%	100.0%
PLOT RED CURVED SPLINE	3%	10%	12%	21%	24%	12%	10%	7%	

HEBREW – ENGLISH TRANSLATION

a source for understanding virtual space and architecture

Eric Jarost Gertzbein, 00186701
M.Arch Candidate,
University of Waterloo
Spring, 2006

CONTENTS

Introduction 229 – 230

COMMENTARY:

Architecture as a Vessel, and the Significance of the Threshold 232 – 235

Genesis 18:20-27, 19:4-8

Hebrew, selected passages

Translations by: E.J. Gertzbein, Everett Fox, Westminster II, Jerusalem Bible, Stone Edition

Creating Site and the Body as a Vessel 236 – 238

Numbers 11:1-4, 11:14-18

Hebrew, selected passages

Translations by: E.J. Gertzbein, Everett Fox, Westminster II, Jerusalem Bible, Stone Edition

Urban Intervention, and Dwelling, Living, and Dying in Place 239 – 242

Exodus 1:11, 3:7-10, 14:11-13

Hebrew, selected passages

Translations by: E.J. Gertzbein, Everett Fox, Westminster II, Jerusalem Bible, Stone Edition

SUMMARY 243 – 244

Appendix 1 245 – 248

Hermeneutic Circle

Appendix 2 249 – 252

Kabbalah

Bibliography 253

Selected Texts: Translations & Original Hebrew

Genesis 18, 20-26, Genesis 19, 4-6 256 – 261

Numbers 11, 1-4, Numbers 11, 14-18 262 – 267

Exodus 1, 11, Exodus 3, 7-10, Exodus 14, 11-13 268 – 273

INTRODUCTION

Intentions

This paper is a study of virtual spaces and architecture through the lens of another culture. With a foreign lens we can rediscover our own understanding of such things. By isolating the representation of virtual space and architecture in the original Hebrew Old Testament, called The Torah, this study will provide evidence as to the understanding of space and architecture in that document.

In order that virtual space and architecture in the Torah might be isolated, this study will compare the English translations of past religious institutions with two contemporary translations (one of my own, and that of E.Fox). Philological observations will ignore the varied religious and cultural persuasions that influenced the translation authors and will instead, focus on their assumption that the Torah is a completely realized work, were every letter, and every word is perfect and absolute. It is with this assumption that I will also conduct my translations of the selected passages.

Virtual Space – Contemporary and Ancient

A thing that is virtual is a real thing that exists in essence or effect, but that is not in actual fact, form, or name of that thing. Virtual reality in the 21st century has been largely popularized, and made accessible, on digital platforms that provide an escape, or an alternative to the physical world. These spaces do not re-interpret the social and the architectural conditions of the physical world as much as they strive to re-create the existing conditions. Currently, 21st century culture is dominated by a scientific and visual rationale for understanding and negotiating the world. As a result, and not surprisingly, virtual spaces currently reflect this understanding, and are generated through rationally understood images and text.

The authors of the Hebrew bible did not recreate existing conditions of the physical world. They presented the invisible and intangible conditions of the world. In the Torah, these conditions exist in the nuance and poetics of its language; thus, keeping the *invisible* space in the real world as *invisible* virtual space in the text. This results in a virtual reality whose representational modality is conceptually analogous to the understanding of the real thing that it is representing. In this fundamentally basic way, ancient Hebrew and contemporary virtual spaces are similar; they both manifest their virtual world through a representational mode that is analogous to the conditions of their real world.

Translations - Hebrew to English

The articulation of concepts taken from one language to another is an extremely complex and difficult task. When done successfully, a perfect translation will put concepts formed in its mother language (conceptually and visually, i.e.: the idea and the text that represents the idea), into a foreign language without a trace of noticeable difference to the integrity and nuance achieved in the original expression.

In languages such as Hebrew, there is an abundance of homophonic and homonymic words; these words often have multiple meanings. Since the Torah was written as a text to be orated (see appendix 2), the homophonic words are extremely important; and with study, it becomes clear that these words are related. That is to say that in Hebrew scripture, homophones carry multiple meanings simultaneously, resulting in a text that conveys plot and metaphor as one. In English, the original, or intended meaning of a homophone or homonym is rarely related; they are distinguished as completely different words that sound the same but are spelled differently, or as words that are spelled similarly but have different meaning. Hebrew words originate from a three (or sometimes two) letter 'root' word, and homonyms often share the same root. When Hebrew

homonyms stem from the same root, a homonym/phonic word results, whose meaning is undeniably thematically and conceptually related. In this way, Hebrew scripture weaves content and metaphor together in a form of poetics that relies on the ambiguity of its diction to generate a breadth and depth of content, and linguistic rhetoric to structure and prioritize thematic hierarchies.

Religious institutions completed most of the translations presented in this study and undoubtedly imposed their biases on the text; this is usually unavoidable, and only to be expected. While study of these biases can reveal much about the religious and cultural preoccupations of the authors, my interest lies in the variety with which their translations represent the Hebrew text. As postulated by Hermeneutic philologists, it is through difference that we are able to learn and gain new understanding (see appendix 1). By revealing differences between the translations and the original Hebrew text, the ancient Hebrew virtual space can be observed and used in later studies to contrast to our notions of virtual space.

COMMENTARY

On the selected texts and the translations

Architecture as a Vessel, and the Significance of the Threshold

Intro to Genesis: 18:20-27 19:4-8

In these passages, the fate of the cities of Sdom and Amarah is discussed between God and Abraham. Here the text distinguishes the moral enlightenment of Abraham and the power of a male figure to redeem. This male power contrasts with the sinful, feminine, cities. That being said, it is fair to note that redemption via a female figure does occur in other Hebrew scripture, specifically in the book of Judith, the scroll of Esther, and the scroll of Ruth (pronounced 'Root').

The content and use of homonyms in these passages develops an image of women as wicked and unworthy creatures who do not receive the same protection (from architectural intervention) as men, and are analogous to the sinful cities that are to be destroyed (city, 'עיר' is a feminine word in Hebrew).

We also see in these passages, a recurring motif in the Torah of wind and wind instruments as an element of life, spirit, emotion, purification, anger and here, destruction.

There is delightful use of diction that contributes to creating a character of the city as though it were a cardinal direction; here the city is not a space made articulated by built form, or architecture, it is a unique and specific place, the evidence of which is its material presence. Here, we see a relationship between architecture and site, where site is created as a result of an intervention.

By observing the role of space and architecture, we see that there was a belief in the power of an image to be more than a representation. Here, image does not represent something; it is the essential thing itself. For instance, in the case of a shadow cast by a house, the shadow (which here is understood to exist both visually on the ground, but also invisibly in space) provides the same level of hospitality as the interior of the architectural space of the house. It extends the amenity of the built form and space into the line-of-sight of a shadow cast by the architecture; it is a line-of-sight/site.

(Genesis 18, 20-27) - Commentary on the text and translations

In the first sentence, the cities' transgressions are described as a cry; this great cry is emphasized through a rhetoric that is structured from the Hebrew word 'כי', (meaning 'for/because'). The rhetoric indicates that the crying of the cities was as a result of the sinfulness of the inhabitants. This passage is a good example where the inhabitants of the city, and their sins have begun to influence the character of the architecture of the city; the development of this reciprocity between a vessel (the city) and that which is contained in the vessel (the inhabitants) is achieved here through the language structure in the sentence and the emphasis it places on the specific content mentioned in the text.

In the next sentence, God is speaking and uses a homonym to indicate the fate of the cities. It is a word that carries strong undertones to relate women, as sinful beings, to the cities. This view of women is further developed later in the text, with the treatment of Lot's two daughters. Here the word used is, 'בלה', which means 'annihilation', 'destruction' or 'finish/an end' but this word is also the word for 'a young married woman', 'a bride' or 'daughter-in-law'. This homonym is an example of where translation must fail; it cannot translate to English, as there is no equivalent English word that encompasses these two meanings.

Mention of movement toward the cities in the next sentence awkwardly translates into English as 'bound', or 'towards'. In Hebrew, the conjugation made to the proper name of the city is exactly the same as is

done to cardinal directions. ‘סְדוּמָה’ (‘Sdom’mah), which is typically translated as meaning directionally towards Sdom, or ‘to/towards’ Sdom is in fact closer in meaning to the English suffix of ‘bound’; as in Northbound, Southbound, Eastbound or Westbound, not east bound or Toronto bound, but *Torontobound*. ‘סְדוּמָה’ actually means ‘Sdombound’. Only my own translation has preserved the interrelationship between the city (architecture/event) and its site (space) as being reciprocal. The use of the suffix ‘bound’ given to city names and sovereign places or specific sites is common in Hebrew scripture and reveals this relationship. It is also important that a siteless, formless, or (sometimes most importantly), eventless place such as a desert is *never* referred to in Hebrew as ‘-bound’. One can travel towards the desert, to the desert, in the desert, but never be or travel ‘desertbound’.

The next passage segues to a conversation between Abraham and God and uses the word ‘וַיִּגַּשׁ’, (‘vah-yee-gash’), which literally means ‘to meet’ or ‘encounter’. In this instance, the translators have related the spatial relevance of the word’s physical connotations with the metaphoric meeting with God as a coming spiritually and morally ‘closer’ to God.

Abraham asks God if he will ‘sweep away’ the city, and uses the word ‘נֹסֵף’, which is another homonym that is used as an expression of emphasis as well as being the word for ‘nose’. It is important to note the correlation between the ‘sweeping’ away of two cities, and the instrument, or ‘nose’ that emphasizes this act. Here, the nose is a wind instrument that can blow to sweep things away. This motif is further developed in the next passage.

However here English cannot keep up with the content as well as the underlying motifs of the Hebrew because as the Hebrew presents a story of Abraham cautioning God from treating the righteous and the wicked equally, it also establishes that a tool for justice, (our senses, i.e.: a nose), acts both as a determinant and enforcer of the law. Abraham emphasizes his abjection to God’s desire to destroy the cities and further develops the use of wind and wind instruments. He uses the word ‘חַלִּילָה’, (‘cha-li-la’), to emphasize a ‘don’t you dare’ or ‘heaven forbid [you should do that]’ sentiment. However the word ‘חַלִּילָה’ also means ‘flute’ or ‘instrument of joy’. A second reading of the sentence based on this other meaning of the word ‘חַלִּילָה’, (‘cha-li-la’) as a flute, yields another message on the sin of temptation, which is very much in keeping with the overall message of the story of Lot (and his wife). The sentence, based on my translations, reads:

“Will you really sweep away the righteous with the wicked?”

But it could also read as:

“The instrument for joy sweeps away the righteous with the wicked”

There are two possible interpretations of this second translation. The first implies that a pleasure might be taken in the blind annihilation. The second is that God is to be considered as an instrument for joy. These two interpretations are explained in brackets as being invisibly understood in the translation below:

“The instrument for joy [an annihilation which] sweeps away the righteous with the wicked”

“The instrument for joy [God] sweeps away the righteous with the wicked”

The rest of the passage is rhetorically structured in its repetition of ‘righteous’ and ‘wicked’ and emphasizes that the contrast between the two types of people demands a contrast in justice for them; i.e. – that it would not be just to serve the righteous the same justice as the wicked.

In the Hebrew, the city's character is resultant from the presence of her inhabitants within. It is important to note that in a set of passages where differentiation between right and wrong is shown to be important, we learn of the interiority and exteriority of the city as being distinct. Here the city acts as a vessel, and the space within that vessel is the same as the vessel itself. Here the exterior space of the city, or more accurately, the sitelessness around the city is considered to be apart from this city; it is not a part of the vessel that is the city, nor is it the city's site, or contained space. If the space within the vessel is bad, or is made bad (by the inhabitant), then the vessel is equally tainted. This characterization is developed through an almost gratuitous emphasis of being inside the city. In this instance, the prefix used for 'in/inside' is attached to the city's name and is coupled with whole words that also mean 'in/inside' to create words that would literally translate as "In-inside' Toronto" and even as "In Toronto, in-inside the city". Of course this is improper English and so an alternative translation was necessary.

The prefix 'ב', ('be'), meaning literally 'in' is attached to the name of the city, which is followed with words such as 'בתוכו', ('beh-toch'), meaning 'inside'. God speaks thusly when promising to reevaluate his decision of destroying the city. His promise to reevaluate the city is based on the existence of the righteous *inside* the city and contributes to a belief in the character of a city as a result of the inhabitants *within*. This is a reasonable reading since God does not speak of destroying the inhabitants but sparing the city itself, he will annihilate them both because, they are one and the same. Thus, the vessel and the space that the vessel contains have the same character. This is also important to keep in mind when studying the preoccupation with instruments that act as containers for space (or wind) in the Old Testament. In the Westminster II and Jerusalem Bible translations, this emphasis on being 'in' the city is left out, or words such as 'at' replace 'in'.

We will see, in the next piece of selected text from Genesis, how architecture, or a vessel for creating or defining space will act in a reverse fashion to what I described above. In the discussion above, the contained space has the power to inform the nature of the vessel. Below, we will see how the vessel (architecture) has the power to inform the nature of the space it is containing. Thus, both the vessel and the space (such as architecture and site) are equivalent and reciprocal entities. Interestingly both these elements, as will be seen later in the commentary on Numbers, are created by event. Event is necessary in creating site and in creating architecture. Since both architecture/a vessel and site/space of containment come from the same source, event or several events, the vessel and its contained space are analogous.

(Genesis 19, 4-8) - Commentary on the text and translations

In these passages, a mob, the male inhabitants of Sdom surround Lot's house and demand to be given the strangers (men) who are inside. Lot offers them his daughters instead. While the content of these passages is fairly straightforward, they reveal an interesting preoccupation with space and architecture, which will be discussed in the commentary below.

At the beginning of these passages, rhetoric is used again to create rhythm and emphasis. For example, in the repetition of the word 'אנשי', ('an-shey'), meaning 'men', or 'group of men' is used twice to say 'men of the city, men of Sdom'. This rhetoric appears elsewhere in these passages but here, what is most interesting is the word choice. The words in these passages have a greater degree of specificity, they are not homophonic, making the translation to English, as long as the rhetoric of the sentence structure is maintained, easier. The vocabulary used by the translators in these passages is accurate and reflective of the content of the words used in Hebrew. However, there are important incidents of mistranslation of prefixes, the foremost of which is the prefix 'ב', ('beh'), meaning in/into/inside.

In the last line of text, Lot explains with a rhetorical question, that the strange men are under his care as guests, since they have come 'into the shadow of my [house/structural] beam'. While according to Lot's answer, social conduct and moral obligations are influenced by architecture, we also see from his response that these social (and moral) obligations are not extended to women. Lot offers his two daughters, who are no doubt *also* within the house, to substitute for the strange men he will not turn over.

In all of the translations the Hebrew for 'shadow', 'צל' ('tzel'), is a part of the word 'בצל' meaning 'under [my..] shadow', yet that is not what the prefix, 'ב' means. 'בצל' describes a condition of being *inside* a shadow, and the translators all describe a condition of being *under* a shadow, or *under* a roof. These two conditions are fundamentally different in their spatial realities. If the Hebrew authors had wanted to describe a condition of being under or on, there are many more specific and less ambiguous words they would have used, rather than the 'ב' prefix.

One condition involves a hierarchy of space in which objects exist with distance between them. In this reality, the space between the objects is not important on its own, it is the relationship of every object to the other that is important. The space between is considered an emptiness that is valued only because it provides amenity for objects to exist physically and with distance between each other. In this reality the shadow of the house exists on the ground and is separated from the house by distance.

The other condition, or spatial reality, involves a system of objects that exist in and through space. The registration of a shadow on the ground is not a dark patch that is distanced from the house above, it is an extension of the house through space that is being registered on the ground. This is possible because the text reveals that the men have come "into" the shadow, they are not 'under' or 'on top' of the shadow. Since a shadow exists as a two-dimensional representation it is impossible to ever be in or inside a shadow unless we consider the space between the shadow and the object it represents as being part of the shadow. That is to say that the shadow (or house) exists three-dimensionally in space and that the invisible presence of the shadow in space (or of the house) is as important as the visual representation of the shadow on the ground, and of the house above which is casting the shadow in space and onto the surface of the earth. This invisible presence of the house in space, according to the text, necessitates for the same provision of hospitality, protection and amenity to those who are in that space as to those who are in the house itself.

In this example we see that the representation of architecture carries the essence of the architecture itself; the representation of architecture (a shadow) becomes architecture.

It is also worthwhile to note that the text is specific in its diction in describing the entrance to the house as the place for the confrontation. It is common for tension to occur at the threshold to architecture in Hebrew scripture, and homonyms are rarely used when expressing a threshold. The containment of tension at the perimeter of architectural intervention creates a hierarchy of space between the interior, exterior and the threshold. Architectural interiors are protected at their thresholds, which reinforces the preoccupation of the text in promoting the outside as being dangerous, and inside or cities/civilization as places of security, as places where one can live. Since the desert is a dangerous place and is a siteless place, life and security demands a site, and so we can see the power of architecture because architecture has the power to create site. It can provide life and site in a previously siteless and life-less place.

Creating Site, and the Body as a Vessel

Intro to Numbers: 11:1-4 11:14-18

In these passages the Children of Israel are traveling in the desert after leaving Egypt, and are complaining about the manna God is sending them; they also want meat. God hears them and is angered. He destroys a part of their encampment and then Moshe prays to God, and God stops his destruction. Moshe later complains to God about the burden of leading the people, and begs to be killed. Instead of killing him, God foretells what Moshe should do to ease his burden, and God eases his burden.

Here the text continues to develop themes of anger, destruction and creation with elements of wind, sound and fire. It also establishes a relationship between event, time and architecture. This relationship as seen in the text, has the ability to create site. In the translations some of the relationships between these elements and content/plot of the text are not accurately represented, and sometimes they are absent entirely.

(Numbers 11, 1-4) - Commentary on the text and translations

In the first passage, the text states that the Children of Israel were 'like' annoying complaints. The text then says that God receives the complaints *in* his ears, and also that their complaints are heard by God. This indicates that ears can also be seen as a vessel that can hold sound; similar to a flute or other instrument. Here we see that it is possible for ears (vessels) to participate in hearing and containing a feeling/mood; in this case the ears become annoying to God, because they contain the annoying complaining of the people.

The following passage contains the word 'אף', ('af'), which is the word for nose, but also as a clitic used to indicate a negative, as in 'af milah!', 'not a word!'. In this case, 'af' is used to emphasize the intensity of God's anger through a metaphor of fire, or burning. This is another example where a wind instrument, a nose, is used in conjunction with the transmission of destruction, in this case destruction by the fire of the anger of God. Therefore, instruments of wind can also be related to the blowing of fire, and as we will see in the coming passages, spirit or strength.

It is noteworthy that the part of camp God's anger destroyed was the fringe, or border of the camp. In the Torah, the preoccupation with threshold emphasizes the importance of architectural interiority over the exterior, or outside world. This preoccupation likely stems from the fear of wilderness, desert and death to which architecture and interior space are antithesised. When the text describes events at architectural or metaphoric thresholds, the Hebrew loses many of its homonymic qualities. This change in the text resonates with an appreciation for architectural intervention and considers it extremely valuable; destruction, confrontation, receipt of bad news, and the like, most often occurs, at an architectural threshold of some sort, not inside.

Previously in the commentary, we saw how Architecture can contribute to creating site. Here, naming is used for site creation. A name is given to the place where the event happened, transforming the place in the desert into a site. It is a specific place that is differentiated from the formless, siteless desert in which it exists.

(Numbers 11, 14-18) - Commentary on the text and translations

In these passages, God lightens Moshe's hardship of caring for the Children of Israel by sharing his burden with others from the tribes. This event occurs, appropriately enough, at a threshold to the tent of the tabernacle, or 'אהל מועד', ('Oh-Hel Mow-ed'). The words actually describe a tent of appointment, or meeting. The word 'אהל', ('Oh-hel') means tent, but 'מועד', ('Mow-ed'), has a more complex meaning than just 'appointment, or meeting'. It is a word used elsewhere in the Torah to describe a space (moment) of fixed time, hence it is also used to describe a meeting or appointment (of and in a fixed time). Considering the nomadic nature of the people, and their belief in an omnipresent God whose essence resides inside a tabernacle in this tent, the nomenclature given to the traveling tent is appropriate. It is unfortunate that the myriad of meanings extracted from the Hebrew word 'מועד', do not translate adequately into English.

What is missing in some of the translators' work here, is the emphasis placed on the heavy weight, the difficulty of Moshe's task. The Hebrew text describes this task as being a heavy burden Moshe cannot carry. It describes a physical weight he was incapable of supporting. Analogous to the intangibility of architectural effects (like a shadow, or other qualities of space that is created and can carry the attributes of the physical), the mind is capable of carrying the attributes of the body. Thus, the body and mind share a similar relationship to the vessel and that which it contains as being interrelated and transferable.

Emphasis is also created through repetition, specifically when Moshe beseeches God to kill him posthaste if that is his will, by saying: "הרגני נא הרג", ('har-gheni na ha-rogh'), which is a repetition of the word 'הרג', ('ha-rag'), which means 'kill' with the word 'נא', ('nah'), as an enclitic word of urgency or emphasis. This urgency and the severity of the request is lost in most of the translations.

Next, the text uses tense in a style that is uncommon for English. In this context the speaker is God. God is instructing Moshe to bring community members to the tent of the Tabernacle and uses imperative Hebrew commands in a past tense. He also uses a past tense to describe future actions. In English, the translation could become nonsensical.

It is difficult for English to mediate the imperative with a past tense, i.e.:

"[You] [will have] Sit down!" or
"[You] Sit down [beforehand]!" or
"[I will have] Sat down" or
"[I will have] sat down [beforehand]".

In the Hebrew, this is not the case, as God's speech reads coherently. It reads as though God is foretelling a past event, or reading an augury with a conviction as though it already happened. In these passages, the merging of time with event (and through event, also architecture, because architecture building is an event) is emphasized. As well, this event is described at the threshold to a tent, 'אהל מועד', ('Oh-Hel Mow-ed'), a name which uses a word linked to the concept of a meeting or event at a fixed time or moment, further emphasizing the relationship between time and event, with architecture and site. This is a poignant example of the relationship between event, site, architecture and threshold can be observed.

At the end of these passages, God refers to Moshe's burden as 'רוח', ('roo-ach'), which means 'wind' or 'spirit' or 'essence' or 'life'. It is another example where there is a relationship between the vessel, or instrument for wind and wind itself. In this case, Moshe is the original vessel carrying the wind, which is heavy or burdensome. The wind has strained Moshe, and the vessel now feels the burden of the task, just as a city can

feel or exhibit the qualities of her inhabitants. Moshe is the vessel exhibiting the qualities of the 'רוח' it is containing. It is interesting to note that although wind/spirit/mood is intangible, God speaks of it as though it is a weighty object that he 'places *on*' the others. Here, the text reinforces the correlation between the body and the spirit as being linked.

Urban Intervention, and Dwelling, Living, and Dying in a Place

Intro to Exodus: 1:11 3:7-10 14:11-13

Hebrew is abundant with homonyms and duplicate meanings. The meaning of English words are more easily identifiable as being homophones or homonyms. Hebrew does not have homophones that are not, or could not also be homonyms because meaning is derived primarily from the root of the unconjugated word. Roots that are conjugated into homonyms, are often indistinguishable through spelling, thus a single word can have several distinct meanings. While an appropriate meaning may be extrapolated through context, the text usually promotes the multiple meanings of single words to develop themes and carry messages. Thus, the English translations should attempt to carry more than the dominant or overt meaning of the text, when translating Hebrew homonyms.

(Exodus 1, 11) - Commentary on the text and translations

This passage can be divided into three major parts: the placement of Egyptian government officials over the Children of Israel, an explanation for the placement of the officials, and an outcome that results.

The first part of the text describes the placement of labour officials on the Children of Israel (CoI). The Hebrew 'עליו', ('al-aiiv') is the first of many words with duplicate meanings in this passage and it is meant to carry several specific meanings. 'Upon', 'above', 'about', 'on' (as in physically 'on' top of) are several English words that could describe the meaning of the Hebrew preposition 'al'. In this case, the appropriate translation into English is 'on' because it carries with it the physical connotation of a *burdening* by weight, as well as being physically and metaphorically above. This is the duplicate meaning (both physical and conceptual) for 'al-aiiv' that the text describes. Oddly enough, none of the translations use the word 'on' to describe the insertion of these officers onto the CoI.

The next part of the passage gives a reason for the placement of these officials: 'for the sake of its humiliation...'. Immediately we can understand that humiliation was *a-priori* in the minds of the government. The purpose of placing the officials was to humiliate, and the text stresses this by using the word 'למען', 'lema-an'. 'lema-an' is another example of a Hebrew clitic, and has only one relative meaning, but it is not directly translatable, except to say 'for the sake of', or 'on account of', or 'in order that'. In this case, these officials were placed *on* the people to enforce something that would be the source of humiliation, therefore it is fair to say they were placed 'on' the CoI 'for the sake of humiliation'. The text is explicit in its emphasis of this official placement for the *purpose* of humiliation. The translations have ignored this great emphasis on humiliation.

The Stone and the Fox Editions interpret the text to say that the officials were set 'over it [CoI], to afflict it with their burdens'. This is hardly the same thing as stressing that someone was made the official purveyor of humiliation as their primary *raison d'etre*. In the original text, the CoI were humiliated not only from forced labour, but also from the burden of carrying the officials who were placed on them.

The Westminster II and Jerusalem Bible are even more off the mark; they have rephrased the entire passage such that there is no emphasis of any kind that even remotely reflects the sensory rich evocation of the burdening of humiliation that is in the original text.

The third portion of this passage speaks of the building of two cities. In this portion there are several clues that reveal the intention of the irregular words chosen, as well as a linguistic rhythm that reemphasizes the humiliation spoken of earlier.

'ערי מסכנות', ('ar-ei mis-ke-not') describes the city type created as a result of the humiliation through forced labour. The word ערי, ('arei') means cities, but the meaning of 'me-skenot' is questionable. It is an extremely odd word choice. 'מסכנות' ('mis-ke-not'), could be the result of conjugation of two very different words: one word is מסכנ, 'me-sken', meaning 'poor', 'pitiful', 'wretched' or 'to impoverish', while the other is סכנ, 'sah-khaan' means 'to be of use/benefit'. What was the author trying to describe, a wretched city or a beneficial city? Most often, city building and urban life is depicted as a positive development in the text. It is also set in contrast to the danger of the unbuilt areas like the sea or the desert. Thus, on first reading it would seem that סכנ, 'sah-khaan' is the appropriate word. However, מסכנ can be *perfectly* conjugated into מסכנות (meaning 'wretched/poor/impoverished women') and in terms of the overall sentence structure and phraseology, is a smoother conjugation than the somewhat unusual סכנ into 'מסכנות'. In fact, the word מסכנות appears only six times in all Hebrew scripture and is an unusual homonym because its two meanings are antithetical and presumably mutually exclusive. I believe that in this context, both meanings apply; one in a literal sense, and the other in a spiritual sense, or in a poetic sense.

Then what does ערי מסכנות mean? Since Egypt was a desert empire, storage cities for harvested resources and food would be a great benefit for her, so the translation of the authors as 'store/storage-cities' is somewhat appropriate. However 'storage' is not what מסכנות means. There are Hebrew words that mean storage, both as an adjective and a verb, so why use the word מסכנות here?

The reasons becomes clear when we look at other instances where the word occurs in the text. In each case, the urban intervention it describes is similar: it is a positive and desirable urban infrastructure. The mood of the city's inhabitants at the time the city is described as מסכנות, 'mis-ke-not' is also very similar. What was the mood of the inhabitants? In each case, whether as a result of war (or captivity/slavery), political, social or economic instability, there was a high level of stress and anxiety. So it seems possible that the two words are expressed in one complex homonym.

On the literal level ערי מסכנות 'arei mis-ke-not' means 'cities that are of use/benefit, or 'boon-cities'. This is the superficial, or literal meaning of the word. The second meaning describes the mental condition of the people at the time when the intervention was considered to be of use or benefit.

I have translated the word to mean boon, rather than 'store-city' as is commonly done in translation, and am aware that this word falls short, as does the translations provided by the other authors. There is no English word that means both 'poor' and 'beneficial'. With that said, I feel that the choice of the word 'boon' is a stronger literal translation for מסכנות and conceptually carries the flavour of 'poor' in its four letters and double 'o's which echo the arrangement, if not sound, of the word 'poor'.

Oddly, some the translators have reordered the words in this sentence. In the Hebrew it first mentions that the cities were built to Pharaoh, it then rhythmically tells us the name of the cities. The rhythm signals that the clause is ending (which is a common method for punctuation in Hebrew) and more importantly, the grammatically gratuitous Hebrew prepositions that create the rhythm, reemphasizing the burden and hard work of building each city. None of the translations maintain the rhythm very well, nor do they account for the strength of the prepositions in front of each name. In my translation I included 'of' before each name, which is not a true translation for the Hebrew 'את' (which has no direct English translation), but maintains the rhythm and emphasis without altering the meaning.

(Exodus 3, 7-10) - Commentary on the text and translations

In these passages, God promises land as consideration in a future covenant with the Children of Israel. As with any legally enforceable promise, wording and intention is very important.

The Hebrew word **מָקוֹם**, ('ma-kom') is translated differently in three English translations. Literally 'makom' means place or location, and was used to describe the land of flowing milk and honey as the 'makom', or place of the Canaanites etc.

The Jerusalem Bible translates ma'kom as 'home', yet the word 'home' is problematic in Hebrew because it does not exist. The English word 'home' is not necessarily contingent upon physical or temporal space. It is an idea or condition that can be conceived as being separate from site and architectural intervention; however Hebrew *relies* on these conditions to describe home.

While there is no word for 'home' in Hebrew, the Hebrew word that most closely describes it is **בַּיִת**, 'ba-yit'. Ba'yit literally means 'house'. It connotes the idea of home through an understanding that a home includes architectural or physically constructed permanence as well as the emotional attachment of belonging. 'Ba-yit' is also used when describing lineage, as in 'house-of', and connotes ownership and connection to rights – the very things that God wanted to give the Children of Israel. Accordingly 'home' should not have been used in the translation of this passage.

The Westminster II translation, reorganizes the order of the words, i.e.: "where the Canaanites dwell, and the Hittites.." Emphasis is placed in the English onto the Canaanites. The Hebrew text treats all the tribes equally by literally listing them without any breaks or divisions in the language, thus there is no suggestion of a hierarchy between the tribes and their 'makom', or 'place'.

The word "dwell", used in the Westminster II translation, is also an improper interpretation of the word 'makom'. The word 'makom', while capable of aiding in describing a place where one dwells (either permanently or temporarily) does not include the act of one's act of dwelling. There are many Hebrew words used often in the text to imply the act of dwelling in a place, and there are also words used to specifically describe 'to dwell', words such as 'sit' 'rest' 'live' or 'dwell'. Such words do not appear in this portion of the text.

It appears that The Stone Edition translation places greater emphasis on the intended meaning of the original text, and in the case of the word 'makom', it is translated appropriately as "place". In the translation by Everett Fox as well as in my own translation the word 'makom' is translated similarly as "place". However I find that there are still discrepancies between the original text and Everett and the Stone Edition translations respectively, for example, prefacing the word 'place' with the word 'the'. Using 'the' in front of the word 'place' connotes a uniqueness or singularity to 'the place' where as 'a place' does not carry with it a connotation of uniqueness or specificity. In the Hebrew, there is no 'the' attached to the word 'makom'. The addition of the word 'ha' - which is the Hebrew prefix meaning literally 'the' could grammatically be added, but it was not.

(Exodus 14, 11-13) - Commentary on the text and translations

In these passages the text is describing a conversation between the Children of Israel and Moshe at the Red Sea. Here repetition and rhetoric are used to emphasize the difference between a place, a desert as unsafe, and a site or a city/civilization as a safe place.

When describing 'in Egypt' a 'silent, or soft' 'ב' is used, while 'in the desert' receives a severe and strongly articulated 'ב'. The pairing of death with the desert, and life with Egypt, reveals the nature of Egypt as a place and the nature of the desert as a place. 'ב' as used here (*in the desert*) describes in concrete terms the physical space. The desert was a place for death, a place that you could exist in physically, as the hard 'ב' connotes, but a place to die.

The 'ב' used to describe being *in* Egypt is soft, and carries a more conceptualized relationship of being in something that is not necessarily physical. A soft 'ב' is often used when describing being '*in the eyes of*' or '*among*', '*before* [someone/something]', '*within*', '*in all this*'. Therefore Egypt was not necessarily a physical entity, it was a conceptualization of what Egypt represented – cities, civilization and architecture, that could provide food and life. We see that the State of Egypt could exist outside the boundaries of a physical condition, while the desert exists only within its special physicality. The desert exists as a landmass, the state of Egypt exists as an idea.

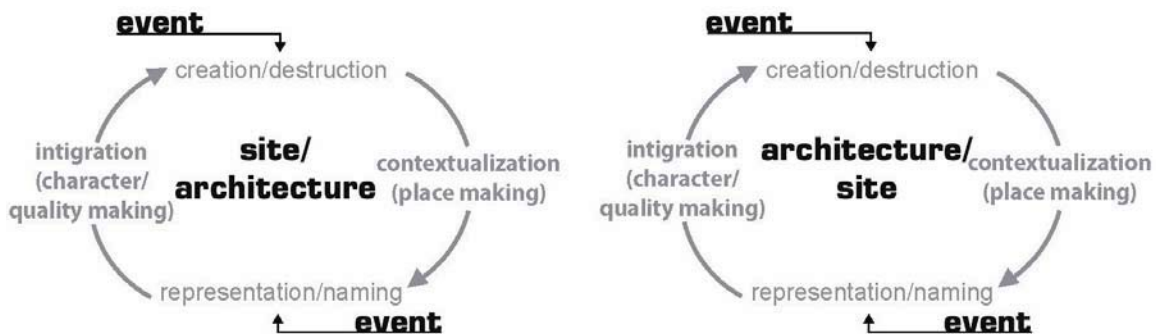
The desert is further contrasted with Egypt by reference to activities that take place in the desert and in Egypt. This litany of activity highlights the preoccupation with desert as a place to die vs. civilization as a place for life. In Egypt you can 'bring out', 'speak', 'work' etc. Whereas 'to die' one goes to the desert. The opening and closing of each passage with Egypt [to do something] and Desert [to die] creates a rhetoric that is absent in many of the translations, and thus, they do not carry the depth or breadth of meaning in the original text.

Summary –Architectural Space in the Torah

Events

Understanding architecture, space, and spacelessness (site, and non-site) in The Torah, comes from an awareness and registration of an event. Events exist as memories and can take the form of names, sites, and architecture. In the Torah, architecture does not exist in a site or as a part of a site, it is the site.

Applying a Hermeneutic model for understanding, we can see (below) how both site and architecture are generated as a result of event. As such, architecture and site exist as a single entity. They are not understood separately since they are interrelated.



Vessels and Thresholds

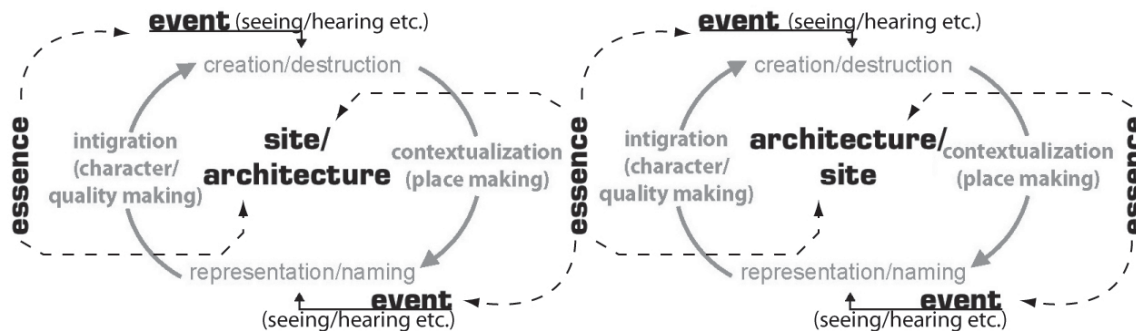
There is a strong motif developed in the text that relates physical objects, as vessels, with intangible essences; spirit, and character. These physical objects can be the human body, or parts of the body, architecture, or even musical or other instruments that contain, or through which, essence flows. Both the vessel and its essence inform the character of the other reciprocally. Understanding the relationship between vessels and the essence they contain is critical in understanding how architecture and space (site/sitelessness) is portrayed, and how it behaves, in the text.

In contemporary virtual spaces, the character of the virtual physical, or of a virtual vessel results from the representation of its appearance. In The Torah, the character of the virtual vessel is understood through an a priori understanding of the essence it is containing, how a vessel looks does not determine its character. This problematizes the condition of architecture and of the body, because vessels that take on the character of what is inside are vulnerable to being tainted. It is for this reason that the text obsesses with thresholds and in distinguishing between inside and out, between interiority and exteriority.

Thresholds protect the sanctity of the existing (good) character of an architecture, or of a person. When a vessel or essence is tainted, one of three courses of action are useful to restore the vessel. One option is additive, the other two are subtractive. One can remove the tainted essence from the vessel, as was done by God to ease Moshe's burden, or good essence can be added, as was the case in Abraham's argument that Sdom should be spared. The third option is to destroy the vessel and the essence together, as one. It is for this reason that Sdom, its architecture and its inhabitants, were annihilated.

The human body (and God's body) also behaves in the manner of vessels. The nose, eyes, hands and ears are of critical importance in determining the essence of the person because it is through these places that essence can flow, or be held.

The text is particular in differentiating between the existence of an essence in or around the space of the body, and the admittance of the essence into the body. Whereas the body protects itself by regulating what may or may not enter through an active participation, architecture has thresholds. These guarded places are used to control access to the interior. For example, in the text, a noise can reach an ear, however hearing the noise is an active admission of the sound into the body, to be heard. The participation of a vessel in regulating essences in the cycle of events creates a complex relationship that contributes to a greater understanding of virtual space and architecture. The diagram below illustrates this relationship.



As seen in the text, and in the diagram above, essence and event exist outside of the physical and material spatiality of site and architecture, they exist in time; time is the essence contained in the vessels of architecture and site. While these vessels exist in materiality in space, they are understood as a result of their relationship with time. The moment in time that defines their character is the moment of event time which has previously occurred.

APPENDIX 1

Hermeneutics, why do translations fall short?

A SCIENTIFIC CONCEPTUALIZATION - theory and methodology for understanding

Every translation author establishes rules by which they carry out their translation, and for each there is a major assumption, a belief in the process for understanding that is evidenced in their work. Their understanding is based on the significance of the relationship of parts to each other and to a whole. Both the whole and the parts can generate new and constantly changing relationships that are interdependent. Figure 1-1 describes this relationship, and is best explained by Ronald Bontekoe in his book *Dimensions of the Hermeneutic Circle*:

The hermeneutic circle represents schematically this integrative aspect of human understanding. The circle has what might be called two poles on the one hand, the object of comprehension considered as a *whole*, and on the other, the various *parts* of which the object of comprehension is composed. The left hand-hand arrow in the diagram is meant to indicate that the object of comprehension, taken as a whole, is understood in terms of its parts, and that this understanding involves the recognition of how these parts are *integrated* in the whole.. The parts, moreover, once integrated, *define* the whole. The whole is what is by virtue of its being composed of *these* parts. Following this logic, the right-hand arrow is meant to indicate that the individual parts of the object of comprehension are understood, in their turn, in terms of their participation in the whole, and that this understanding involves the recognition of how the whole *contextualizes* each of its parts. In this process of contextualization, each of the parts is illuminated in its own integrity. The part is what it is by virtue of its being located *here* - and consequently serving *this* function within the whole. The two poles of the hermeneutic circle are thus bound together in a relationship of mutual clarification.

Friedrich Ast (1778-1841), was a Romantic Idealist, a scholar and philologist who developed an interpretive and explanatory understanding for the process of cognition called Hermeneutics. Even though Bontekoe's model was the likely approach taken, it seems that Ast's model, called the Hermeneutic Circle has carried forward in these translators' works. He believed that our experience is ultimately a manifestation of one mind or entity to which we belong and are all components of. He called this one mind or entity the World Spirit and believed that our understanding came from a relationship to this single source. As quoted by Bontekoe, Ast says:

..the notion that things enter the mind from outside, through images, through sense impressions or whatever other non-elucidating explanations have been devised, is a self-annulling and long-abandoned conception. Being cannot transform itself into knowledge, or the corporeal into spirit, without being akin to or fundamentally one with it. (BE,69)

According to Ast, understanding does not come out of, or as a result of experience. It comes *with* experience because as we experience something we are engaging a component of the one spirit and so are recognizing a truth that is self-evident. He says that something "is to be comprehended not in its mere appearance, but rather in its essence and truthfulness" (BE,72). It is with this intent, to reveal a single truthfulness about the Old Testament that authors have gone about their translations. Their preoccupations have been, for the most part, to reveal the content and plot that occurs in the text, however content and plot are only superficial messages the Hebrew presents. Ast's description of understanding became the first explicit formulation for the Hermeneutic Circle, as seen in figure1-2:

The basic principle of all understanding and knowledge is to find in the particular the spirit of the whole, and to comprehend the particular through the whole; the former is the analytical, the latter, the synthetic method of cognition. However,²⁴⁶ both are posited only with and through each

other. Just as the whole cannot be thought of apart from the particular as its member, so the particular cannot be viewed apart from the whole as the sphere in which it lives. Thus neither precedes the other because both condition each other reciprocally, and constitute a harmonious life. (BE, 75)

This ideology lies at the heart of the translations, and while it can be useful, it also has the ability to form a dialectic when the originative one spirit cannot be understood directly. When this happens, the parts will also likely be misunderstood, as is the case with Hebrew homonyms. The one spirit is only understood by the comprehension of its parts that it is manifest in, and these parts are only understood through the comprehension of the one spirit, this is why a dialectic is possible – the parts are not independent items, they are fragments or clues that reveal the whole, they have no inherent meaning in-of-themselves. Often, there is not a single truth contained in the Hebrew text, there are several that co-exist in single words, each describing a different message.

It is as though the parts are all pieces of a whole, such as a vase that has crashed and left pieces on the floor. Assembly of the parts in the correct order reveal the whole, and according to Ast there is no true relevance to the parts other than being essentially of the whole.

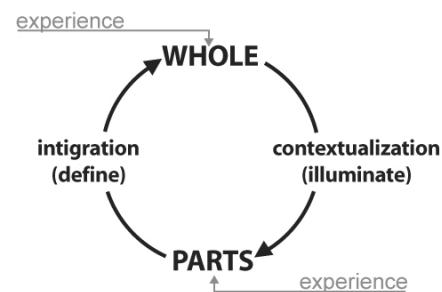


figure1-1



figure1-2

This circle (figure1-2) requires an a-priori understanding of information that originates within the circle itself and is a major flaw in Ast's work, and in my opinion, most Old-Testament translators' works. As in the example of a vase, Ast's model can be very helpful, once one recognizes that the parts are components of a vase. But to first recognize that it is a vase, prior experience is needed to inform a reading of the parts as the result of an accident, or an event. The parts begin to take on more significance based on their pattern and scattering (was the vase dropped on the floor, smashed with another item, thrown against the wall, etc). Such a reading is already outside of the limited scope of Ast's circle since the parts are beginning to reveal more than the whole or single world spirit.

Problematic with the translations is the a-priori understanding the authors have for the text based on religious dogma that does not necessarily include or consider important the content presented in the nuances and sensibilities of the original language. Thus, their translations presume that there is nothing outside of their English interpretations that is part of the 'one spirit' to be understood. They are translating the parts in terms of the whole and are assuming an understanding of the whole will be achieved in terms only of its parts. They give little emphasis to the parts as important and meaningful units. They are participating in what some philologists call a viscous circle. For Bontekoe, Ast presented a solution that was unsatisfactory:

Ast himself is aware of this problem and attempts to put forward a solution to it. The one originative spirit, he contends, manifests itself in such a way that whatever whole we are considering inevitably expresses itself in its simple undivided essence through each of its parts. Whenever we encounter a part of the whole-to-be-understood, then we simultaneously encounter the whole itself, for the former is a representative manifestation of the latter. Because of this, our understanding of the whole is not synthetic, the result of correctly fitting together the parts, but is rather stimulated by each and every

part considered in isolation. Each and every part, in other words, *by itself* provides us with enough information to allow us to comprehend the whole. The only benefit to be gained by considering more than one part, according to Ast, is that this makes possible an increase in the vividness of our understanding of the whole.

According to Ast's circle, experience and *prior understanding is not necessary* because the parts will reveal the true one spirit. Bontekoe nicely elaborates on Ast's flaw:

The problem with Ast's solution is that, while ingenious, it is contradicted by all the evidence of our experience. Typically the relationship of part to whole is such that, while parts receive their meaning and significance only in light of the wholes to which they belong, that meaning and significance is not decipherable unless the part is seen in the context of the whole which is to say, in the company of all the other parts, which when correctly arranged in conjunction with the first part, constitute the whole. In other words, Ast went seriously astray in denying that our understanding of wholes depends upon our synthetic grasping of the interdependent arrangement of parts.

What is problematic for the translators is that they have integrated their experience with literary texts and assume that their experience is keeping them from entering a vicious circle. However, in this case, their experience has imposed a self-evident understanding of books, on the Torah, as though it were written with a similar function as books that they are familiar with. The Torah was not written as a book to be read with the eye, it was written as a visual reference for oration. It is a book of oral tradition and memory. This seems to be outside the scope of their experience or understanding. As such, the translations they have provided do not adequately serve this study's proposal that architecture and virtual space can be observed through a philological comparison of English translations and the original Hebrew text. It is for this reason that my own translations (and those provided by Fox) were critical for this study.

APPENDIX 2

Kabbalah - Hebrew as iconographic vessels, sounds and images

A MYSTICAL CONCEPTUALIZATION– Divining Presence with a vessel for sound

The difficulty in recognizing what we understand results from a habit of acceptance. We make a habit of creating self-evident truths; this is also called belief, or faith. We believe certain things to be true, and there comes a point where we stop reassessing what has led us to believe, or understand things in such a way. When this happens, ideas can crystallize themselves through a process of ritual, eventually tradition, or even (religious or secular) law, and create a multitude of social and cultural habits.

A major hurdle for translators was to overcome their habit of reading text as a pedantic assembly of literary devices that create ideas. Reading this text in this regard is like paddling a boat out of water; the motor of the boat, the gas, and the water in which the boat sits is as important, if not more so, than the boat itself, without which, it will get nowhere. This is a text that works with all its parts to deliver message and concept; these parts include the normative elements of text, a canvas or page, letters and vowels as well as linguistic ambiguity tempered by poetic nuance, cantillation marks, a 'pointer' (or vision) to guide the eye of the reader, the mouth of the reader for oration, the ear of the listener, and the space in which the sound can travel.

The Hebrew text is not an assembly of words that describes concepts, they are vessels that carry instructions on how to be filled with spiritual life. They are images that represent concepts, and are as important as the concepts. This is because the object/visual cue that is representation in Hebrew mythology is as powerful as the essential thing that is being represented.

A principal concern of Judaism is to question and interpret what it considers to be self-evident. While in some ways this is dialectic, and follows closely to Ast's approximation of our understanding (the parts of the organization/institution are understood as the essence of the whole institution), much can be revealed. This is because the founding work of the religion, a book called the *Torah* (considered to be the 'instruction' from God) is actually a book of history that requires interpretation in order to extract the instructions on how to live. It is in this way that the institution promotes and is designed to be a cycle where it is constantly being discovered and rediscovered through a critical understanding in terms of itself, but, and this is where it differs from Ast, in terms of the self-evident truths of those who are practicing it. It is a cycle that cannot help but incorporate practical experience into Ast's Hermeneutic circle; this allows for insights into the *potential* meanings for the text to generate truly unique and *alternative* Whole Truths.

In Judaism, this mystical practice, which is traditionally considered to be as old as the text itself, as it came about in concordance with it, is called the Kabbalah. There has been no group more concerned specifically with the text of the old testament (the five books of Moses, 'Torah') than Kabbalah. It is traditionally believed that the Kabbalah began at Mt. Sinai when the written law was given. Kabbalah, which comes from the Hebrew 'le'kabbel'; or 'to receive/to accept' references the acceptance of the law at Mt. Sinai.

More accurately, scholars believe Kabbalah can be dated back to Isaac the Blind, 1160 – 1236 BCE (Scholem, *Kabbalah and its Symbolism*, 1969). Those who studied the written law and practiced and were knowledgeable in the oral law were first called by other names such as, "masters of mystery", "men of belief", "masters of knowledge", "those who know", "those who know grace", "children of faith", "children of the king's palace", "those who know wisdom", and "those who reap the field", prior to being called Kabbalists.

FOUR LEVELS OF UNDERSTANDING/MEANING

According to the Kabbalah, there are four levels in the Torah, which correspond to the four letters of God's Name, *yud, hei, vav, hei* יוד ה ו ו. Since the written law is considered to be God's word, a proper understanding and reading and living (both are necessary), is considered a perfect life, which provides a closeness and proximity to God's holiness and righteousness. The four levels in the Torah are derived from the Hebrew

word 'teneh' (meaning basket or vessel, as the Torah is a vessel for God's law) which is an acronym for each of the four levels, *Ta'amim*, *Nekudot*, *Tagin*, *Otiot*; Cantillation, Vocalization (flavour and dots/vowels), Crowns and Letters. There are two 'revealed' levels and two 'concealed' levels. Together, these levels are the text, and they give life to the text. Through the proper combination of the revealed and concealed levels, Kabbalists believe that the energy and light of God is made present.

Kabbalists believe that the letters of the text convey the literal meaning and the *ta'amim*, that which allows us to cantillate it correctly, reveals God's transcendent energy that "surrounds all worlds." This energy, or light supposedly hovers above and around the letters. In contrast, they believe that the *nekudot*, which are vowels that allow us to vocalize the text, actually enter into the letters when they are uttered, to enliven them, similar to the way a soul could be said to enter a body to give it life. For this reason the *nekudot* are also called *tenuot*, which comes from the word Tenuah, which means 'motion'. Therefore the tenuot, or 'motions' are represented by the creation of vocalization or life they give the otherwise static letters.

These two levels are not seen in the text of the Torah scroll (although their presence can be seen). The *ta'amim*, cantillation (figure2-3), and *nekudot*, vocalization (figure2-4) are considered spiritually higher than the revealed layers – the letters and crowns.

Nekudot comes from the word Nikud, which literally means 'dot'. Nekudot, or 'dots' are important because they are the grammatical backbone and create a linguistic vocalization to the letters and words. The Kabbalah teaches that *nekudot* give life and spirit to the words as a result of the relationship between the letters, words, and *nekudot*, which create coherent vocalization for the words.

Ta'amim is considered the highest spiritual level in the Torah and comes from the root word Ta'am, which means reason or (sweet) flavour/taste. Ta'amim have the power to bring the flavour and sweetness of God's energy into our lives through a proper cantillation of his text. Ta'amim, represented by the *trop*, the Hebrew word for special diacritical marks, indicate both how the words are to be sung during communal reading and how the sentences are to be punctuated. Kabbalists believe that although a rational meaning to the *trop* will only be revealed by the Messiah, we can still hear their sweetness and flavour.

figure2-3

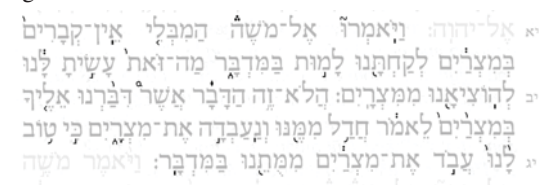
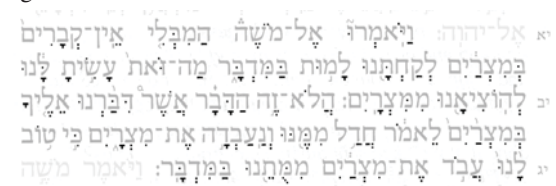


figure 2-4



What one sees written as text, in black on white, are the letters and the crowns above the letters, these are the two revealed levels. Although the crowns have no rational meaning, they have secret meaning. Some letters have three crowns, some have one, and some have none. The crowns carry with them the ability to establish a spiritual hierarchy according to their arrangement in particular words.

There is of course additional meaning to the letters, which is represented by their numerical value. Every letter in the Hebrew alphabet has a corresponding numeric value, and they can be used to form numbers. In fact, the text is organized using letters to number the chapters and lines. It was with this value system that the four levels of spirituality as a way to understand the Torah was developed by Kabbalists. Specifically, in the portion of the text called 'Ki' Tavo' 'For You Shall Come', we read that when the Jews enter the Land of Israel and bring the first fruits to the Temple in Jerusalem, 'V'samta bateneh,' 'And you put (the fruits) in a basket'.

Here the word *teneh* is used unexpectedly; the use of the word 'teneh', meaning 'basket', is unusual where typically the word 'kli' or vessel is used. In this instance, a comparison of the word *kli* and *teneh* reveal that they are numerically equivalent, both equaling 60. This clue is enough to suggest the correlation between *kli*, *teneh* and that *Torah* as a vessel. It is this word, 'teneh', that is used as an acronym for the four levels in the text: Ta'amim, Nekudot, Otiot. Kabbalists indicate that the significance of the similar value of the word 'kli' and 'teneh' is that the text (as a whole) should be seen as a vessel into which we can put/live our lives, much like putting our faith in God, in the same way that offerings were put into 'kli' before God.

Bibliography

- 1 R. Bontekoe, *Dimensions of the hermeneutic circle*, Humanities Press, Atlantic Highlands, N.J., 1996.
- 2 J. Dan and R. C. Kiener, *The Early Kabbalah*, Paulist Press, New York, 1986.
- 3 S. Even Shoshan, *A New Concordance*, Kiryat-Sefer Ltd, Jersusalem, 1998.
- 4 E. Fox, *The five books of Moses: Genesis, Exodus, Leviticus, Numbers, Deuteronomy; a new translation with introductions, commentary, and notes*, Schocken Books, New York, 1995.
- 5 W. L. Holladay and L. Kohler, *A concise Hebrew and Aramaic lexicon of the Old Testament, based upon the lexical work of Ludwig Koehler and Walter Baumgartner*, Brill, Leiden, 1971.¹
- 6 M. Idel, *Absorbing perfections: Kabbalah and interpretation*, Yale University Press, New Haven Conn. ; London, 2002.
- 7 A. Jones, *The Jerusalem Bible*, Darton, Longman & Todd, London, 1966.
- 8 R. A. Knox, *The Holy Bible: a translation from the Latin Vulgate in the light of the Hebrew and Greek originals, authorized by the hierarchy of England and Wales and the hierarchy of Scotland.* -, Sheed & Ward, New York, 1954.
- 9 R. A. Knox, *The Holy Bible: a translation from the Latin Vulgate in the light of the Hebrew and Greek originals, authorized by the hierarchy of England and Wales and the hierarchy of Scotland.* -, Sheed & Ward, New York, 1954.
- 10 R. C. Musaph-Andriessse, *From Torah to Kabbalah: a basic introduction to the writings of Judaism*, Oxford University Press, New York, 1982.
- 11 O. S. Opfell, *The King James Bible translators*, McFarland, Jefferson, N.C., 1982.
- 12 M. J. Packer, *The structure of moral action: a hermeneutic study of moral conflict.* -, Karger, Basel, 1985.
- 13 Rabbi N. Scherman, *The Chumash: The Torah*, Mesorah Publications Ltd, New York, 2001

¹ Used exclusively to determine multiple usages and meanings of words in the selected texts.

SELECTED TEXTS

THE ENGLISH

Translation Authors:
Eric Jarost Gertzbein
The Jerusalem Bible
The Stone Edition, Torah
Everette Fox, The Five Books of Moses
Westminster II, The Holy Bible

העברית

The Hebrew text is an original and unedited copy of the Hebrew Bible, the Torah, with the exception that vowels, dots, cantillation marks, and passage numbers have been included for ease of reading.

GENESIS *Eric Gertzbein*

- 18, 20-27: So said YHWH,
Sdom and Amarah cried out,
for their cry is very grievous,
and for their sins are very heavy.
Now I shall descend there,
and if I shall see their cry that came to me was done,
annihilation!
And if not, I will notice.
And the men turned from there and went Sdombound.
But Avraham still stood before YHWH,
and Avraham came closer to God and said:
Will you really sweep away the righteous with the wicked?
The nose [flute/instrument for joy] sweeps the righteous with the wicked.
Maybe there are fifty righteous inside the city,
Will you really sweep it away? The nose will sweep it away
Will you not pardon the place for the sake of the fifty righteous who are in her midst?
Be it far from you [instrument of joy, flute] to do a thing like this,
to bring to the righteous death with the wicked,
it would be: like righteous, like wicked.
Be it far from you [instrument of joy, flute] the judge of all the earth,
this[act]/he will not bring justice.
And YHWH said:
If I will find in Sdom fifty righteous inside of the city I will pardon the whole place for their sake.
- 19, 4-8 They had not yet laid down, when the men of the city, the men of Sdom enclosed on the house,
from youth to old man, even all the people from the outskirts.
And they called to Lot and they said to him:
Wherever the men who came to you this night!
Bring them out to us and we will know [rape] them.
And so Lot went out to them, to the entrance and he closed the door behind him. He said:
Pray my brothers, do not be wicked,
Pray listen, I have two daughters who have not known [slept with] a man,
I will bring them out here to you and you will do to them whatever is good in your eyes.
Only to these men don't do a thing,
have they not come into the shadow of my [house/structural] beams!

בראשית

18 כ
וַיֹּאמֶר יְהוָה
וַעֲקַת סֹדִם וְעִמֹרָה כִּי־רַבָּה וַחֲטִאתָם כִּי כָבְדָה מְאֹד:
כא אֲרִדְהָנָא וְאֲרָאָה הַכְּצַעֲקָתָהּ הַבָּאָה אֵלַי עֲשׂוּ אִ כְּלָה
כב וְאִם־לֹא אֲדַעָה: וַיִּפְּנוּ מִשֵּׁם הָאֲנָשִׁים וַיֵּלְכוּ סֹדְמָה
כג וְאֲבָרְהָם עֹדְנֹו עִמָּד לִפְנֵי יְהוָה: וַיִּגַּשׁ אֲבָרְהָם וַיֹּאמֶר
כד הָאֵף תִּסְפָּה צְדִיק עִם־רָשָׁע: אוֹלֵי יֵשׁ חַמְשִׁים צְדִיקִים
כה בְּתוֹךְ הָעִיר הָאֵף תִּסְפָּה וְלֹא־תִשָּׂא לְמָקוֹם לְמַעַן
כז חַמְשִׁים הַצְדִיקִים אֲשֶׁר בְּקִרְבָּהּ: חֲלָלָה לָךְ מַעֲשֵׂת ו
כח כִּדְבַר הַזֶּה לְהַמִּית צְדִיק עִם־רָשָׁע וְהָיָה כַּצְדִיק כְּרָשָׁע
כט חֲלָלָה לָךְ הַשִּׁפְטֹ לְכָל־הָאָרֶץ לֹא יַעֲשֶׂה מִשְׁפָּט: וַיֹּאמֶר
יהוה אִם־אֶמְצָא בְּסֹדִם חַמְשִׁים צְדִיקִים בְּתוֹךְ הָעִיר
כו וְנִשְׂאתִי לְכָל־הַמָּקוֹם בְּעִבּוּרָם:

19 ד
טָרָם יִשְׁכְּבוּ וְאֲנָשִׁי
הָעִיר אֲנָשִׁי סֹדִם נִסְבוּ עַל־הַבַּיִת מִנְעֵר וְעַד־זָקֵן כָּל־
הָעָם מִקְצָה: וַיִּקְרָאוּ אֶל־לוֹט וַיֹּאמְרוּ לוֹ אַיֵּה הָאֲנָשִׁים
אֲשֶׁר־בָּאוּ אֵלֶיךָ הַלַּיְלָה הַזֶּה הֲוֹצִיָאֵם אֵלֵינוּ וְנִדְעָה אֲתָם:
וה וַיֵּצֵא אֲלֵהֶם לוֹט הַפֶּתַחַה וְהַדְלֵת סָגַר אַחֲרָיו: וַיֹּאמֶר
ח אֶל־נָא אַחֵי תִרְעוּ: הִנֵּה־נָא לִי שְׁתֵּי בָנוֹת אֲשֶׁר לֹא־
יָדְעוּ אִישׁ אוֹצִיָאָה־נָא אֶתְהוֹן אֵלֵיכֶם וַעֲשׂוּ לָהֶן כְּטוֹב
בְּעֵינֵיכֶם רַק לְאֲנָשִׁים הָאֵל אֶל־תַּעֲשׂוּ דְבַר כִּי־עַל־בֶּן
ט בָּאוּ בְּצֵל קִרְתִּי:

GENESIS

Jerusalem Bible

- 18, 20-27: Then Yahweh said, 'How great an outcry there is against Sodom and Gomorrah! How grievous is their sin! I propose to go down and see whether or not they have done all that is alleged in the outcry against them that has come up to me. I am determined to know'
- The men left there and went to Sodom while Abraham remained standing before Yahweh. Approaching him he said, 'Are you really going to destroy the just man with the sinner? Perhaps there are fifty just men in the town. Will you really overwhelm them, will you not spare the place for the fifty just men in it? Do not think of doing such a thing: to kill the just man with the sinner, treating just and sinner alike! Do not think of it! Will the judge of the whole earth not administer justice? Yahweh replied, 'If at Sodom I find fifty just men in the town, I will spare the whole place because of them.'
- 19, 4-8 They had not gone to bed when the house was surrounded by the men of the town, the men of Sodom both young and old, all the people without exception. Calling to Lot they said, 'Where are the men who came to you tonight? Send them out to us so that we may abuse them.'
- Lot came out to them at the door, having closed the door behind him said, 'I beg you, my brothers, do no such wicked thing. Listen, I have two daughters who are virgins. I am ready to send them out to you, to treat as it pleases you. But as for the men, do nothing to them, for they have come under the shadow of my roof.'

GENESIS

Stone Edition

- 18, 20-27: So HASHEM said, "Because the outcry of Sodom and Gomorrah has become great, and because their sin has been very grave, I will descend and see: If they act in accordance with its outcry which has come to Me — then destruction! And if not, I will know."
The men had turned from there and went to Sodom, while Abraham was still standing before HASHEM. Abraham came forward and said, "Will You also stamp out the righteous along with the wicked? What if there should be fifty righteous people in the midst of the city? Would You still stamp it out rather than spare the place for the sake of the fifty righteous people within it? It would be sacrilege to You to do such a thing, to bring death upon the righteous along with the wicked; so the righteous will be like the wicked. It would be sacrilege to You! Shall the judge of all earth not do justice?" And HASHEM said, "If I find in Sodom fifty righteous people in the midst of the city, then I would spare the entire place on their account."
- 19, 4-8 They had not yet lain down when the townspeople, Sodomites, converged upon the house, from young to old, all the people from every quarter. And they called to Lot and said to him, "Where are the men who came to you tonight? Bring them out to us that we may know them." Lot went out to them to the entrance, and shut the door behind him. And he said, "I beg you, my brothers, do not act wickedly. See, now, I have two daughters who have never known a man. I shall bring them out to you and do to them as you please; but to these men do nothing inasmuch as they have come under the shelter of my roof."

GENESIS *Everett Fox*

- 18, 20-27 So YHWH said:
The outcry in Sedom and Amora – how great it is!
And their sin – how exceedingly heavily it weighs!
Now let me go down and see:
if they have done according to its cry that has come to me –
destruction!
And if not –
I wish to know.
The men turned from there and went towards Sedom,
but Avraham still stood in the presence of YHWH.
Avraham came close and said:
Will you really sweep away the innocent along with the guilty?
Perhaps there are fifty innocent within the city,
Will you really sweep it away?
Will you not bear with the place because of the fifty innocent that are in its midst?
Heaven forbid for you to do a thing like this,
to deal death to the innocent along with the guilty,
that is should come about: like the innocent, like the guilty,
Heaven forbid for you!
The judge of all the earth – will he not do what is just?
YHWH said:
If I find in Sedom fifty innocent within the city, I will bear with the whole place for their sake.
- 19, 4-8 They had not yet lain down, when the men of the city, the men of Sedom, encircled the house,
from young to old man, all the people (even) from the outskirts.
They called out to Lot and said to him:
Where are the men who came to you tonight?
Bring them out to us, we want to know them!
Lot went out to them, to the entrance, shutting the door behind him and said:
Pray, brothers, do not be so wicked!
Now pray, I have two daughters who have never known a man, pray let me bring them out to you, and
you may deal with them however seems good in your eyes;
only to these men do nothing,
For they have, after all, come under the shadow of my roof-beam!

GENESIS *Westminster II*

- 18, 20-27: So the Lord told him, The ill repute of Sodom and Gomorrha goes from bad to worse, their sin is grievous out of all measure; I must needs go down to see for myself whether they have deserved the ill report that has reached me or not; I must know for certain. And Abraham stood there in the Lord's presence, as the men turned and went on towards Sodom. Abraham drew close to him, and asked, Wilt thou, then, sweep away the innocent with the guilty? Suppose there are fifty innocent men in the city, must they too perish? Wilt thou not spare the place to save fifty such innocent men that dwell there? Never that, thou wilt not destroy the innocent with the guilty, as if innocence and guilt were all one; that is not the way, that is not how the Judge of the whole earth executes justice! And the Lord told him, If I find fifty innocent citizens in Sodom, I will spare the whole place to save them.
- 19, 4-8 And before ever they had gone to rest, the townspeople laid siege to the house, old and young, from every quarter of the city, calling for Lot, and crying out, Where are thy evening visitors? Bring them out here, to minister to our lust. So Lot went out, shutting the door behind him, and said, No brethren, I entreat you, do not be guilty of such a wrong. I have two daughters here, that have as yet no knowledge of man; these I will bring out, and you shall have your will with them, but do these men no harm; are they not guests under my roof?

NUMBERS

Eric Gertzbein

- 11, 1-4: And now, the nation was like viciously annoying complaints in the ears of YHWH,
And YHWH heard, and his nose became hot [his anger became inflamed].
And against them burned YHWH's fire, and it consumed a border [a threshold] of the encampment.
And the nation cried to Moses, and Moses prayed to YHWH.
And the fire died down.
And the name of that place was called Tav'Erah, for [there] against them burned the fire of YHWH.
- 11, 14-18: Unable I am alone to carry [bear/support] this whole nation, for it is too heavy for me.
And if this is how you deal with me,
kill me! Yes, kill me if I have found favour in your eyes so I will not see my wickedness.
And YHWH said to Moses:
Gather to me seventy men from the elders of Israel,
of whom you have known to be elders and officers of the nation.
And you will have taken them to the tent of appointment [the space of fixed time], and they shall take
position there with you.
And I will have descended and I will have spoken with you there.
And I will have taken away from the mood [spirit, wind, breath] that is upon you, and I will have
placed it on them.
And they shall bear with you in the carrying of the nation.
And you shall not carry it on your own.

ויקרא

א וַיְהִי הָעֵם כְּמִתְאַנְנִים רַע בְּאַזְנֵי יְהוָה וַיִּשְׁמַע יְהוָה
וַיַּחַר אַפּוֹ וַתִּבְעַר-בָּם אֵשׁ יְהוָה וַתֹּאכַל בְּקִצָּה הַמַּחֲנֶה:
ב וַיִּצְעַק הָעָם אֶל-מֹשֶׁה וַיִּתְפַּלֵּל מֹשֶׁה אֶל-יְהוָה וַתִּשְׁקַע
ג הָאֵשׁ: וַיִּקְרָא שֵׁם-הַמָּקוֹם הַהוּא תִבְעָרָה כִּי-בָעָרָה בָּם
ד אֵשׁ יְהוָה:

יז לֹא-אוּכַל אֲנִי
יח לְבִדִּי לִשְׂאת אֶת-כָּל-הָעָם הַזֶּה כִּי כָבֵד מִמֶּנִּי: וְאִם-
כָּבֵד אֶת-עֲשֵׂה לִי הֲרֹגֵנִי נָא הֲרֹג אִם-מִצַּאתִי חַן
בְּעֵינֶיךָ וְאֶל-אַרְאֶה בְּרַעְתִּי:
יט וַיֹּאמֶר יְהוָה אֶל-מֹשֶׁה אֲסַפֶּה-לִּי שִׁבְעִים אִישׁ מִזִּקְנֵי
ישראל אֲשֶׁר יָדַעְתָּ כִּי-הֵם זִקְנֵי הָעָם וְשֹׁטְרֵיו וְלִקְחָתָּ
כִּי אֲתָם אֶל-אַהֲלֵ מוֹעֵד וְהִתְיַצְּבוּ שָׁם עִמָּךְ: וַיְבַרְכֵנִי
וְדַבַּרְתִּי עִמָּךְ שָׁם וְאֶצְלָתִי מִן-הַרוּחַ אֲשֶׁר עָלֶיךָ וְשָׁמַתִּי
עֲלֵיהֶם וְנִשְׂאוּ אִתָּךְ בְּמִשְׁאֵ הָעָם וְלֹא-תִשָּׂא אִתָּךְ לְבַדְּךָ:

NUMBERS *Jerusalem Bible*

- 11, 1-4: Now the people set up a lament which was offensive to Yahweh's ears, and Yahweh heard it. His anger blazed, and the fire of Yahweh burned among them: it destroyed one end of the camp. The people appealed to Moses, and he interceded with Yahweh and the fire died down. So the place was called Taberah, because the fire of Yahweh burned among them.
- 11, 14-18: I am not able to carry this nation by myself alone; the weight is too much for me. If this is how you want to deal with me, I would rather you killed me! If only I had found favour in your eyes, and not lived to see such misery as this! Yahweh said to Moses, 'Gather seventy of the elders of Israel, men you know to be the people's elders and scribes. Bring them to the Tent of meeting, and let them stand beside you there. I will come down to speak with you; and I will take some of the spirit which is on you and put it on them. So they will share with you the burden of this nation, and you will no longer have to carry it by yourself

NUMBERS *Stone Edition*

- 11, 1-4: The people took to seeking complaints; it was evil in the ears of HASHEM, and HASHEM heard and His wrath flared, and a fire of HASHEM burned against them, and it consumed at the edge of the camp. The people cried out to Moses; Moses prayed to HASHEM, and the fire died down. He named that place Taberah, for he fire of HASHEM had burned against them.
- 11, 14-18: I alone cannot carry this entire nation, for it is too heavy for me! And if this is how You deal wit me, then kill me now, if I have found favor in Your eyes, and let me knot see my evil!" HASHEM said to Moses, "Gather to Me seventy men from the elders of Israel, whom you know to be the elders of the people and its officers; take them to the Tent of Meeting and have them stand there with you. I will descend and speak with you there, and I will increase some of the spirit that is upon you and place it upon them, and they shall bear the burden of the people with you and you shall not bear alone.

NUMBERS

Everett Fox

- 11, 1-4: Now the people were like those-who-grieve (over) ill-fortune, in the ears of YHWH.
When YHWH heard, his anger flared up;
there blazed up against them a fire of YHWH
and ate up the edge of the camp.
The people cried out to Moshe
and Moshe interceded to YHWH,
and the fire abated.
So they called the name of that place Tav'era/Blaze, for (there) had blazed against them fire of YHWH.
- 11, 14-18: I am not able, myself alone, to carry this entire people,
for it is too heavy for me!
If thus you deal with me,
pray kill me, yes, kill me,
if I have found favor in your eyes,
so that I do not have to see my ill-fortune!
Then YHWH spoke to Moshe:
Gather to me seventy men of the elders of Israel,
of whom you know that they are elders of the people and its officers,
and take them to the Tent of Appointment,
stationing them there with you.
I will come down and speak with you there,
I will extend from the rushing-spirit that is upon
you and place it upon them;
then they will carry along with you the burden of the people,
so that you will not (have to) carry it, you alone.

NUMBERS *Westminster II*

- 11, 1-4: Meanwhile, the people were assailing the Lord with complaints, and bemoaning their hard lot. The Lord was roused to anger when he heard it, and sent a fire which burnt up the outlying part of the camp. Whereupon the people had recourse to Moses; and when Moses prayed to the Lord, the fire died down. It was this divine punishment by fire which gave the place its name, the Place of Burning.
- 11, 14-18: I cannot bear, alone, the charge of so many; it is too great a burden for me. If I may not have my way in this, then in mercy, I beseech thee, rid me of these miseries by taking my life away. Whereupon the Lord said to Moses, Choose out for me seventy Israelites of ripe age, men already known to thee as elders and officers of the people, bring them to the door of the tabernacle that bears the record of my covenant, and let them stand there at thy side. I will come down and converse with thee there; taking away some of the spirit which rests upon thee and giving it to them instead, so that they may share with thee that charge over the people which thou canst not support unaided.

EXODUS

Eric Gertzbein

- 1,11: And they [Egypt] set on it [the Children of Israel] forced labour officials for the sake of its humiliation in its forced labour.
And it built boon-cities of Pithom and of Ramessese to Pharaoh.
- 3,7-10: And so said YHWH, I see and have seen the affliction of my people that is in Egypt.
And their call for help I have heard in the face of their slave-drivers, for I have known of their suffering.
And I will descend to save it from the hand of Egypt and to raise it up from this land to a land goodly and spacious,
to a land flowing with milk and honey,
to a place of the Canaanite, and the Hittite, and the Amorite, and the Perizzite, and the Hivvite, and the Jebusite.
And now behold the cries of the children of Israel come to me, and I have also seen the oppression with which Egypt oppresses them.
And now go and I shall send you to Pharaoh, lead out my people, the children of Israel from Egypt.
- 14,11-13: They said to Moshe:
Is it because there are no graves in Egypt
that you have taken us out to die in the desert?
What is this that you have done to us, bringing us out of Egypt?
Is this not the very word that we spoke to you in Egypt!
Indeed, better for us serving Egypt
than our dying in the desert!

במדבר

1 וַיִּשְׁמְעוּ עָלָיו שְׁרֵי מִסִּים לְמַעַן עֲנֹתוֹ בְּסַבְּלַתְּם וַיִּבְּן יב
עָרֵי מִסְכְּנוֹת לְפָרְעָה אֶת־פֶּתָם וְאֶת־רַעְמֶסֶס׃ וְכַאֲשֶׁר י
יַעֲנֶה אֹתוֹ בֶּן יִרְבֵּה וְכֹן יִפְרָץ וַיִּקְצֹוּ מִפְּנֵי בְנֵי יִשְׂרָאֵל׃

3 הָאֱלֹהִים׃ וַיֹּאמֶר יְהוָה רְאֵה רָאָה רְאִיתִי אֶת־עֲנֵי עַמִּי אֲשֶׁר ז
בְּמִצְרַיִם וְאֶת־צַעֲקֹתְךָ שָׁמַעְתִּי מִפְּנֵי נִגְשָׁיו כִּי יִדְעֵתִי י
אֶת־מִכְּאֲבָיו׃ וְאָרַד לְהַצִּילוֹ מִיַּד מִצְרַיִם וּלְהַעֲלֹתוֹ מִן־ ח
הָאָרֶץ הַהִוא אֶל־אָרֶץ טוֹבָה וְרַחֲבָה אֶל־אָרֶץ זָבֶת חֶלֶב וְדָבָשׁ אֶל־מְקוֹם הַכְּנַעֲנִי וְהַחִתִּי וְהָאֱמֹרִי וְהַפְּרִזִּי וְהַחִוִּי ט
וְהַיְבוּסִי׃ וְעַתָּה הִנֵּה צַעֲקַת בְּנֵי־יִשְׂרָאֵל בְּאָה אֵלַי וְגַם־ י
רְאִיתִי אֶת־הַלַּחֲץ אֲשֶׁר מִצְרַיִם לֹחֲצִים אֹתָם׃ וְעַתָּה י
לָכֶה וְאֶשְׁלַחְךָ אֶל־פָּרְעָה וְהוֹצֵא אֶת־עַמִּי בְנֵי־יִשְׂרָאֵל י
מִמִּצְרַיִם׃ וַיֹּאמֶר מֹשֶׁה אֶל־הָאֱלֹהִים מִי אֲנֹכִי כִּי אֵלֶךְ

4 אֶל־יְהוָה׃ וַיֹּאמְרוּ אֶל־מֹשֶׁה הַמְּבַלִּי אֵינְךָ קָבָרִים יא
בְּמִצְרַיִם לְקַחְתָּנוּ לְמוֹת בְּמִדְבָּר מֵה־זֹּאת עֲשִׂיתָ לָנוּ י
לְהוֹצִיאָנוּ מִמִּצְרַיִם׃ הֲלֹא־זֶה הַדְּבָר אֲשֶׁר דִּבַּרְנוּ אֵלֶיךָ יב
בְּמִצְרַיִם לֵאמֹר חֲדַל מִמֶּנּוּ וְנַעֲבֹדָה אֶת־מִצְרַיִם כִּי טוֹב יג
לָנוּ עֲבֹד אֶת־מִצְרַיִם מִמֹּתֵנוּ בְּמִדְבָּר׃ וַיֹּאמֶר מֹשֶׁה

EXODUS *Jerusalem Bible*

- 1,11: Accordingly they put slave-drivers over the Israelites to wear them down under heavy loads. In this way they built the store-cities of Pithom and Rameses for Pharaoh.
- 3,7-10: And Yahweh said, 'I have seen the miserable state of my people in Egypt. I have heard their appeal to be free of their slave drivers. Yes, I am well aware of their sufferings. I mean to deliver them out of the hands of the Egyptians and bring them up out of that land to a land rich and broad, a land where milk and honey flow, the home of the Canaanites, the Hittites, the Amorites, the Perizzites, the Hivites and the Jebusites. And now the cry of the sons of Israel has come to me, and I have witnessed the way in which the Egyptians oppress them, so come, I send you to Pharaoh to bring the sons of Israel, my people, out of Egypt.'
- 14,11-13: To Moses they said, 'Were there no graves in Egypt that you must lead us out to die in the wilderness? What good have you done us, bringing us out of Egypt? We spoke of this in Egypt, did we not? Leave us alone, we said, we would rather work for the Egyptians! Better to work for the Egyptians than die in the wilderness!'

EXODUS *Stone Edition*

- 1,11: So they appointed taskmasters over it in order to afflict it with their burdens; it built storage cities for Pharaoh, Pithom and Raamses.
- 3,7-10: HASHEM said, "I have indeed seen the affliction of my people that is in Egypt and I have heard its out cry because of its taskmasters, for I have known of its sufferings. I shall descend to rescue it from the hand of Egypt and to bring it up from that land to a good and spacious land, to a land flowing with milk and honey, to the place of the Canaanite, the Hittite, the Amorite, the Perizzite, the Hivite, and the Jebusite. And now, behold! the outcry of the Children of Israel has come to Me, and I have also seen the oppression with which the Egyptians oppress them. And now, go and I shall dispatch you to Pharaoh and you shall take My people the Children of Israel out of Egypt."
- 14,11-13: They said to Moses, "Were there no graves in Egypt that you took us to die in the Wilderness? What is this that you have done to us to take us out of Egypt?" – for it is better that we should serve Egypt than that we should die in the Wilderness!"

EXODUS

Everett Fox

- 1,11: So they set gang-captains over it, to afflict it with their burdens.
 It built storage-cities for Pharaoh – Pithom and Ra'amses.
- 3,7-10: Now YHWH said:
 I have seen, yes, seen the affliction of my people that is in Egypt,
 their cry I have heard in the face of the slave-drivers;
 indeed, I have known their sufferings!
 So I have come down
 to rescue it from the hand of Egypt,
 to bring it up from that land
 to a land, goodly and spacious,
 to a land flowing with milk and honey,
 to the place of the Canaanite and the Hittite,
 of the Amorite and the Perizzite,
 of the Hivvite and the Yevusite.
 So now,
 here, the cry of the Children of Israel has come to me,
 and I have also seen the oppression with which the Egyptians oppress them.
 So now, go,
 for I send you to Pharaoh-
 bring my people, the Children of Israel, out of Egypt!
- 14,11-13: And they said to Moshe, Is it because there are no graves in Egypt that you took us to die in the desert?
 What is this you have done to us to bring us out from Egypt?
 Is this not the very thing that we spoke to you in Egypt, saying,
 keep away from us; and we will serve Egypt.
 Indeed, better for us to serve Egypt than our death in the desert.

EXODUS *Westminster II*

- 1,11: So he made them answerable to officers of the public works, who laid crushing burdens on them, using them to build the store-cities of Phithom and Ramesses;
- 3,7-10: I have not been blind, the Lord told him, to the oppression which my people endures in Egypt, I have listened to their complaints about the cruelty of the men who are in charge of their work. I know what their sufferings are, and I have come down to rescue them from the power of the Egyptians; to take them away into a fruitful land and large, a land that is all milk and honey where the Chanaanites dwell, and the Hethites, and the Amorhites, and the Pherezites, and the Hevites, and the Jebusites. Yes, the cry of Israel's race has reached my ears, I have watched how their Egyptian oppressors ill-treat them. Up, I have an errand for thee at Pharaoh's court; thou art to lead my people, the sons of Israel, away out of Egypt.
- 14,11-13: Were there no graves for us in Egypt, they asked Moses, that thou hast brought us here, to die in the desert? Was it not ill done, to bring us away from Egypt at all? And did we not tell thee as much while we were still there? Leave us, we said, to our Egyptian bondage; better slavery here, than death in the desert.

BIBLIOGRAPY

- Aarseth Espen, 'Playing Research: Methodological approaches to game analysis' University of Bergen, 2003.
- Aarseth Espen, 'Allegories of Space: The Question of Spatiality in Computer Games', in Markku Eskelinen and Raine Koskimaa (eds) 'Cybertext Yearbook 2000', University of Jyväskylä, <http://www.hfuib.no/hi/espen/papers/space>
- Adams Ernest, 'The Role of Architecture in Video Games', http://www.designersnotebook.com/Columns/047_The_Role_of_Architecture/047_the_role_of_architecture.html 2005
- Allakhazam. 2005. Allakhazam.com: World of Warcraft. <http://wow.allakhazam.com/>
- Alexander Christopher et al. 1977. A Pattern Language - Towns Buildings Construction. New York: Oxford University Press
- Alexander Christopher et al. 1979. The Timeless Way of Building. New York: Oxford University Press
- Alexander Christopher et al. 1975. The Oregon Experiment. New York: Oxford University Press
- Anders Peter, 'Envisioning Cyberspace: Designing 3D Electronic Spaces', McGraw-Hill, New York, 1999.
- Anders, Peter. 'Envisioning Cyberspace: The Design of On-Line Communities, The Virtual Dimension', NY NY, Princeton Architectural Press, 1998. pg. 220-232.
- Banks LA (1982): Seven times around Jericho. 07292:
- Bartle Richard 'Hearts, Clubs Diamonds, Spaces: Players Who Suit Muds', 1996, <http://www.mud.co.uk/richard/hcdis.htm>
- Benjamin Walter, 'A Glimp into the World of Children's Books', Selected Writings, Vol. 1: 1913-1926. Cambridge, MA, London: Belknap Press/Harvard University Press, 1996. 435-43.
- Bentekoe Ronald, Dimensions of the Hermeneutic Circle, Humanities Press, Atlantic Highlands, N.J., 1996.
- Bienkowski P (1986): Jericho in the Late Bronze Age, Warminster, Wiltshire: Aris & Phillips.
- Björk, Staffan and Holopainen, Jussi 2005. Patterns in Game Design. Hingham: Massachusetts: Charles River Media, Inc.
- Björk, Staffan, Sus Lundgren and Jussi Holopainen. 2003. Game Design Patterns. In Level Up: Digital Games Research Conference. ed. Marinka Copier and Joost Raessens. Utrecht, The Netherlands: Utrecht University.
- Blast Theory – 'Can You See Me Now', <http://www.blasttheory.co.uk>.
- Blizzard. 2004. World of Warcraft. Blizzard Entertainment. www.blizzard.com / www.worldofwarcraft.com
- Blizzard. 2005. "World of Warcraft® ACHIEVES NEW MILESTONE WITH TWO MILLION PAYING SUBSCRIBERS WORLDWIDE". Blizzard Entertainment. <http://www.blizzard.com/press/050614-2million.shtml>
- Bogojevic Sladjan & Kazemzadeh Mohsen, 'The Architecture of Massive Multiplayer Online Games', Masters Thesis in the Department of Computer Science at the Lund Institute of Technology, Lund University, Sweden, September 8th, 2003.

Boyd Danah, 'Faceted ID/ENTITY: Managing representation in a digital world', Thesis submitted to the program in Media Arts and Sciences School of Architecture and Planning for a Master of Science in Media Arts at the Massachusetts Institute of Technology, September 2002.

Brown Richard, 'Alchemy, mimetics, immersion and consciousness', Paper presented to The Victorian College of Art, Melbourne University, 2003.

Bromberg, Heather. 'Are MUDs Communities? Identity, Belonging and Consciousness in Virtual Worlds', Cultures of Internet: Virtual Spaces, Real Histories, Living Bodies. Ed. Rob Shields. London: Sage, 1996. pg 143-52.

Caillois, Roger. 1961. Man, play and games. Urbana: Chicago: University of Illinois Press.

Campbell Joseph, 'Myth & Metaphor in Society', Mystic Fire Audio, New York, 1998,

Campbell Joseph, 'The Hero with a Thousand Faces'. Princeton University Press, Princeton, 1949.

Campbell Joseph, 'The Hero's Journey', Edited by Stuart L. Brown, New York: Harper and Row, 1990.

Campbell Joseph, 'The Masks of God', Viking Press, New York, 1970.

Campbell Joseph, Interview: 'The Power of Myth with Bill Moyers' (The Hero's Adventure, The Message of the Myth, The First Storytellers, Sacrifice and Bliss, Love and the Goddess, Masks of Eternity), 1988 – 1989.

Carruthers Mary J, 'The Book of Memory: A Study of Medieval Culture', Cambridge University Press, Cambridge England, 1990.

City of Heroes, Cryptic Studios, produced by NC Soft, www.cityofheroes.com

City of Villains, Cryptic Studios, produced by NC Soft, www.cityofvillains.com

Cooper Robbie, 'In pictures: Online gamers unmasked', http://news.bbc.co.uk/2/shared/spl/hi/picture_gallery/05/technology_online_gamers_unmasked/html/1.st

Computer Games Magazine, 'Interview with Chris Metzen, Blizzard's Creative Director', <http://www.blizzard.com/wow/insider/metzen-interview.shtml>

Deleuze Gilles; Guattari Felix, 'A Thousand Plateaus: Capitalism and Schizophrenia', Athlone Press, London, 1988.

Diablo2, www.diablo2.com

Dibbell Julian, My Tiny Life: Crime and Passion in a Virtual World, Fitzhenry & Whiteside Ltd, Markham Ontario, 1998.

Dickinson Patrick, The Seven Days of Jericho, A. Dakers, London 1944.

Elderscrolls Oblivion, www.elderscrolls.com

Eskelinen Markku, 'The Gaming Situation', in Game Studies, Vol.1 Issue.1, <http://www.gamestudies.org/0101/eskelinen>

Feinberg AL, 1901 Storm the Gates of Jericho, Toronto, McClelland and Stewart <1964>:

Fishman J (1983): And the walls came tumbling down, New York:Macmillan.

Fudge James, 'Interview with Cryptic Studios' Jack Emmert', www.gamespy.com

Garau Maia, 'The Impact of Avatar Fidelity on Social Interaction in Virtual Environments', Dissertation submitted for a Doctor of Philosophy to the University of London Department of Computer Science, October 13th, 2003.

Garstang J, Garstang JBE (1948): The story of Jericho, New , rev. [i.e. 2nd] - ed. London:Marshall, Morgan & Scott.

Gaudin Sharon, 'Virtual Worlds Are As Important As The Real World to Internet Users', <http://www.informationweek.com/story/showArticle.jhtml?articleID=196600347>

Glover Katherine, 'Why can't gay dwarves get married in Middle-earth', http://www.salon.com/news/feature/2007/04/28/gay_dwarves/

Gothic3, www.gothic3.com

Guild Wars, www.guildwars.com

Grosz E A, Architecture from the Outside: Essays on Virtual and Real Space, MIT Press, London, 2001.

Hayworth Tad, 'Local Dungeons and Dragons Club Dissolves', http://www.brokennewz.com/displaystory.asp_Q_storyid_E_1131ddclub

Harper Elizabeth, 'Keynote speech by Mike Morhaime, chief of Blizzard, at the Austin Game Developers Conference' September 5th 2007.

Judgehype. 2005. "Blizzard interview by JudgeHype". Judgehype World of Warcraft. <http://worldofwarcraft.judgehype.com/index.php?page=interviews23-en>

Kreimeier, Bernd. 2002. "The Case for Game Design Patterns". Gamasutra. http://www.gamasutra.com/features/20020313/kreimeier_01.htm

Landscape Design and the Experience of Motion. Volume 24 Jan 2003. "Lordship of the Feet: Toward a Poetics of Movement in the Garden." Conan, Michel p.187-213

Lee, Dr. Kaiman, AIA. "State of the Art Computer Aided Environmental Design". Environmental Design & Research Center: Boston, 1975.

LineageII, www.lineage2.com

Ljungstrom Mattias, 'The use of architectural patterns in MMORPGs', Paper presented at the Aesthetics of Play conference for the Department of Information Science and Media Studies at the University of Bergen, Norway, 14-15 October 2005,

<http://www.aestheticsofplay.org/ljunstrom.php>.

McGregor Leigh Georgia, 'Architecture, Space and Gameplay in World of Warcraft and Battle for Middle Earth 2', University of New South Wales, Sydney.

Morse Margaret, 'Nature Morte: Landscape and Narrative in Virtual Environments' *Immersed in Technology: Art and Virtual Environments*. Ed. Mary Anne and Macleod Moser, Douglas. Cambridge, Mass., London: MIT Press/Banff Centre for the Arts, 1996. pg 195-232.

Nintendo, www.nintendo.com

Price Charles, 'Evolution of Interaction Schemes in Computer Role-Playing Games', Undergraduate Philosophy Thesis, Carnegie Mellon University, April 29th, 2003.

Reuters Adam, Congressional Democrats' agenda gets SL stage, <http://secondlife.reuters.com/stories/2007/01/02/congressional-democrats-agenda-gets-sl-stage/>

Riegle Dr. Rodney P, 'Creating Online Worlds: The Future of Student Work', <http://www.coe.ilstu.edu/rpriegle/wwwdocs/studentwork.htm>

Rossi Aldo, 'The Architecture of the City', Massachusetts, MIT Press-Opposition Books, 1985.

Simpson Gemma, 'Virtual world may revive outlawed experiments', http://news.zdnet.com/2100-9588_22-6145400.html?tag=sas.email

Starcraft2, www.blizzard.com

Stephenson Neal, 'Snow Crash', Bantam Spectra Book, US, 1992

Streamweaver, 'Interview with MacAllen, moderator in the official City of Heroes forums and FAQ writer', <http://coh.warcry.com/faq/view/21>

Streamweaver, 'Interview with J. David Spurlock, developer for City of Heroes', <http://coh.warcry.com/faq/view/21>

Streamweaver, 'Interview with Aura Manning, community coordinator at NC Soft, publisher of City of Heroes', <http://coh.warcry.com/faq/view/21>

Streamweaver, 'Interview with Jeremy Gaffney, developer for City of Heroes', <http://coh.warcry.com/faq/view/21>

Suellentrop Chris, 'How Governments from Beijing to the Beltway could shackle your freedom', article published in April 2006 Issue 14.04 of Wired Magazine.

Swalwell Melanie, 'Aesthetics, Avatars, and Kinaesthetic Responsiveness in Quake' Paper presented at Fourth Crossroads in Cultural Studies Conference, Tampere, Finland, 29 June – 2 July, 2002.

Takahashi Dean, 'Interview with Blizzard Chief Mike Morhaime', www.mercurynews.com, Friday August 11th 2006.

Talamasca Akela, 'Avatar Right', www.seconddlifeinsider.com/2006/07/09/avatar-rights

Torah (Hebrew Old Testament), Book of Joshua, and selected passages.

Thottbot. 2005. Thottbot: World of Warcraft database. <http://thottbot.com/>

The Avatar Site, <http://www.avatara.org/essay.html>

The Daedalus Project, 'MMORPG Hours vs. TV Hours', <http://www.nickyee.com/daedalus/archives/000891.php>

The Leading MMORPG Services Company, <http://www.ige.com/>

Tobold's MMORPG Blog, <http://tobolds.blogspot.com/2004/09/world-of-warcraft-how-it-works.html>.

Turkle Sherry, Life On The Screen: Identity In The Age Of The Internet, Simon & Schuster, New York, 1995.

Wallace Mark, 'Cyberia Rising: Autodesk Enters Second Life, 3pointD.com The Metaverse and 3D Web', <http://www.3pointd.com/20061129/cyberia-rising-autodesk-enters-second-life>

Warcraft Realms. 2005. WarcraftRealms.com. <http://www.warcraftrealms.com/>

Woleslage "EtheC" Jeff, 'Interview with Matt Miller at Cryptic Studios', <http://www.tentonhammer.com/node8829> , July 3rd 2007.

WorldOfWar. 2005. The Unofficial World of Warcraft Site. <http://www.worldofwar.net/>

WorldOfWarcraft. 2005. World of Warcraft Game Guide. <http://www.worldofwarcraft.com/info/basics/>

World of Warcraft Europe. 2005. "A Few Notes on Battleground Wait Times ". PvP Forum. 2005. <http://forums-en.wow-europe.com/thread.aspx?fn=wow-pvp-en&t=72991&p=1&tmp=1#post72991>

World of Warcraft Online, www.warcraft.com

World of Warcraft hits 9 million users worldwide! Making it the 90th biggest country in the world., supadupagama, <http://www.videogamesblogger.com/2007/07/24/world-of-warcraft-hits-9-million-users-worldwide-making-it-the-90th-biggest-country-in-the-world.htm>

WoW maps, <http://mapwow.com/>