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Grotto

Videogame Modes and Visionary Architecture

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by

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Chapter 1

Introduction

> We are at a moment, I believe, when our experience of the world is less that of a long life developing through time than that of a network that connects points and intersects with its own skein.
>
> *Michel Foucault, "Of Other Spaces," Architecture-Mouvement-Continuité, 1984*

This thesis explores the history of computer games from a personal and comparative perspective, discussing games as an extension of "visionary architecture". [1] In doing so, I've found it useful to use the term "mode" rather than game categories already in use in the academic field of Games Studies. Mode is a term used in videogames– for example, games like *Minecraft* (Mojang, 2011-) and *Dwarf Fortress* (Bay12Games, 2006-) present very different play-styles using (loosely) the same game assets and engine as different "modes" ("Survival", "Creative", "Story" modes in *Minecraft* and "Fortress", "Adventure", and "Legends" modes in *Dwarf Fortress*, respectively). We might also see in many different genres of game a "God mode", enabled by the use of cheat codes to allow game testers to thoroughly test games by circumventing difficulty. In the study of literature we also see the use of the term mode to refer to style and methods that transcend genre. In my extension of this idea of modes of videogames, I bring history, player affect, an idea of encoded and decoded ethics, and clusters of associated works from outside of games. A mode is a holistic view of a game that can shift by bringing different theoretical lenses and personal perspectives to bear to locate meaning in play.

Three interconnected game modes will be identified in this text: *The Dungeon*, *The Arcology*, and *The Frontier*. These modes encompass player perspective, agency, and different conceptions of a "game self" (who or what we imagine ourselves to be in the world of a given game). Each game mode also conceals or interrogates different ideologies within its mechanics. By identifying these modes, I have defined conceptual containers which connect ideas to actions within an inhabitable "place"—one that does not need to exist as a built environment and may indeed be impossible to build, or even disastrous. These modes are not

1. Visionary or "Paper" Architecture refers to architectural designs that, due to various factors such as technological, social, economic, or practical constraints, are not intended to be built. These can include speculative designs, theoretical explorations, or ambitious futuristic ideas. Such architecture often serves as a form of critical or creative expression for architects, allowing them to question, challenge, and rethink existing norms and conventions within the field.

comprehensive definitions of categories in an academic game studies context; rather, they are the conceptual building blocks of my own personal art practice, which I explore in a chapter devoted to my videogame *Grotto*.

My understanding of each mode comes from personal experience, contextualized by events in my life that found parallels in the phenomenology of play. This paper is meant to function as a context and entryway to my artwork, connecting the seemingly disparate domains of game studies, phenomenology, architecture, and genealogy (both in the sense of a history of biological reproduction and of cultural reproduction). I will give examples and brief histories of digital games and place them within each mode, including games that span multiple modes (such as *Dwarf Fortress* by Bay12 Games). I will then associate each mode with parallel cultural projects in architecture, art, and history, and show how theories that are critical of mainstream cultural and historical canons can also be applied to the study and production of digital games. By showing how critical thought about art, architecture, and history can be applied to digital games, I hope to provide access points to my work and illuminate it. I will focus in particular on my long-term videogame project *Grotto*, which spatializes a family history in a large, persistent, multiplayer web space filled with histories and counter-histories inscribed within symbolic game-objects like relics and cenotaphs.

1.1 The Dungeon Mode

The dungeon is a familiar setting in fantasy fiction, and a seminal backdrop for computer games. Many of the first computer games were "dungeon crawls."[2] The history of their creation is intertwined with the early history of computing, as well as with the extensive cultural and political baggage of fantasy as a genre. In a typical dungeon game the player explores an occluded-view map of a subterranean labyrinth that becomes filled-in as they traverse it. In my thesis game project *Grotto*, the dungeon represents an occluded past, constructed from oral histories and genealogical data, but held together by fantasy and folklore beyond the horizon where the records run out. My experience of constructing a family history is filled with contradictions, secrets, and omissions. I have traversed history as I would a dungeon game. The dungeon is an obscured, non-functional, imagined structure that seems to descend forever into darkness—at once a mine, prison, ossuary and vault. In my game *Grotto* I have constructed a dungeon using my own family tree data as its structure, as a family of termites might create an expansively growing network of tunnels in wood—an architecture secreted from biology that flows from the domestic space into the common waters of all human history.

2. A "dungeon crawl" videogame is a type of role-playing or strategy game in which the player navigates through a series of interconnected underground environments, typically fighting monsters and collecting treasure. These games often feature randomly generated levels and a high degree of replayability. The term "dungeon crawl" is thought to have originated from the game "Dungeons & Dragons," which popularized the concept in the 1970s.

1.2 The Arcology Mode

Videogames can make ideologies 'disappear' into the rules of their worlds, but they can also challenge the foundations of what we assume to be implicit. The *SimCity* series of games (Maxis), for example, incorporates rules specifying which of its in-game urban arrangements will be successful–reconfiguring those assumptions is not possible through gameplay. In contrast, the fantasy simulation game *Dwarf Fortress* allows for an unusual amount of freedom for players to reconfigure its simulated societies of dwarves. As I will show later, the level of detail and modularity of the game elements of *Dwarf Fortress* foreground notions of value and labor often treated as implicit in other simulation games.

The game-self experienced by the players of these two games is also very different. In the *SimCity* series the player acts as an unseen mayor or developer whose power over the environment is bounded only by economic resources. In *Dwarf Fortress* the player is similarly disembodied, but the level of agency is held in check by the will of the resident dwarves that make up the simulated society. They cannot be compelled to work if their basic individual needs are not met.

Arcology, a portmanteau term that consists of the words "architecture" and "ecology," was coined in 1969 by artist-architect Paolo Soleri (1919-2013) to refer to his designs for enclosed-structure megacities. In an era where the borders between art and architecture were already blurred in visionary megastructure ideas by designers like Archigram and Buckminster Fuller, Soleri's work stood out in its flexibility and its relationship to its surroundings. Where Fuller's designs suggested a technocratic battle against the environment in atomic-powered space-station-like ziggurats and domes, Soleri's designs suggested a porous, homeostatic border between inside and outside—more cellular-wall than tank hull. A unique feature of Soleri's conception of arcology is that his designs were not meant to be proscriptive or utopian. Rather, he envisioned his citiscapes as laboratories for finding new ways to negotiate the tensions between their inhabitants and the environment. Arcosanti, located in the Arizona desert, is a still–continuing reification of this idea of urban laboratory (Cosanti Foundation n.d.).

Whereas the Dungeon Mode offers an exploration of the past, the Arcology Mode is a simulation of a future that remains unfinished. Arcology games are case studies in the distribution of power. They enshrine assumptions about the efficacy of its consolidation or demonstrate the nuances of its distribution. As emblematic projections of possible futures, arcologies push us to consider the possibility and impact of disasters. They help us imagine new 'selves' that could be capable of building a better (or at least different) world.

1.3 The Frontier Mode

Frederick Jackson Turner's (1861-1932) famous Frontier Thesis, presented in the seminal essay "The Significance of the Frontier in American History" (1893), posits that the existence of an open frontier played a crucial role in shaping

American democracy and individualism. Critiques of Turner's thesis inform my conception of a Frontier Mode of gaming.[3] As a concept, the frontier has continued its expansion past the edges of the maps-of-empire into new outlands of space, virtual reality, the internet, and digital games. It continues to manifest itself in utopian-libertarian projects that envision an individual freedom-from-restraint (with demonstrably disastrous after-effects for society). Frontier is the territory of "open world" games like *Minecraft*, where resource extraction without consequences, an expanding homestead, and siege-defense[4] are all major aspects of gameplay. It offers a perspective where violence is directed out at an "other" with no expected consequences, and where individuals act as unbounded conquerors. In my conceptual framework, The Frontier is the scene of historic crimes. It looms perpetually within our present—outside of time, rationalized by an imagined past, and in the service of an imagined future. The Frontier creates an ever-expanding dungeon gravesite while promising to lead to an always-deferred future arcology.

The Frontier Mode game has parallels with the rapid proliferation of survivalist media in popular culture (exemplified by reality television shows like *Alone*, and *Naked and Afraid)*, and zombie-horror media like *The Walking Dead* and *The Last of Us* (franchises spanning mediums across comic books, television, and videogames). The fantasy of individual self-sufficiency in the face of a total social breakdown and at the front-lines of a war with an unreasoning, unthinking enemy (one that exists at some less-than-human state) is a modern preoccupation that runs through videogames too numerous to count.

In this proposal for a subsequent research project, I outline some ways that Frontier Mode games reinforce the idea of freedom as freedom-from-restraint rather than social freedoms (such as freedom from privation and unregulated labor markets), incorporating ideas about human nature, individualist paranoias, and power fantasies. [5] In keeping with my other game mode models, I intend to explore the visionary architecture of the Frontier Mode, which spans a spectrum from the bushcraft homestead to the suburban fallout shelter mania of the postwar United States. The fantasy survival strongholds of the Frontier Mode are the site for schizo-fascist construction, an architecture of isolation where waves of zombies can attack each night and a capable fantasy self is held safe within, self-sufficient to the end.

3. In his book "The End of the Myth," Grandin argues that Turner's theory not only romanticizes the violence and exploitation that occurred on the frontier, but also ignores the ways in which empire and capitalism drove expansion. Grandin contends that Turner's focus on the frontier as a "safety valve" for social and economic issues served to justify policies harmful towards marginalized groups. I explore this idea of social safety valve as it relates to digital games.

4. Siege defense games are a subgenre of strategy and action games where the player is tasked with defending a fortified position or location from waves of enemy attacks. The player must strategically place defensive structures, such as walls, traps, and weapons, to repel the enemy's assault and prevent them from breaching the stronghold.

5. Franklin Delano Roosevelt, in his calls to war against the Nazi regime, counted the "Four Freedoms" being protected from fascism as "freedom from want, from fear, of speech, of worship." Henry Luce, the influential publisher of "Time," "Life," and "Fortune" magazines, amended these with another: "individual enterprise" (Grandin 381)

1.4 Grotto

My understanding of each of these game modes is the motivation behind my thesis project, *Grotto*. As a consequence, they also provide keys to interpreting it. *Grotto* is an ever-expanding environment for engaging with the properties and hidden ethics of each of the game modes I describe in this text. Doing so leads to a critique of history, hierarchies, and power. As these modes constitute a schema of past, future and present imaginaries, they also link roughly to fantasy, science fiction, and survival horror. In working through this schema, I hope to locate new imaginaries with new forms of ethics at their core.

Chapter 2

The Dungeon Mode

> The toddler, taking its first steps as an organism-that-persons, drags its whole world along as pull-toy.
>
> *Arakawa and Ginz, The Architectural Body, 2002*

In dungeon exploration videogames, a shifting ontology (game world and architecture) and epistemology (player/player-character knowledge of that game world) can both distract from and expose a system of ethics embedded in a game's rules. A dungeon raid is a violent archaeology carried out within a hostile system of architecture rather than in a specific place. The "place" of a videogame dungeon lies in a form of visionary architecture, created by some imperial force positioned in a hierarchy of power that is part of a fantasy world. "Marvelous" and "Faery" Fantasy media—the kind in which dungeons might be found—drag with them the moribund ideas of rightful hereditary rule, patriarchy, and biological essentialism as a spectral counterpoint to modern values. Adjacent to fantasy and architecture, dungeon games have an opportunity to critique history, power, place, and orientation.

2.1 Game Modes

Videogames are studied across many academic fields, including game studies, computer science, psychology, anthropology, sociology, media studies, and cultural studies. Each field approaches videogames from a unique perspective, and theoretical approaches differ. As an artist, I approach the study and production of videogames from a personal perspective—I have "inhabited" them at specific times in my life and brought external situations and emotions with me. I have made videogames a memory palace, ritual space, and an interzone of mindfulness/mindlessness over the years.[1] In the debate on how best to critically engage with videogames, I position myself closest to authors like Miguel Sicart, who proposes that rather than being understood by their rules or their narratives, games are best understood as a complex interplay between all of their elements and the player's own context (Sicart 2011).

In the past I found it cumbersome to try to talk about this subjective, holistic

1. Memory Palaces, also known as the Method of Loci, is a mnemonic technique that has been used since ancient times to improve memory and recall. It involves creating a mental construct of a familiar environment and associating specific pieces of information with distinct locations within that space. By mentally navigating through the environment and visualizing the associations, individuals can enhance their ability to remember and retrieve information.

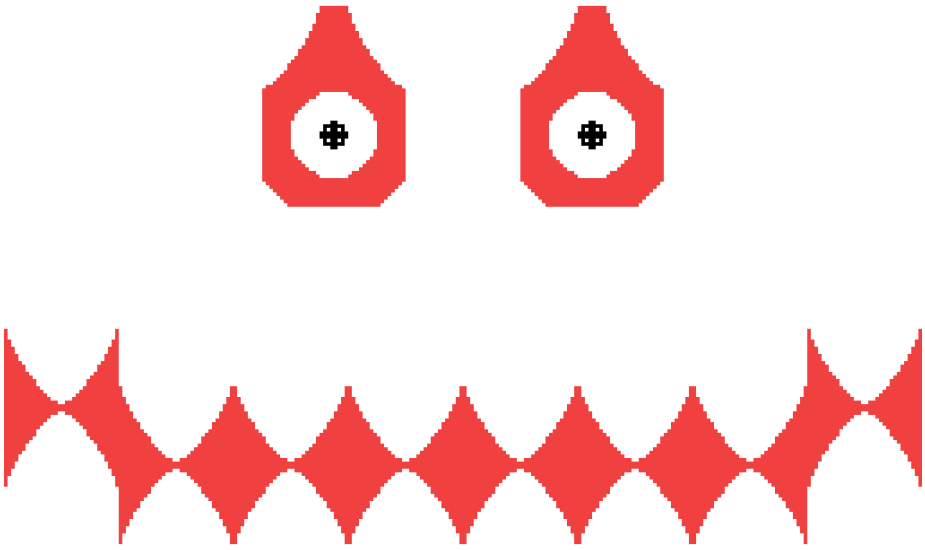
view of games because no word seemed broad-yet-meaningful enough to usefully refer to it. I have finally settled on *mode* as my way of referring to a lens through which one may understand the formal qualities and contexts of a game. It is a way of looking at a cluster of features rather than a classification—one game could, for example, be played and examined in more than one mode. It is true that the word "mode" is already used in game design (indicating a modality of play). It has also been used in literary criticism to imply a working method, mood or style beyond the more specific boundaries of literary genre. However, I use "mode" here to include features and contexts of both game play and game creation. A game can be made in the Dungeon Mode, inheriting all the context, history, genre trappings, imagined "game-self", expected play mechanics, and player affiliations implied therein. I can also take all of those expectations and methods of game-world apprehension and transfer them to non-game-world experiences— e.g. , the terror of navigating the US healthcare system considered in the Dungeon Mode. An important feature of game modes, as I present them, is that each mode has an imagined architecture, and an imagined game-self that relates to that architecture. By examining this relationship we can infer embedded ideas about how a subject relates to the world and to hierarchies of power and force.

As a "mode", dungeon games preoccupy me for reasons that have only recently become clear. Below, I will trace their parameters and pull at the associations that connect them to my own ideas and memories as well as their use and meaning in culture at large. In doing so, I find I am pulling out an unruly hairball of interconnected subjects, ranging from visionary architecture, nationalism, intergenerational trauma, a history of hobbyist software and internet affinity groups, speleology, phenomenology, epistemology, genealogy, mythology, religion, and J.R.R Tolkien. This network of subjects, while at times unwieldy, has been generative for me as an artist, as a background for using the idea of dungeons as an explorable place to symbolize my relationship to history and my position as an historical subject. The dungeon mode is subterranean, mazelike, and dark. I am stuck inside it, continually trying to find a vantage point from where my hand-scrawled map makes some kind of sense.

2.2 Horror

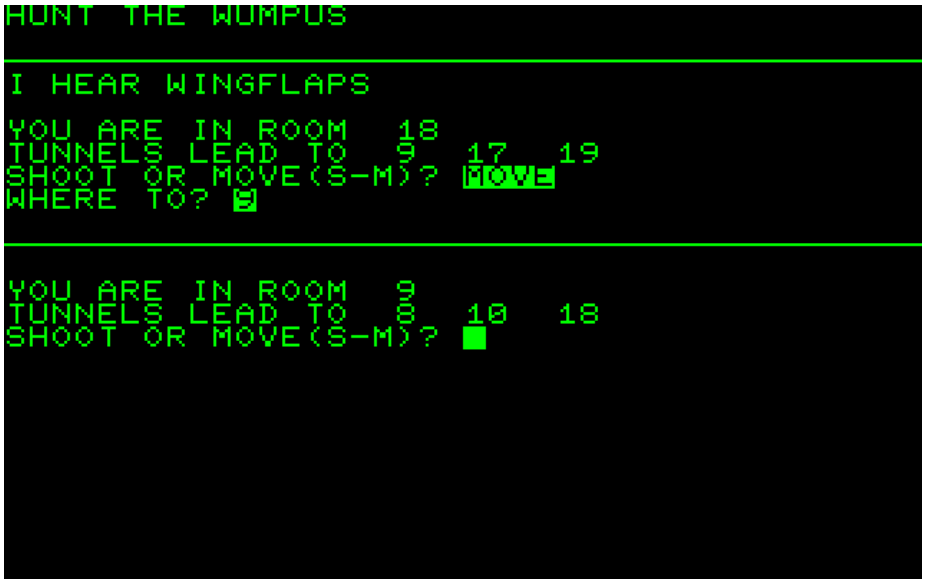
My first clear memories of interacting with digital games involve traversing dungeons. Videogame dungeons are imagined underground worlds separated from natural resources—darkness, traps, and hunger are often incorporated as game elements. As a player explores a dungeon, a maplike screen is often filled in one room or hallway at a time. My first exposure to a computer was the Texas Instruments TI-99/4A version of the game *Hunt The Wumpus*. It was one of a handful of games included in a first-grade class meant to expose children to home computers, which were still a novelty at the time. This version of *Wumpus* was one of many derivations of the 1973 original *Hunt the Wumpus*–a text-based

game made by Gregory Yob.[2] The TI-99/4A was a slab of chromed plastic connected to a boxy CRT monitor. The blank white expanse of a new map on its screen was a dangerous territory to explore, one choice at a time. Each new cavern was represented as a circle, and the player as a stick figure within. One cave held a monster called the Wumpus. This expanse was understood from above but experienced from an occluded, perspectiveless, first-person view seen only in the mind's eye. Carelessly pressing keys, I wandered through the Wumpus's cave unaware, resulting in an animation of closing jaws and bleated notes from Chopin's *Piano Sonata No. 2 in B♭ minor* —identifiable to a child only as the "you are dead" song. The screen had suddenly become my perspective as I had been eaten alive.



Jaws closed- the death screen of Hunt the Wumpus for the TI-994A Home Computer (Texas Instruments 1981)

2. The later graphical versions flattened the architecture of Yob's original text-only game. Unbounded by the need to represent the caverns on a 2d plane, Yob's map could be imagined as a three dimensional dodecahedron–twenty caves, each with three exits, interconnected in a way that was radically different than the common ten by ten grid-based strategy games of the time. Without graphics, a good memory (or pencil and paper) were needed to play effectively.



Hunt the Wumpus for The Commodore PET (Gregory Yob 1978)

Stunned by my "fatal" experience with the Wumpus, I raised my hand to ask if I could use the restroom. Stepping out from the computer room in a still-unfamiliar school, I was immediately lost. In the many dreams inspired by that situation that have followed, the school has grown larger and larger. The hallways are branching out in an infinitely-generative pattern. What has carried over from this childhood experience into adulthood was a certainty that videogames exist as shadow extensions of the spaces in which they are played. The well-lit classroom where children were seated in rows and given commands by an adult was connected, as through a door, to a dark labyrinth that was home to a ravenous minotaur.

It took time before I had a computer or a game console in my home. I gained all of my early experiences of videogames at the homes of relatives or friends, which might have made the experiences seem more exciting. When I was around eight years old, my then-childless aunt and uncle bought a Sears Telegames console (a clone of an Atari 2600) to occupy my cousins and me when we visited. My grandmother and her husband followed suit, and playing games became part of holiday visits for the children in my extended family.

The Atari 2600 (also known as Atari VCS, or "Video Computer System"), was an early commercial home videogame console, first released in 1977. It was extremely popular and sold over 30 million units worldwide. The quality of the games made for Atari 2600 varied wildly– at its worst, it was a platform for inferior home-versions of popular arcade games, at its best, it was a space for experimenting with new kinds of play styles, working within hardware constraints, and engaging with a wide audience. One game for the Atari 2600, Warren Robinett's *Adventure* (1979) is often singled out as an important milestone in

computer gaming (Montfort and Bogost 2009, 5).[3] It introduced a play area that spanned multiple connected screen-spaces filled with traversable mazes, monsters that exhibited simple behaviors, and tool-like objects with properties: a dragon-killing sword, gate-opening keys and a game-ending golden grail. The game included the first documented "easter egg" in a commercial game– Robinett's name hidden in a normally inaccessible game-area.[4] *Adventure* conjured up an unseen world represented by glyph-like symbols. Its dragons roared a harsh, staccato machine-sound that I found terrifying. I found death in *Adventure* particularly disturbing—to be swallowed by a dragon resulted in imprisonment inside the walls of the dragon's transparent belly. In this state, moving the joystick still visibly caused the block that represented the player to twitch—spasming in-place inside the now satiated and inert dragon. Horror, before I had any conception of horror in movies or literature, was now a part of this new world of games that I was experiencing.

Following the success of *Adventure*, Atari planned what was originally intended as its sequel. *Swordquest* was a series of four action-adventure games released for Atari 2600 between 1982 and 1984. *Swordquest: Fireworld* was one of a handful of games in my uncle Ron's collection. When I encountered it, the instruction manual had been lost. I only had a vague understanding from playground rumors that there was some sort of real-life golden sword that could be won if I could beat the game. I found it almost indecipherable. Like *Adventure*, the *Swordquest* games stretched across multiple screens (a programming feat given the constraints of the hardware) and presented an occluded dungeon without a map. Folded within each 'room' were two additional hidden play layers—a challenge area and a treasure room. These spaces were visualized in the crudest possible iconography, and lacked the built-in affordances of modern games, such as tutorial levels or descriptive text.[5] The simple graphics of the Atari fell into reference-less abstraction without the supporting packaging, manuals, or (in *Swordquest*'s case) comic books. I found the game frightening and impossibly difficult, but, playing in a dark room, I became fixated on it.

I have found, counterintuitively, that specificity of sound and images in games of the dungeon mode is inversely proportional to the amount of fear and suspense I feel playing them. A subjective glyph seems to have more of an effect on me than a 3D rendered monster. Likewise, the idea of darkness represented as a blank area of a map can induce more anxiety in me than the unrendered darkness

3. Robinett became one of the pioneers of Virtual Reality, like others, such as Scott Fisher, who had worked at Atari. Robinett's *Adventure* is not related to the landmark text-based adventure game *Adventure* (1977) by Donald Wood, which was inspired by *Colossal Cave Adventure* (1975), and was notable for its innovative use of ASCII graphics and its non-linear gameplay.

4. As a game produced by Atari for its own console, *Adventure* was not officially permitted to list individual creator credits, and hiding his name within the game (colloquially an "easter egg" in gaming) was the only way Robinett could credit himself.

5. An affordance is a relationship between an individual and the surrounding environment that enables them to perform certain actions. For example, a chair affords sitting, a door handle affords grasping and turning, and a staircase affords climbing (Gibson 2015). Contemporary commercial videogame design depends heavily on these sorts of affordances in order to rapidly orient a player to a game space while retaining attention and engagement.

of a first-person perspective game. The difference is between what is unknown and what is simply unseen. I've struggled to understand why I am currently gravitating towards symbolic representation of spaces rather than specific views, as I consider myself a highly visually oriented person. Rautzenberg perhaps does a better job of explaining how symbolic spaces create affect in dungeon games—

> Images, symbols, names and finally notions are media in which the harsh urgency of reality could be represented; a reality that one could withdraw from because of those very media ... The breadth of reality could be imagined as potentiality.' Image, symbol, name, notion: according to Blumenberg, this is the evolution of medial world apprehension. At the beginning there is the image (not the word!) as a first distancing between mind and world, the basic condition for differentiations between illusion and truth, map and territory. But this sequence is not to be understood as hierarchal. Images are not 'weaker' than symbols, names or notions (that would be blatant Platonism), they are just the first way of distancing from reality. Images come first because, for Blumenberg, humans are defined as 'emphatically visible beings' and it is because of this that the visual sense plays such a primary role in human evolution. (Rautzenberg 2020, 132)

2.3 The Invisible Hiding Place

Gaston Bachelard, a French philosopher and poet, explored the importance of hidden spaces in domestic architecture in his book *The Poetics of Space*. Bachelard argued that hidden spaces, such as attics, cellars, closets, and even wardrobes and drawers, hold a special significance in the human psyche, serving as places of refuge, secrecy, and imagination. Bachelard's hidden spaces are often intimate and joyous, such as the opening of a treasure box or secret drawer. A closed and hidden space is a seed of imaginative, potential energy:

> Sometimes, a lovingly fashioned casket has interior perspectives that change constantly as a result of daydream. We open it and discover that it is a dwelling-place, that a house is hidden in it. (Bachelard and Jolas 1994, 86)

In both my aunt and uncle's home and my grandparents' home, videogames became a sort of extra-domestic space—a crack in a wall that could be passed through to a variable architecture that was connected to and dependent on the 'real' house. In both homes there were good reasons to keep children inhabiting their own separate space. My uncle, who struggled with alcoholism, later took his own life. When I was eight years old, my maternal grandmother's husband—whom I called my grandfather—shot himself in the room where the Atari was kept. After being diagnosed with bone cancer, his employer had terminated his health insurance coverage. That room was called the "mud room" in my family.

It was a transitional space between indoors and outdoors—a space where muddy boots were quarantined, paperwork was done (in a locked roll-top desk) and where children played. It was also a transitional space from the home into the places accessed via the game console. It was also a transitional space from life to the hidden space of death.

Shortly after my grandfather's death I remember one day of being back in the (now cleaned and emptied) mud room playing another Atari game, *Sneak n' Peek* (1982). In my mind it was another dungeon, mapped on the iconography of a family home. The videogame is a version of Hide and Seek, where hiding places (invisible, enterable pockets of space) riddle a house. The visible topology of the environment must be tested (by slowly moving the stick-figure-like player character into each pixel) in order to find the location of hiding places. Two children could take turns hiding and testing the skein of the house for invisible folds. One child playing alone could only search for a computer player over and over. As a child playing alone, it was never your turn to hide. I imagined that this was because the computer already knew where everything was hidden.

Just as the house in *Sneak n' Peek* had permeable walls, the Atari was a portal to other spaces in my grandparents' home. Somewhere beyond the closed door of the mud room, adults were planning my grandfather's funeral. "Thank God for Pac-Man," I remember my grandmother saying through a closed door.

The Dungeon Mode is hidden on the other side of a crack in our world, and inside it we still must painstakingly test the walls of the dungeon in order to understand it. In table-top roleplaying games and in dungeon videogames, secret doors must be searched out on every surface, portals may exist in the floors. I spent hours combing every pixel of the walls and floors of the 1986 adventure video game *Deadly Towers*, a near-universally panned title for the Nintendo Entertainment System (NES) because of its invisible tesseracts between dungeons. There was no warning and no visible crack at the sites of these slippages, just a sudden fade to black and the occasional menacing subtitle "Parallel Zone" when one was touched by the player character, whisking them to a new and unfamiliar depth of catacombs.

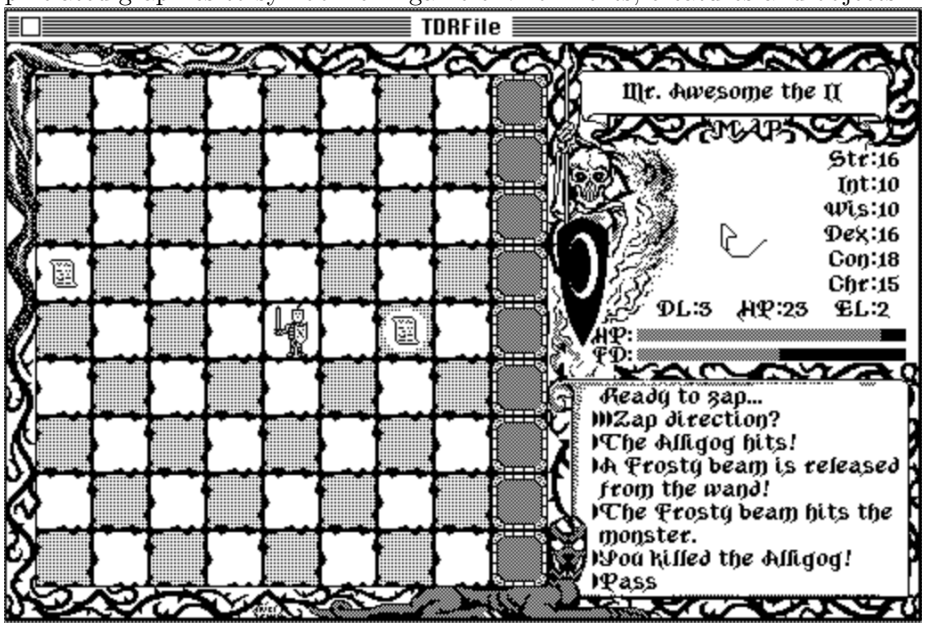
For some, the hidden space of the dungeon is where secret selves can be embodied. A "dungeon" in contemporary terms outside of fantasy games could recall a space of sex play, where roles are assumed and power relations may be inverted. The "closet" and the "dungeon" are both places, figurative or real, where forbidden selves might be compartmentalized away from quotidian spaces.

2.4 The Dungeon Revealed: Exploration-as-epistemology

The early iterations of the beige, all-in-one Apple Macintosh computer were fetish objects to me as I entered my tweens. I glimpsed and briefly interacted with these computers in a few places—the offices of my step-father and the state-employee father of a friend, and in the study of a school acquaintance

during a slumber party. The Macintosh was unlike the other computers I had seen—boxy but oddly anthropomorphic, displaying an icon of itself with a smiling screen every time it powered up. It had (for the time) high resolution graphics in 1-bit dithered black and white, and a graphical user interface that used visual metaphors like documents and folders—a fully symbolic space.

It was on the Macintosh that I first played what came to be known as *Roguelike* videogames. They were mechanically similar in various ways to *Rogue*, a popular dungeon crawl game originally developed by Michael Toy, Glenn Wichman and Ken Arnold while students at UC Santa Cruz (c. 1980). Roguelikes are usually characterized by randomly-generated levels, turn-based gameplay, and permadeath (the player's character dies and the game must start over from the beginning) (Lait 2008). *Rogue* was heavily influenced by the play mechanics, characters and situations of the Table-top role-playing game *Dungeons & Dragons* (Craddock 2015, 42). As in the roleplaying games that preceded them, Roguelike videogames are more often than not set in dungeons, often with the barest hint of a world that might lie outside. More advanced roguelike games included a perspective-based fog-of-war feature, sometimes simulating line-of-sight, allowing walls and obstacles to partially obscure the player's surroundings. The Macintosh was last-in-line to receive these sorts of games, which originated mostly on time-shared institutional computers, and used alphanumeric characters rather than pixelated graphics to symbolize in-game environments, creatures and objects.



The Dungeon Revealed (Woodrose Editions 1987)

The Macintosh game in question was John Raymond's 1986 game *Dungeon of Doom* (and its accompanying, expanded version, *The Dungeon Revealed*). In keeping with the interface conventions of the Macintosh, *Dungeon of Doom*

figured its environments with a pictographic language of pixel-art icons rather than with crude ASCII characters, but its gameplay mirrored other games in the genre; The player descends floor by floor, searching for a magical object that will allow them to re-ascend and exit through an otherwise locked door. During the journey they collect food, weapons and potentially dangerous magical items that must be tested to be understood.

Each new play-session re-jumbles the level layouts and pseudo-magical object names so that every playthrough is different and fresh. Level layouts begin as simple open spaces and become increasingly maze-like and byzantine at deeper levels. There were trappings of fantasy role playing games here, like player classes (Knights, Wizards, Alchemists and the nondescript "Jones", each with their own advantages). What felt very new to me was the corner of the game screen that was devoted to a "map"—really just a blank area that each player movement would fill in with a single pixel line. This turned the act of playing the game into a sort of etch-a-sketch-style drawing. The game seemed defined by what was known and unknown to the player—the map, the items.

In an article that trots through a history of speleological aesthetics in games (while positing that *most* games are essentially 'caves' by virtue of the enclosure of their skyboxes[6]), media theorist Markus Rautzenberg writes–

> Computer games literally and figuratively mediate between map and territory by continuously transforming them into one another, and this is the iconic mode, the ludic condition of interactive digital images. During exploration, map becomes territory, 'place' becomes 'space' and vice versa. But it is one of the defining aspects of ludic mediality that these differences do not become blurred during the performativity of gaming, but on the contrary become perceivable as gameplay devices. (Rautzenberg 2020, 126)

This tells us something specific about the Dungeon Mode, granted we can distinguish between 'space' and 'place'. According to Michel de Certeau (who Rautzenberg quotes at length) 'space' refers to the system of signs and symbols that govern our understanding of the world, while 'place' is the site of lived experience, where people engage with and make meaning from their surroundings (Certeau, Rendall, and Certeau 1984). Many games that I view in the Dungeon mode *are* essentially playable maps that hide and expose themselves, but some include additional representations of what is known about the dungeon, ("mini-maps") as in the game *Dungeon of Doom*. There is a fluid exchange between a game world (territory) and what we know of it (map). Many games have a permanent compendium of monsters and items encountered over the history of all play-sessions, while information that reconfigures from one individual play-session to another—such as the architecture of the dungeon maze, or the randomized 'greeked' names of items not yet used within the play-session—is

6. In 3D game development, a skybox is a technique used to create the illusion of a large and expansive sky in a 3D game world. The skybox is positioned around the game world so that it appears to be infinitely far away, giving the illusion of a vast and open sky.

not preserved. Two kinds of knowledge/memory are created in this schism—the knowledge of the individual player character and a history that spans across play-sessions, something institutional, encyclopedic, but still bounded by the collected experiences of the player.

2.5 Caverns and Shadows

Hans Blumenberg was a German philosopher who explored the role of the cave in human history and philosophical thought. In his work *Höhlenausgänge* (Cave Exits), he argues that caves provided shelter and served as sites for religious and spiritual rituals. They also allowed humans to contemplate their place in the world free from the demands of the outside world.

Blumenberg saw Plato's allegory of the cave as a powerful metaphor for the way humans come to understand reality, but *Höhlenausgänge* inverts the platonic story. In the Platonic cave allegory, prisoners occupying fixed positions in a cave perceive shadows on a wall as the entirety of reality, without ever understanding that the shadows are cast by three dimensional figures beyond the scope of their vision. But the cave in Blumenberg's retelling, is a place where symbols are not merely degraded versions of a hidden reality, but a respite from that reality. Blumenberg's cave is a space where humans can engage in contemplation and reflection, producing an archetype that he calls the "non-hero". Rautzenberg provides us the following translation from *Höhlenausgänge*:

> Culture is and always will be a conspiracy against the exclusive standardization of humanity through the example of the strongest, the most useful and efficient members of society—albeit knowing that without them, nothing would work [...]

Blumenberg's cave provides some respite from survival of the fittest, a place where physically weaker humans can hone other talents:

> Those who are excluded from the hunt become dreamers, storytellers, tricksters, imagemakers, fools, who provide enrichment and entertainment during times between hunting sessions ... Fiction and compensation originate from the same source.

While I am fairly uneasy with sorting people into separate classes of workers and dreamers (even in some allegorical past) I am fascinated by the imaginative power of the cave. There is a strong but possibly under-researched relationship between the subcultures of the 1960's and 1970's, cave exploration, and fantasy media. Both of my parents were also spelunkers—hangers-on of the Texas Speleological Society in the 1960's (local chapters of the Speleological Society are known as *Grottos*). My parents' involvement with the Texas Grotto during those years resulted in a font of stories of exploration and adventure starring a cast of hippy scientists, artists and recreational drug users in caves across the US and

Mexico. 1960's-western-youth-culture's preoccupations with pastoralism and pre-industrial life is not something I have personally researched. I think, however, that there is a strong and self-evident connection between that questioning of modernity and a period fascination with fantasy media like the books of J.R.R. Tolkien, who positioned himself in many ways as opposed to modernism (Stuart 175). The cave is a place outside of time where dreams can occur, but it's also a place inhabited by the troglodyte, the cave-dweller, like Tolkien's character Gollum– a hobbit-like creature who devolved as a result of his long-term possession of a cursed ring of power. One can stay inside the cave too long.

Rosalind Williams writes in *Notes on the Underground*:

> If we imagine going underground, we not only imagine an environment where organic nature is largely absent; we also retrace a journey that is one of the most enduring and powerful cultural traditions of humankind, a metaphorical journey of discovery through descent below the surface. The primary documents for this study will be nineteenth-century fictional narratives that imagine human life in subterranean space. Before looking at these narratives, though, we need to look at the cultural tradition from which they emerge. Long before Virgil's Aeneas was guided by a Sibyl to the infernal regions through a cave on the leaden Lake Avernus, long before stories of Proserpine's abduction to the underworld by Pluto or of Orpheus' descent to the Stygian realm to bring back Eurydice, and long before recorded history, when the earliest humans drew the bison and bears they hunted on the walls and ceilings of caves, they must have told stories about the dark underworld lying even deeper within the earth. Even in environments that lack caves-the Kalahari Desert, and the flat open landscapes of Siberia and Central Asia-the preliterate inhabitants assumed a vertical cosmos: sky, earth, and underworld. The underworld might be a region of water, or fire, or a counterheaven (suggested by the way the sun and stars dip below the horizon), but in any case nature was assumed to be as deep as it was high, its major axis vertical. In this richly symbolic universe of the past, vertical movement was far more significant than movement in the horizontal axis. Narratives about journeys to the world below were inherently sacred. (Williams 2008, 7)

After *Dungeon of Doom*, the next roguelike game I was exposed to was *Moria* (1983) by Robert Koeneke (1957-2022). In the progression of Roguelike games, *Moria* was the first to feature mazes that extended beyond the edges of a single screen (as *Adventure* had). Like other early videogame dungeons, *Moria's* subterranean architecture serves no purpose but to obstruct, detour and torture. The creatures that do seem to dwell there seem to wait their whole lives for a trespasser to attack.

Mac UMoria 5.5.2 (Koeneke-Wilson 1987)

The videogame dungeon is often reflected in a primitive epistemology of known and unknown spaces and items, light and shadow. The mazes of *Moria* can't be learned, as they are reconfigured in each new play session, maps wiped clean, knowledge of magic items forgotten. Koeneke was both a computer scientist and a spelunker—his experiences as a real-life cave explorer informed how darkness was represented in the game. *Moria* was the first Roguelike to employ line-of-sight mechanics that modeled darkness and occlusion, creating the feeling of rounding-a-corner to be confronted with the unknown that one might experience in a network of caves. *Colossal Cave Adventure*, the seminal 1975 text-based computer game, was also created by a cave explorer—William Crowther (Crowther's game is cited by Toy and Wichman as an inspiration for *Rogue*, although the games are very different).

2.6 The Grail

Games within the Dungeon Mode often feature a quest as primary motivation for play, in harmony with the fantasy media they inherit from. Intentionally or unintentionally, meaning accompanies the quest item or act chosen for a game backdrop. Along with that meaning is a certain amount of affect, as a player brings their own context into the stated quest.

Modern videogames have their roots in a few core structures, many of which

originate from tabletop role-playing games (TTRPGs). The thematic elements of a dungeon crawl and the dice-based mechanics of simulated combat, central to many Dungeon Mode games, trace their lineage back to TTRPGs like Dungeons & Dragons. As Espen Aarseth, a noted game scholar, points out, digitizing these role-playing mechanics introduces challenges to player motivation. Quests, which mimic elements of narrative, are introduced to boost player motivation, mitigating the issues arising from the absence of direct referee-player interaction (Aarseth 2005, 503).

The *Swordquest* series of Atari 2600 games was part of a larger promotional contest called the "Swordquest Challenge." Each game was centered on a different element ("Fireworld", "Earthworld", "Waterworld", and "Airworld"), and players embodied a warrior on a mission to overcome various challenges and puzzles to win the ultimate prize—a real-life, solid-gold Sword. The series was marketed as featuring a grand prize pool of over $150,000 in cash and gold objects, crafted by the renowned commemorative coin manufacturer, The Franklin Mint. Despite heavy advertising in Atari's publications, the fourth game, Airworld, was never officially released due to Atari's financial struggles in 1983 and 1984. Consequently, the promotion was discontinued and the remaining prizes were never awarded. They were likely returned to The Franklin Mint and melted down (Grundhauser 2016). [7]

While playing *Swordquest* as a child, I don't remember being joyfully enticed by a possible prize, but there was some sort of gravity added by it to the act of play. The possibility of winning gold somehow made playing the game a kind of child's pantomime version of work.[8] Reaching the prize would link it to the real world in a way that I could only imagine as a sort of eschaton where neither the game world nor the world of my life would need to continue. I imagined here the same sort of abrupt fantasy ending in which Arthur is taken to Avalon or Frodo to Valinor. I could also imagine the inverse—to grasp the prize might be to suffocate under the weight of the dungeon. To dematerialize or to become immeasurably heavy. To reach the dungeon's goal would mean to gain total knowledge of it—to ascend from being a microbe in its gut to becoming its new architect, to exit Plato's cave, blinded by the sun.

While *Moria* ends with a confrontation with the Balrog (a monster at the lower depths of Tolkien's mines of Moria), most classic roguelikes have a magic object as their primary goal.[9] Many roguelike games, such as the influential *Nethack* and the streamlined modern roguelike *Brogue* have included 'The Amulet of Yendor' as their ultimate prize, adopted from Toy and Wichman's *Rogue*. Be it treasure or confrontation with power, the quest object of roguelike games lies at the bottom of the dungeon. In many roguelikes, the player must then

7. In 2022 a recreated version of the final game was produced by developer Digital Eclipse for an Atari retrospective collection called *Atari 50*.

8. Looking back at that experience I wonder about the contested border between play and work, especially in light of games like *Roblox*– a multiuser game construction set tied to a real world economy by way of an in-game marketplace. *Roblox* is a powerful creative tool, but it is targeted specifically at, and depends on, the labor of children.

9. *Angband*, another influential roguelike descended from Moria, also culminates with a battle rather than the acquisition of an artifact- this time with Tolkien's evil god Morgoth.

ascend back through the levels with their prize to win the game. If we imagine a journey to the bottom of a Dungeon as a trip into the past, the quest object serves as a point of origin, a final piece of knowledge, or a talisman of the power that built the dungeon. The Orb, the Sword of Fargoal, the Amulet of Yendor, are all also keys to escape the dungeon. In *Moria* and *Angband* and many of their descendents, the player is free to exit the dungeon to a "town" level where supplies can be purchased. The goal of those games is to attack and unseat some great power, not simply to escape.

In fantasy literature there are countless examples of quests for magic objects. I am most interested in the object as a talisman and a symbol of power, and what the story implies about power and hierarchy. In Sir Thomas Malory's *Le Morte D'Arthur* and other retellings of the Arthurian myths, the sword *Excalibur* is a symbol of the divine right of kings– invincible in battle (when used justly). Wounded in battle, King Arthur returns the sword to the Lady of the Lake, with the decree that it would reveal itself again to another divinely ordained king of Britain in the future.

The Golden Cradle of Libuše is an object of power in Czech mythology. According to the myth, the cradle was used by the prophetess and princess Libuše, who was said to have predicted the founding of Prague. The cradle symbolized the legitimacy of the ruling dynasty. Unlike Excalibur, it is not a weapon and does not confer power in battle. Instead, it represents the power of prophecy and divine knowledge. On suffering a vision of a future filled with ruin and bloodshed because Libuše had surrendered rule to a man, she sank the cradle of her firstborn to the depths of the Vltava river, prophesying that it would return when a just ruler of the Czech people was born. Both of these myths have been used to evoke a shared national identity and a mythological background to accept a pre-ordained ruler. The myth of Libuše was one of the many folk tales assembled into the book *Staré pověsti české* (Ancient Bohemian Tales) by Alois Jirásek. It was assembled as part of a post-Austro-Hungarian Empire Czech nation building project, which involved codifying a literary written language from spoken Bohemian and Old Czech orthography, as well as cementing pre and post Christian myths that could form the foundation for a national identity[10].

The Arthurian legends, Tolkien's artifacts, and Libuše's cradle all contain narratives of hereditary rulers, underlining ideas about power and the righteousness of those who wield it. Concepts of absolute power, just rule, and criteria for leadership recur in these tales. The quest item's role as both an unreachable objective and a corrupting symbol of power are recurring themes I will revisit in the fourth chapter, Grotto.

10. The branch of my family that I have had the most personal interaction with were Czech immigrants to Texas, farmers who left Moravia during the wars of revolution that led to the formation of the Czechoslovak state. My family spoke a dialect of Moravian "Texas Czech" that prefigured the codification of the Czech language exemplified by Jirásek's book, but which they spoke as a primary language, along with other Texas Moravians, until my grandmother's generation.

2.7 Fantasy

Named after the underground dwarven ruins of J.R.R. Tolkien's *The Lord of the Rings* books, *Moria, (*and its successor *Angband*) adopted nearly all of their fantasy elements directly from Tolkien. Tolkien's Hobbit books have had an oversized influence on other fantasy media.

That influence increased through the 1960's and 1970's, and became a constant presence in the development of tabletop gaming and then digital games, movies, and toys. In a passage of her book *Race and Popular Fantasy Literature,* Helen Young notes:

> The influence of Tolkien's writing, particularly The Lord of the Rings, on Fantasy role-playing games is likewise immense. Gary Gygax and Dave Arneson's 1974 Dungeons & Dragons imitated Tolkien's work so closely that it infringed copyright and elements had to be changed for later editions under threat of legal action. (Young 2015, 18)

There is a bottomless well of derivative knock-offs and uncritical lookalikes of Tolkien's fantasy works. As a child, my mother read *The Hobbit* aloud to me, despite her acute dyslexia.[11] As a result, the trappings of Tolkien's fantasy world seemed part of the unquestioned foundation of imaginative play to me when I was a child.

Dr. Rosemary Jackson's book *Fantasy: The Literature of Subversion* explores the idea that fantasy is not just a genre of literature, but a distinct literary "mode" that serves a particular cultural function. According to Jackson, a literary mode is a way of organizing cultural and imaginative practices that shapes the way we think about and understand the world.[12]

In conceptualizing my game 'modes' for this study, I wanted to make a similar proposition to Dr Jackson's—that, like fantasy literature, videogames can be a subversive space that challenges dominant cultural assumptions and values. However, games can (and do) also conform to the status quo—reinforcing dominant values and assumptions in the immutable rules of a game world or backgrounding them in aesthetic and narrative cues. The performance of games, their mechanics, the interactions of their communities, embedded story elements like quests, character representations, and player contexts, all brew a complex soup where meaning is encoded and decoded.

Fantasy as a literary mode is essentially bottomless, and each work of fantasy is conditioned by the values and intentions of their authors. Yet, as scholars like Roland Barthes and Umberto Eco have demonstrated, the decoding process is essentially open. Our position as readers, just as our position as players, creates something new when we encounter a fantasy work, situated somewhere between

11. "I may have skipped over some dwarf songs," my mother has admitted of her otherwise heroic feat.

12. Jackson's usage of the word mode compliments my usage, but is not its source. She stresses that fantasy as a mode is defined in its relation to the real, whereas genre is a schema limited to specific themes, plot structures, and conventions.

the author's situation and intent and our own. The fantasy of the Dungeon Mode is a specific subset of Fantasy. Heavily influenced (or burdened) by Tolkien, it brings us into an encounter with Tolkien's specific situation and his ideals.

Jackson (using terminology established by philologist and literary critic Tzvetan Todorov) places the fantasy works of Tolkien and his contemporary C.S. Lewis as "marvelous" or "faery" narratives. Jackson finds these works particularly repressed and filled with nostalgia and "religious longing"(Jackson 2008, 5):

> The current popularity of J.R.R.Tolkien's The Hobbit and The Lord of the Rings indicates the strength of a romance tradition supporting a ruling ideology. Tolkien is nostalgic for a pre-Industrial, indeed a pre-Norman Conquest, feudal order. He makes a naive equation of industry with evil, referring with disgust to the 'materialism of a Robot Age' and looking backwards to a medieval paradise, his secondary worlds providing coherence and unity. An Oxford professor of philology, Tolkien allies morality and aesthetics: virtue lies with a beautiful Elvish Speech, evil with an ugly Black Speech. [...] For Tolkien, the only way is backwards: the chauvinistic, totalitarian effects of his vision are conveniently removed from present material conditions, by providing an 'escape' from them. He is repelled (like [Lewis] Carroll) by the physical and material. (Jackson 2008, 91)

Contemporary American fantasy media—Movies, television, games, often ape Tolkien directly rather than the Norse myths that his books drew inspiration from.[13] This might serve as a starting point for understanding the preponderance of English accents in fantasy media like television, film and games. Even in worlds completely secondary to our own, the English accent somehow means fantasy for Americans. Popular explanations for this tend to suggest that the English accent seems exotic yet accessible to Americans (Wheeler), that it lends an air of sophistication to narratives that might otherwise be considered low-brow or juvenile. It may be a foregone conclusion that American Fantasy media set in a Medieval feudal society might be filled with English accents, but even representations of the Roman Empire (Such as HBO's series *Rome*) are filled with English accents.[14] Englishness has somehow become a proxy for some sort of imagined classical past.

Like many European-Americans, I find it difficult to trace my ancestry back much further than a handful of immigrant passages from Europe. That transition has symbolically become a horizon between a modern conception of time and some fantasy pre-history filled with knights and basilisks.

13. Much can be said about the different approaches that Tolkien and Richard Wagner took to adapting these myths, but I'll leave this to more qualified scholars.

14. Since much contemporary prestige television has worked to give an air of class to violent and explicit genre fiction that might otherwise be considered exploitation media, *Rome* may be borrowing heavily from the BBC's series *I, Claudius*—hence the presumed acceptability of English-accented Romans, even when produced by macho American filmmaker John Milius.

Fantasy media is based on the manipulation of myths. It quietly alters some unspoken fairy tale to produce a substitute for concrete material origins for who European Americans really are, how they got here, and by what means they inherited the positions they now hold. Imperial feudalism and a preoccupation with kings and hierarchies are prominently embedded in fantasy worldbuilding. [15] They have, as a result, become an assumed backdrop to the Dungeon Mode of games. A journey to the depths of a dungeon can be imagined as a transgression either against, or at the behest of a king. Such a journey is an invasion of a dark and inhospitable past with the intention to righteously loot treasure and learn secrets. In chapter four, I explore how I have applied the Dungeon Mode to an exploration of my own family history

The Tombs of Atuan by Ursula K. Le Guin (the second book in her fantasy series *Earthsea*) operates well within the boundaries of Jackson's "marvelous" subcategory of fantasy, but with a substantially different perspective and style than Tolkien. The book follows a young girl, Tenar, who is taken from her family and raised to become the high priestess of the eponymous tombs—a labyrinthine network of tunnels and chambers, filled with darkness and shadow, home to the "Nameless Ones".

Darkness is a constant presence in the *Tombs of Atuan*. The tunnels and chambers are poorly lit, and Tenar spends much of her time in the dark. The darkness is both a source of fear and a source of power. The Nameless Ones are able to move through the darkness with ease and can use it to hide from their enemies. Tenar, as the high priestess, is also able to use the darkness to her advantage. She is trained to move through the Tombs with confidence, and she is able to use the shadows to hide and observe her surroundings. The darkness in the Tombs is not just a physical presence but also a metaphor for the unknown and the unknowable. Tenar's entire life is shrouded in darkness, both literal and metaphorical. Tenar is exalted and idolized, but knows nothing of life outside the tombs and its surrounding citadel. While she has some power as a priestess, she is a slave to the religious order that forced her title upon her.

The *Earthsea* books inhabit the same "Marvelous" subgenre of Jackson's Fantasy mode—they take place in a "second" world, with feudal nations in conflict, ruled by kings, filled with magic and supernatural beings like dragons. They do provide a texture of internal candor and characterizations that feel more visceral and immediate than Tolkien's. I found *Tombs of Atuan* interesting because much of the novel was spent in a subterranean labyrinth. I was also especially intrigued by how it backgrounded the hero of the first book and told the story through the eyes of Tenar, who moves through the dungeons with assured ease while the primary hero of the series, the wizard Ged, lies trapped within it, wholly at her mercy. *Tombs of Atuan* is so strikingly similar to Roguelike games

15. Zach Blas is an artist whose work often explores the intersections of technology, power, and the body. In his piece "Metric Mysticism," Blas critiques the technology company Palantir (named after an all-seeing magical crystal ball from Tolkien's *Lord of the Rings*) and its role in creating surveillance technologies for government agencies. Blas shows how data is recast as a transcendental truth accessed by corporate and state power by evoking fantasy names and tropes (*Zach Blas Performance Lecture*).

(especially in its narrative usage of hunger and darkness) that it was the topic of a talk at the 2021 Roguelike Celebration conference (*Noah Swartz - The Tombs of Atuan*). I am struck by the perspective of Tenar, a child who has mastered her corner of the dark but is helpless outside it. It's an unusual position for a child—one that harmonizes neatly with my childhood experiences of digital games.[16] It's curious that features of the Dungeon Mode, copied whole cloth from Tolkien, find instead a closer relative in *Tombs of Atuan*, a later work that contrasts texturally so much with Tolkien, while dealing with the same genre conventions. I think this is a subtle effect of taking an adventure story in which danger is constantly signposted but safety is assured and turning it into a game performance that almost always ends in failure and death of the player. In the case of games with permadeath as a feature, this carries some weight as well. We can say as a result of this dramatic shift in affect from these same-genre works that, while a dungeon videogame can be played in the Dungeon Mode, *The Lord of the Rings* would be very difficult to *read* in the Dungeon Mode.

2.8 Disorientation and Darkness

Phenomenology, as defined by the Moravian philosopher Edmund Husserl, Maurice Merleau-Ponty, and others, is the study of appearances or sense impressions– "the experience of experience." Humans seem to be oriented certain ways towards some objects (expressing awe or sublimity towards a mountain or storm for example, or toward a tool). In Husserl's view, all consciousness is intentional, meaning that consciousness is always directed towards something. This intentional orientation is fundamental to our experience of the world, and it allows us to make sense of the objects around us. Husserl believes that this intentional orientation is what distinguishes conscious experience from mere sensation or perception (Husserl 1980, 1:64).

For Husserl, disorientation is a state in which the intentional orientation between the subject and the object of consciousness is disrupted or disturbed. This can happen when there is a breakdown in the normal flow of conscious experience, such as when we encounter something that doesn't fit into our existing categories or expectations, or when we experience a strong emotional response that overwhelms our ability to understand or make sense of what is happening.

This might happen, for example, when we encounter a new and unfamiliar situation, or when we are confronted with information that challenges our preconceived ideas and beliefs. On the one hand, it can be a deeply unsettling experience, as we struggle to make sense of things that we previously took for granted. On the other hand, however, it can also be an opportunity for growth and discovery, as we are forced to confront our assumptions and rethink our understanding of the world.

The Dungeon Mode of gaming includes the domestic spaces in which the

16. John Williams Gardner's novel *Grendel*, a retelling of the epic poem *Beowulf* from the perspective of its eponymous monster, is another interesting literary example of a phenomenology of darkness and otherness.

games are played, extending outside of the frame of the screen to include the viewer. Disorientation occurs when the normal flow of conscious experience is disrupted, leading to a breakdown in understanding. The Dungeon Mode is a perpetual state of disorientation, always seemingly resolving before it is once again destabilized. Having this space of disorientation linked to a quotidian space is somewhat like discovering a new and unfamiliar door in a home. Entering the dark passage beyond it and looking back can create a sense of Jamais Vu.

Queer Phenomenology is an interdisciplinary look at the phenomena of disorientation and how it is semantically and experientially linked to otherness and queer and minoritized identities (Ahmed 2006). Ahmed's work has been referenced in games studies texts before (Ruberg 2020), and her painstaking inventory of perspectives in the domestic space have been valuable to my personal conception of the Dungeon Mode. Ahmed critiques Husserl's phenomenology as assuming a heterosexual cis-male subject that is situated in a world that is already pre-given and fixed. In her view, it is a phenomenology that assumes an able (male, white) body, privileges vision, the availability of its objects, and disappears history and materiality.

> I have noted that phenomenology is full of moments of disorientation. And yet, such moments are often moments that "point" toward becoming orientated. As noted earlier, Merleau-Ponty, following Husserl, suggests that the "I can" proceeds from overcoming disorientation, from reorienting the body so that the line of the body follows the vertical and horizontal axes. Such a body is 'one that is upright, straight, and in line. The straight body is not simply in a "neutral" position: or if it is the neutral position, then this alignment is only an effect of the repetition of past gestures, which give the body its contours and the "impression" of its skin. In a way, the utterance "I can" points to the future only insofar as it inherits the past, as the accumulation of what the body has already done, as well as what is "behind" the body, the conditions of its arrival. The body emerges from this history of doing, which is also a history of not doing, of paths not taken, which also involves the loss, impossible to know or even to register, of what might have followed from such paths. As such, the body is directed as a condition of its arrival, as a direction that gives the body its line. And yet we can still ask, what happens if the orientation of the body is not restored? What happens when disorientation cannot simply be overcome by the "force" of the vertical? What do we do, if disorientation itself becomes worldly or becomes what is given? (Ahmed, 2006, p. 84)

Disorientation is not experienced in a universal way– some bodies are given affordances to spaces that others are not, even in darkness, even in a place where one does not know the language. What does it mean to enter a space where a mental model of a new 'self' must be constructed in concert with a model of a new space? It would be a mistake to frame this experience as being separate from

the orientation and body of the player who reaches into this new and unfamiliar space, like a child reaching into a Halloween-box to imagine the noodles and peeled grapes they touch are eyes and worms. Through imaginative play we do not escape ourselves and our situations, but we may be several steps removed from simply being in a dark room in a familiar home. For many, childhood can be its own form of disorientation, a game, even one that intermittently and cruelly tips itself back over into incomprehensibility, is still a solvable puzzle.

Disorientation in roguelike games takes on specific forms—while the dungeon space is understood as a map being progressively drawn out as the player character traverses it, the function of death in the game means that in each playthrough the dungeon has rearranged itself, and must be relearned. Drug effects are playfully included in the mechanics of many roguelikes, from *Angband* to the modern *Brogue*—a sampled potion may be a potion of hallucination that throws the symbol-set of the game into upheaval, each glyph representing a monster or item changes each turn, representing things the player may not have ever encountered. A rat might turn into a dragon for a moment, making strategizing difficult. A toad monster in *Brogue* induces these effects as an attack. The contemporary 3D maze exploration game *Catacombs of Solaris* by Ian MacLarty does away with all trappings of game mechanics (such as enemies or goals) and instead periodically paints the plane of the game screen back to the surfaces of the 3d objects that project upon it. This creates a queasy, mind-bending, psychedelic effect that reminds the player that even a three-dimensional game is a collapsed two-dimensional illusion when played on a single screen. The constant swapping of what-projects with what-is-projected upon is so disorienting that simply stumbling through an empty maze– or rather a maze that is filled with itself—is more than a player can comfortably handle.

The gulf between *Rogue* and *Catacombs of Solaris* is 40 years wide and filled with thousands (if not uncountable) "dungeon" games that experiment with perspective and mechanics in as many different ways. What we see more often that not across them is an attempt to rationalize a space that defies and disorients the player. Players attempt to traverse, map, catalog, clear and loot a folded, dark, reconfiguring space that interferes with their efforts. A sort of cellular logic of active learning enacted by the player is counteracted by an entropic noisy active forgetting enacted by the dungeon.

2.9 Hunger

Roguelikes, starting with the 1985 update (version 1.0.3) of the game *Hack* (Craddock 123), often include hunger as a game mechanic. Previously, videogames had often used a health meter—reduced by damage from enemies and restored by collecting food items. Roguelikes like *Hack* and it's famous successor *Nethack*, used hunger as a separate quantity from health, one that ticked down with time and could be held at bay by collecting food. *Nethack* innovated on this mechanic by causing the rate of hunger to increase as a character becomes more powerful, balancing difficulty and strength. *Dungeon of Doom* was the first game I had

played in which a small thermometer-style bar measured how close to starving the player character was. Since escape in the game was impossible until the goal was reached, scattered bundles of food had to be found to survive. Food scarcity became a sort of clock—the player had to balance the advantages of carefully combing each level for useful items against the fixed amount of food (and its increasing scarcity at lower levels).

Dr. Rosalind Williams' book *Notes on the Underground: An Essay on Technology, Society, and the Imagination* explores the relationship between technology and society, and how the imagination shapes our understanding of both. In her text, Williams argues that hunger, both physical and metaphorical, is a key theme that runs through many literary works that explore the idea of an underground world:

> Subterranean surroundings, whether real or imaginary, furnish a model of an artificial environment from which nature has been effectively banished. Human beings who live underground must use mechanical devices to provide the necessities of life: food, light, even air. Nature provides only space. The underworld setting therefore takes to an extreme the displacement of the natural environment by a technological one. It hypothesizes human life in a manufactured world. What would human personality and society look like then? (Williams 2008, 5)

For Williams, underground worlds, which were a preoccupation of early fantastic literature, could be seen as a vision of a technological future in which humanity is encapsulated and separated from the natural world. Williams sees the future in popular conceptions of subterranean worlds, whereas I see an equally inhospitable past.

Hunger is not necessarily the primary motivation of games played in the Dungeon Mode, but rather a timer that gives urgency to the player's quest. Thorough sweeps of dungeon levels are measured against a slowly dwindling hunger meter that presses the player on. Scarcity defines the dungeon though, it is completely separate from natural resources, unlike games of the *Frontier Mode*, which often allow for hunting or even farming. Hunger modulates the way that a player acts in a dungeon, encouraging risk-taking, increasing the stakes of play-choices. A dungeon raider is a desperate armed scavenger with a Sword of Damocles dangling overhead. To extrapolate this play mechanic to our wider lens of the Dungeon Mode (which overlays a symbology of exploring the past over the rhythms of dungeon exploration)—hunger is a privation that changes how we access and engage with the past. For me, the ticking clock of play-hunger is simply an attention to time itself, the overwhelming feeling, when surveying hundreds of lives collapsed into points on a map, that my own life is rushing past, and that I will never realistically reach any understanding of history and my own relationship to it.

2.10 The Visionary Architecture of the Dungeon

Visionary Architecture is architectural imagining, a proposition of place, often positioned as futuristic or utopian. Some famous examples of these sorts of visionary projects are Étienne-Louis Boullée's *Cenotaph to Newton*, a proposed 500-foot concrete spherical planetarium, and the work of Brodsky & Utkin, Soviet era Russian architects who produced a series of hand-drawn, ink-on-paper architectural fantasies featuring whimsical and often absurd elements, such as a palace that sits atop a giant human hand or a lighthouse that is perched on the back of a giant fish. In chapter two of this text, "The Arcology Mode", I'll explore a few examples of modernist visionary architecture that has shaped the popular conception of the future, binding visionary architecture science fiction tropes, utopianism and often authoritarianism. Numerous visionary architectural projects compare to videogames in illuminating ways, such as the unusual work of Arakawa and Gins, who proposed baffling, inaccessible obstacle-course-like structures that they suggested would extend the lives of their inhabitants. For our model of the Dungeon Mode of games however, the work of Giovanni Battista Piranesi (1720-1778) seems especially relevant.

Piranesi was an Italian artist and architect who is known for his series of etchings of Roman ruins, and for a series of visionary architectural etchings called *Carceri d'Invenzione* (Imaginary Prisons). These etchings depict vast, labyrinthine structures with towering, intricate columns, staircases, and bridges. The prisons are often devoid of human figures, giving them a sense of eerie emptiness and abandonment. The etchings have been interpreted in many different ways, with some seeing them as a commentary on the social and political systems of Piranesi's time, while others view them as purely imaginative works of art. Aldous Huxley felt their pointlessness brought them close to abstraction, and that they represented some internal psychological state (Roncato 2006, 7). Piranesi's structures are a hostile architecture that exist to strike-with-awe, entrap, torture, and disappear their tiny inhabitants, just as a videogame dungeon might. In addition to being a tomb, vault, or fortress, we imagine the dungeon as a carceral space, a place of punishment and confinement, a prison. When we think of *visionary prison architecture* we think of an architecture of both containment and exposure—of the Panopticon.[17] But the visionary architecture of the dungeon is an architecture of losing, of darkness, of occlusion, it is the architecture of the oubliette, of the pit. A dungeon, completed by some great power, has fallen to ruin and been forgotten. Those who live within it are subterranean, animalistic, practitioners of strange doctrines. Cave-dwelling albinos who work, insect-like towards meaningless goals, hoarding wealth that

17. The term "panopticon" was first introduced by the English philosopher and social theorist Jeremy Bentham in the late 18th century. The panopticon was originally conceived as a type of prison design in which a central watchtower could observe all of the prisoners in their cells, without the prisoners being able to see the observer. Bentham saw the panopticon as a way to create a more efficient and cost-effective prison system, as well as a means of controlling and reforming prisoners.

can have no value, for it is never spent.

It may be hard for some to imagine a dungeon as a visionary architectural project. In fantasy literature, dungeons are often ancient ruins rather than futuristic spaces, and why should an architect want to invent an inhospitable, ruined past in any detail beyond the facade of a movie set? Even in asking this question we have linked the dungeon to the past—and as a result we have spatialized time—to descend into the dungeon is to descend into the past (with unsure footing). Stratas of mined time filled with fossilized records present themselves to us as they might to an archaeologist. This is the domain of videogames within the Dungeon Mode.

Manfredo Tafuri (1935-1994) was an Italian architect and architectural historian known for his critical analysis of architecture and its role in society. As a Marxist, Tafuri emphasized the importance of understanding the historical and social context of architecture in his writings, and he often focused on the relationship between architecture and power. Tafuri was interested in the ways in which architecture can serve as a means of social control and the ways in which it can be used to reflect and reinforce dominant ideologies. I find Tafuri to be a challenging writer, but with some careful readings he offers a lens on architectural avant gardes and visionary architectural projects—which have also become a preoccupation of my model of game modes.

Piranesi was among the architects and artists that Tafuri wrote about. The neo-classical architectural forms of Piranesi's dungeons suggest to Tafuri, "that this universe is both that of republican justice and that of imperial cruelty" (Tafuri, *The Sphere and the Labyrinth* 49). In my view, their romanesque arches and imposing-but-pointlessly-intersecting facades suggest some infinitely vast storage space of ancient architectural shapes left to crumble in the dark, waiting for the coronation of some new emperor cruel enough to unleash them on the world once again. Piranesi is discussed at length in games studies writing and may be the first to spring to mind when discussing videogames and visionary architecture in the same breath. Ario Barzan, writing for *Killscreen*, says of *Carceri d'invenzione*:

> [...] Piranesi's prisons, crudely masoned, fragmented, providing no comforts, and spotted by minor, shaded figures—dig at a deeper notion. They confront us with a worldview that disassembles the European Renaissance's anthropocentrism, exemplified in Perugino's painting, "Delivery of the Keys," whose symmetries and centralized perspective assure us of a fundamental, logical order in which humans play a part. [18] Conversely, to look at these prisons and their inhabitants is to sense that this world's forces are guided by the architecture and its mechanisms, rather than by the people who've been reduced to objects themselves. (Barzan 2015, 4)

18. Perugino was an Italian Renaissance painter who is best known for his frescoes and altarpieces. One of his most famous works is the painting "Delivery of the Keys," which depicts the moment when Jesus gives the keys to the kingdom of heaven to Saint Peter.

Dungeon Mode videogames, while inheriting the trappings of marvelous fantasy literature, unbalance the optimistic proposition of their source material—that heroes, representing an underlying order and goodness in the universe, will prevail. To finish the proposed quest of a game within the Dungeon Mode is a near impossibility. In most dungeon mode games the developer is not the god or king that a hero quests on behalf of, they are a demiurge, a flawed architect that delights in the hero's torture.[19] In this architectural pessimism we can see a counterpoint to a utopia different from the one proposed by modernism—a medieval fantasy utopia that never existed but reifies itself over and over in popular culture. One of Tafuri's critiques of Utopian currents in modernist architectural avant-gardes was that they were motivated by fear, hoping that rationality could create a stable future in which the present is projected, delivered from risk (Tafuri 1976, 52). The dungeon is the mine, prison and crypt dug in order to produce the regressive utopia of the righteous fantasy empire. A utopia where risk is mythopoetic rather than real, and always resolves in favor of cosmically ordained, hereditary power. In the dungeon mode, the exact same fantasy is given counterpoint simply by ending the story in failure. In giving over the narrative control from a storyteller to a system that accepts the proposition of risk and danger at face value, and plays it out as such.

Foucault introduced the concept of *heterotopias* in his 1967 lecture "Of Other Spaces." Heterotopias refer to spaces that are "neither here nor there," meaning that they are neither a part of the ordinary world nor a part of the imaginary world.

According to Foucault, heterotopias are "counter-sites," (Foucault 2019, 24) meaning that they exist in opposition to the dominant social order. They are places that function outside of the usual norms and rules of society and allow for alternative possibilities to emerge.

It's not new ground to talk about the general heterotopic nature of videogames (see the excellent "Heterotopias" digital zine (Priestman and Martin)), but returning to this idea is useful when considering the Dungeon Mode. Before I had been introduced to the concept, I had already conceived of my own dungeon game as being carceral, a ritual space, and a space outside of time, all at once—fulfilling criteria for several of the different types of heterotopias that Foucault identifies in his text [20].

Tafuri found Piranesi's *Carceri* etchings to be explicitly heterotopic (Tafuri 1987, 40). Their montage of discontinuous forms extend into infinite space, enveloping the spectator, divorced from meaning or usefulness, a tectonic uplift of jumbled history that smashes utopian dreams into valuelessness, opening an unmendable fissure between signifier and signified.

Analyzing games through the perspective of Dungeon Mode provides insight into the meanings of their interactive architecture and exposes their inherent ethical systems, power hierarchies, and both individual and collective histories. By combining fantasy elements with intricate ethics and power structures, dungeon

19. With the notable exception of the *Ultima* series of games, in which the developer, Richard Garriott, inserted himself as king.

20. See chapter 4: *Grotto*

games open doors for critiquing and reevaluating concepts such as legitimate hereditary rule, patriarchy, and biological essentialism. By reconnecting fantasy games to the societal and cultural context they originate from, and understanding the borrowed fantasy tropes and their inherent, often unquestioned ideas, we enhance the creative potential of our symbolic interactions within these virtual worlds. Specifically, videogame dungeons can serve as influential metaphors for our understanding of power and history, and our relationships to these concepts.

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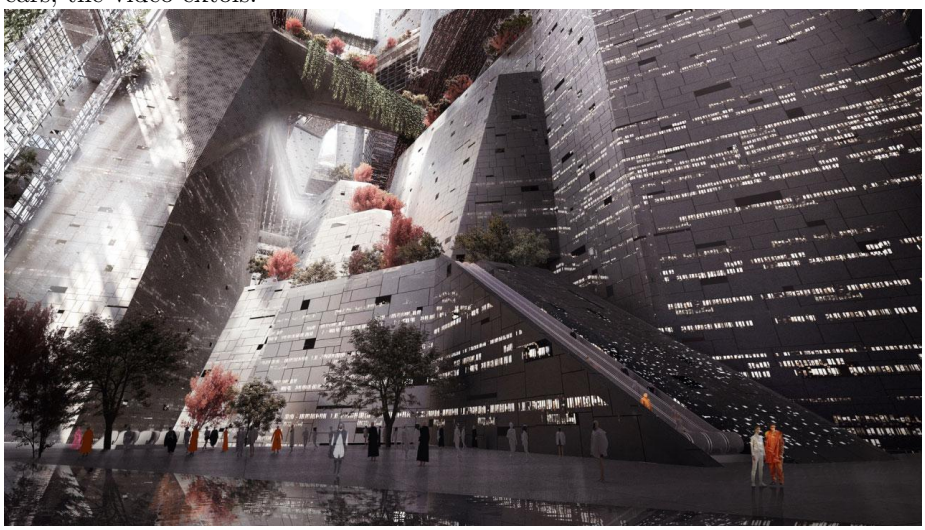
Chapter 3

The Arcology Mode

3.1 Megastructures

On July 25th, a series of releases from the Saudi press agency announced plans to create a linear megacity called "The Line", part of the Saudi state's NEOM project, a legal and economic special area in northwestern Saudi Arabia. Visualizations of the project had already been disseminated in various forms in 2021—they depict a towering wall-like structure mirrored on either side. The structure is both a wall and a mirage, promising to disappear into the surrounding desert, creating a utopia for humans (and a dystopia for birds). The press releases promised, like many in a long lineage of visionary architectural projects, that The Line would be environmentally harmonious, "a zero carbon city" (Reuters 2022). Such estimations naturally overlook the impact of the accumulated 100 to 200 billion dollars of petrochemical profits that would be funneled towards the Line's creation. 3D modeled promotional videos posted online for the project could be easily mistaken as a stealth advertising campaign for a videogame—in one video an actress escapes from a gray and polluted urban wasteland, leaping into The Line's gleaming eco-mall interior, where she is granted the power of flight. Nine million people will be able to live in the structure without needing cars, the video extols.



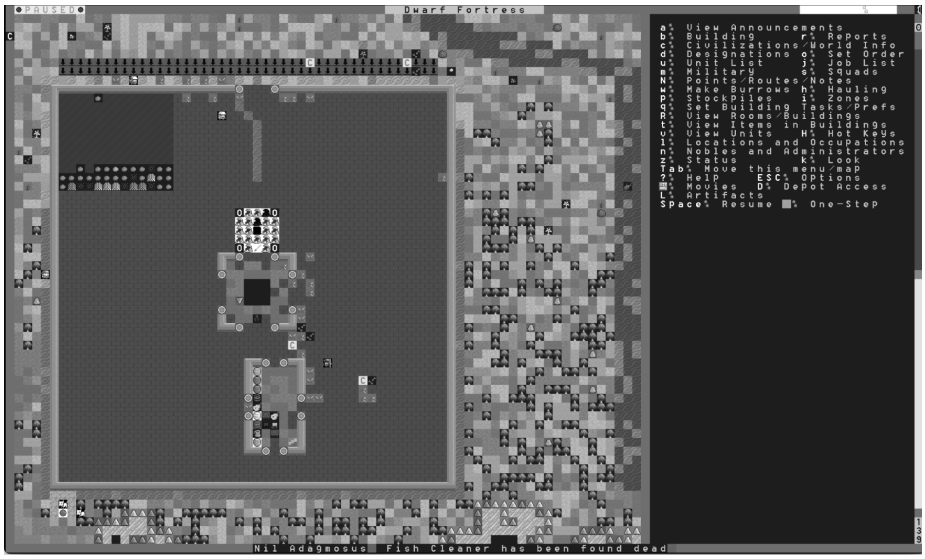
Visualization of the interior of The Line (NEOM)

As I was watching these videos, my own visionary megastructure was collapsing, an intricate, vertically-stacked city wrapped around a central shaft,

filled with temperamental fantasy dwarves. This is a city built in the videogame *Dwarf Fortress* (2002, 2023 Bay12Games). I had started building my fortress as the pandemic lurched into its second year, slipping from a temporary emergency into a seemingly permanent fixture of the increasingly inhospitable world outside. Inside *Dwarf Fortress*, a plumbing disaster, a series of overly ambitious construction projects, and a handful of preventable dwarf-deaths had sent my dwarves into enough of a spiral of rage and depression that they had put down their picks and refused any further work.

Dwarf Fortress is a particularly fascinating civilization simulation game. It has a notoriously steep learning curve and minimal graphics (in its base configuration, everything in the game world is represented by letters and glyphs on a matrix—an array of such matrices symbolizes levels of elevation in a space that stretches from sky to magma)[1]. Every in-world item, character and location can be inspected by the player, revealing generated, detailed text descriptions. Playing the game can involve an awkward juggling of menus that initially feels like building a ship-in-a-bottle by navigating a series of tax forms, but for those with the patience to learn it, *Dwarf Fortress* is uniquely generative and dizzyingly deep. The player guides the building of a civilization of dwarves inside a procedural simulation of a randomly seeded world. Each game world is unique, with potentially thousands of years of generated history, civilizational clashes, trade relations, and the formicine teeming of nature across a fractal terrain of varied biomes. The game, while taking on a set of obligatory Tolkienesque fantasy tropes (here there are civilizations of elves, humans, goblins, and dwarves) as its starting point, leaves all subsequent world events entirely to the interplay of the simulation and the player. Everything that occurs, every name and detail down to the eye color of a single river trout, is generated by the game (Weiner 2011). This is taken to unheard-of extremes—I've watched dwarves invent, and through recitation evolve named modes of poetry, music and dance, each with (sometimes lengthily) described formal elements. Every detail of the dwarves' culture and production (down to what sort of rendered fat or plant oil they are making individual bars of soap from) is modeled and running within the simulation. Most importantly, every individual dwarf citizen has likes and dislikes, a history of in-game experiences that modifies their personalities, detailed relationships with other individuals, and resulting states of mental and physical health, all of which can be read and reacted to, dwarf-by-dwarf.

1. The developers, Bay 12 Games, provide *Dwarf Fortress* as a free download, and have historically accepted donations to continue work. In December of 2022 they released a commercial version that includes built-in graphics and a streamlined user interface ("Bay 12 Games: Dwarf Fortress" n.d.)



Dwarf Fortress, Free version with community tileset (Bay12Games 2002-2022)

The game, developed by a pair of brothers, Tarn and Zach Adams, over the course of two decades, was selected by the Museum of Modern Art for a recent exhibit on games, and has been the subject of a handful of academic papers. I picked up the game after a play lesson over coffee from a professor who had taught a course based around *Dwarf Fortress*. Ever since, I've found that I return to periods of intense play when I am stressed or feel otherwise out of control of my life. It helps to recenter me, even when a play session ends in disaster[2]. What stands out most is how singular *Dwarf Fortress* is in the manner in which the world constructed by the game is understood through the process of experimentation, not just the player's visual perspective. Through experimentation in a game, we intuit not just a designed world and its principles (and embedded ideologies); we also imagine a game-self within that world, through which our actions are carried out. [3]

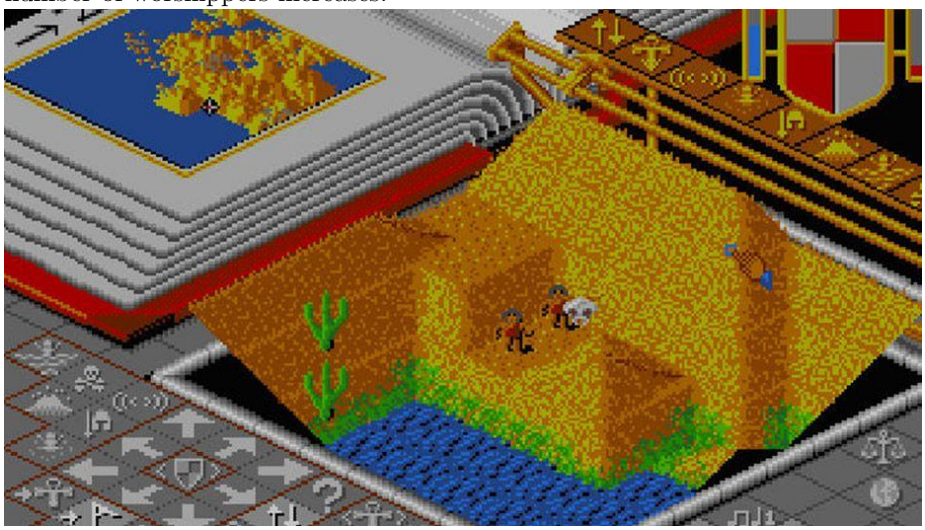
3.2 An Empowered Game Self

Other simulation and strategy games have very different structures and embedded ideologies and construct very different game-selves for the player. *SimCity* (1989), for example—one of the earliest and most iconic simulation games—presents itself as an open urban construction set, but is built on rigidly normalized ideas of

2. It's not immediately apparent why a game filled with almost-inevitable disaster is calming and meditative to me, but I think it may have something to do with how my mind works within this particular mode of game.

3. Patrick Jagoda's book, "Experimental Games" (University of Chicago Press, 2020), examines games as an inherently experimental artform. Examining games as complex, networked systems that are embedded within wider socio-cultural contexts, Jagoda posits that games can cultivate new forms of thinking, feeling, and being in the world.

what does and does not create effective cities or happy citizens. In his talk at the first International City Gaming Conference in Rotterdam, game artist and critic Paolo Pedercini described *SimCity* as promising endless possibilities to create a dream city, but in reality, always producing "something that looks like Phoenix Arizona" (Pedercini 2017) For its 2013 iteration, *SimCity's* designers researched real cities to try to model them correctly, but found that they had to vastly under-represent the area covered by parking lots in a modern city or the game terrains would resemble one vast parking lot (Twilley 2013). Nation-building strategy games like Sid Meier's *Civilization* series also enshrine ideologies about technological progress, the inevitability of capitalism and zero-sum competition between nations. The *Civilization* series are games of militaristic and cultural domination that result in a victor and losers. As McKenzie Wark observed of the fifth game in the *Civilization* series in her book *Gamer Theory,* "You can change the form of government but there's not much you can do to change the underlying form of production"(Wark 2007) By contrast, *SimCity*'s various iterations are open-ended games, but their implied success-state is one of maximum optimization and growth of individual city-blocks, sewn together in a car-connected sprawl. Player agency in these games is generally managed by the scarcity of a defined energetic resource (usually money, often mined from the ground with a baked-in exchange value, as if it were a feature of the physics of the universe). Production is simply an action of money in such games, labor as an action that requires workers does not functionally exist, and scarcity is reinforced as implicit. The player-character is a sort of god, kept in check only by the depths of their wallet. In Peter Molyneux' 1989 game *Populous*, the player assumes literally the role of a god who generates potential energy from worshippers, with increasing power to directly modify the landscape as the number of worshippers increases.



Populous, Amiga Version (Bullfrog 1989)

The God-player of *Populous* peers down at the isometric landscape of the game world as at a page of a magical book. While *Civilization* suggests an individual political leader as the player's game self, the *SimCity* series suggests some undefined hybrid of mayor and all-powerful unchecked urban planner/construction firm (perhaps a suburban crown prince?). Like these games, in *Dwarf Fortress* the player is not represented as an individual character in the game itself. But unlike other simulation games, the will of the player is carried out by individual dwarves who must be fed, housed, provided with alcohol, intellectually stimulated, and kept in touch with peers and family, or they simply do not work. Robbie Fordyce sums up this level of agency and its potentials succinctly in his article "*Dwarf Fortress*: Laboratory and Homestead" for the journal *Games and Culture* —

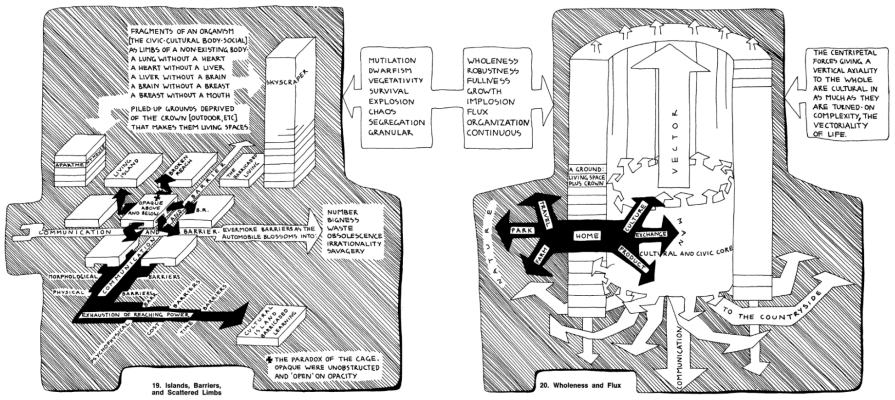
> How do we understand the role of the player in the game of *Dwarf Fortress*? The player acts to coordinate resources so as to best serve the psychic requirements of the community. Warding off insanity among the most emotionally precarious dwarves is, for all pragmatic concerns, the only loss condition for the game. To this end, the player is not a transcendent entity who utilizes a hierarchy of command in order to succeed, despite the cues of the strategy games genre, they also do not take the role of a ''focalizer'' for action, such as within character-driven games... Instead the player is the genius loci of the community, a deity that develops out of the community itself, which, and I cannot emphasize enough, is expressly not an idea of the transcendent ''invisible hand'' in any of the myriad permutations drawn from Adam Smith. This position points to the two primary concerns for this article: First, the totally immanent nature of the ordering of the community's labor and resources and second, the lack of a transcendent economic hierarchy leads to a completely free space for the processes of laboratory experimentation. (Fordyce 2018, 10)

Action in the game isn't a function of money (to the dwarves, gold is just a shiny metal, liked or disliked as any other building material[4]) it's the movement of a highly complex and healthy city-as-organism and city-as-laboratory. This form of play operates within different parameters than the "God mode" of other simulation games. This difference goes beyond level of agency, as the quality of that agency is set by a system of which the player is a part, rather than its primary mover.

4. Coins can be minted, but a full currency economy mode was abandoned after it caused inevitable accelerated civilizational collapses in previous versions of the game ("DF2014:Dwarven Economy" 2018)

3.3 From Arcology to the Arcology Mode of Games

Social media responses to the Saudi Line press release included references to *SimCity* and *Civilization*, demonstrating that the link between visionary megastructures and games is already strong in the popular consciousness. Adding *Dwarf Fortress* to the conversation changes things though: by virtue of breaking down what is backgrounded as implicit in other games of nation building, *Dwarf Fortress* exemplifies a mode of play that I call the "Arcology mode".



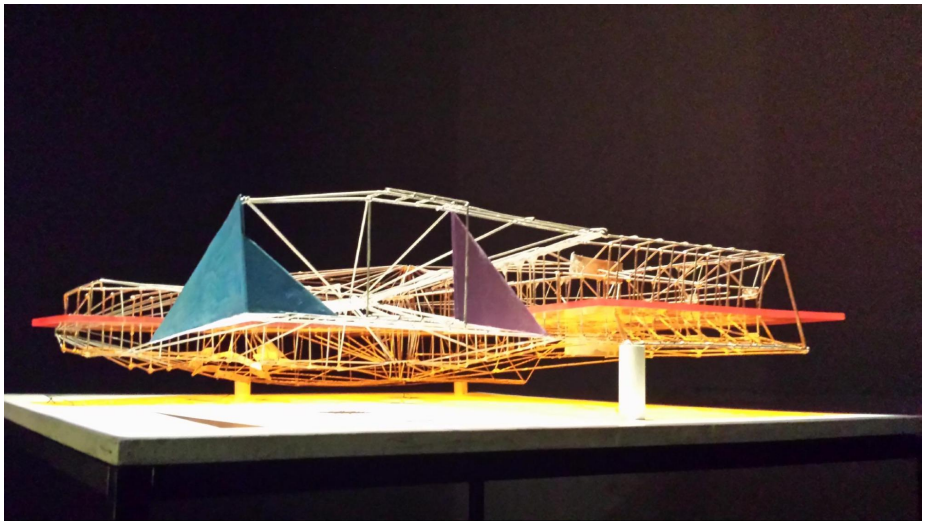
Arcology sketches from Paolo Soleri's Arcology: City in the Image of Man (1974)

Arcology, a portmanteau of "architecture" and "ecology" was coined by artist-architect Paolo Soleri to describe his visionary architecture of environmentally regulated city-megastructures (Soleri 1970). An arcology was a "three dimensional" city, densely populated, growing *up* rather than merely out. Soleri believed that reducing the footprint of such structures, combined with passive heating and cooling and the use of renewable energy sources, would reduce the environmental impact of large cities. Soleri's sketches towards his arcology projects included much more than architectural forms; they made sweeping theoretical proclamations about connections between society, culture, technology and self.

Ten years earlier, Dutch artist Constant Niewenhuys had begun envisioning his own "New Babylon" megastructure as a hopeful expression of Situationist ideas of *unitary urbanism*—in this case, infinitely reconfigurable environments meant to facilitate a new class of "homo-ludens"[5] to playfully define their surroundings, unifying art and life. McKenzie Wark, in her survey of the Situationists, *The Beach Beneath the Street*, measures the distance between Constant's re-imagining of social order in space and the modernist visionary projects of the time—

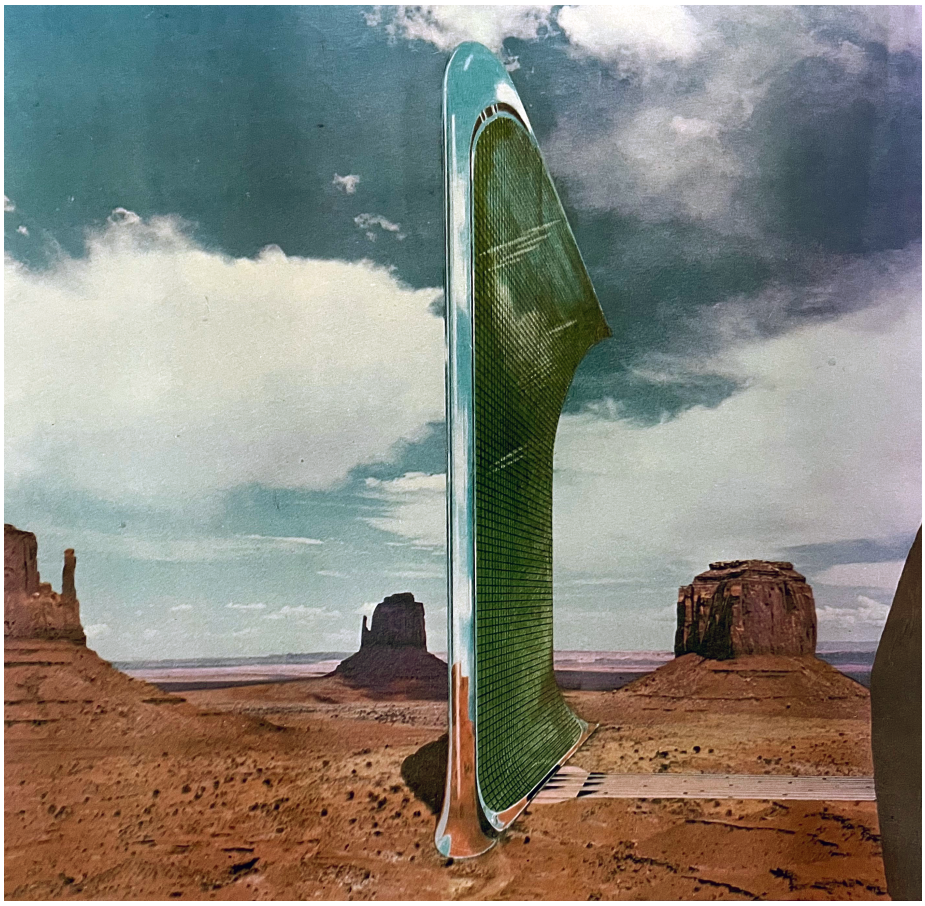
5. "Homo Ludens" is a term borrowed from Dutch philosopher/historian Johan Huizinga, who asserted in his text of the same name that, "civilization arises and unfolds in and as play" (Huizinga 1971)

> Of all these seemingly utopian projects, Constant's is the only one for which a transformation in built form can only come out of a transformation of social relations. (Wark, McKenzie 2011, 145)



Model From Constant's New Babylon - www.borzo.com

The idea of dense megastructures, already in the zeitgeist by way of groups like Archigram, had begun to receive a full-throated denunciation by the emerging new left.



Archizoom Associati: "Wind Town", 1969 - from "The Hot House" (Branzi, Isozaki, A., & Evans, C. H. 1984)

Constant himself was drummed-out of the Situationist International by founder Guy Debord, who had concluded that a prescriptive situationist mode of architecture was not possible[6]. Sociologist Jean Baudrillard called such projects the "chimera of utopia" (Austin and Soleri 1974, 32). The Arcologies and Megastructures of Constant and Soleri were overshadowed by a backlash against proposals like Buckminster Fuller's atomic-powered floating *Triton City* and *Old Man's River City*, which had been condemned by urban historian Lewis Mumford—

Whatever their superficial difference, all these projects are essentially

6. This marked the end result of a quarrel that began when images of a church designed by collaborating Dutch architects were included in an issue of the journal *Forum* prepared by Constant, introducing the Situationist concept of *Unitary Urbanism*. The images of the church incensed Debord, who considered churches to be antithetical to the concept (Wigley and Constant 1998, 32)

> tombs: They reflect the same impulse to suppress human variety and autonomy, and to make every need and impulse conform to the system of collective control imposed by the autocratic designer. (Mumford 1971, 203)

—many critiques of Soleri's visionary architecture condemned it thus as authoritarian even though Soleri, who had spent portions of his childhood living under fascism, argued ceaselessly that the arcology was a *laboratory* for the will of its residents, and that the structures should evolve to fit their needs and environmental requirements—

> The laboratory is by definition that with which utopia cannot coexist. Utopia is conclusive if not conclusion itself. The laboratory is—instances and occasions streaming along the immense tide of those events reality is itself creating. (Soleri 1984)

"Arcology" is also the final form that residential blocks take in *SimCity 2000* (the second game in the series)— a componentized form of neighborhood that fits the maximum number of residents into the same Phoenix-style car-centric sprawl. This representation might have infuriated Soleri, who thought the car had enslaved North American society. Soleri's designs flowed from a belief that suburbia was an "engine for consumption." His designs were also connected to a complicated personal system of metaphysics that seemed situated in a new-age mentality, fixated on ideas of an interplay between interiority and exteriority. The parallel project of science-fiction worldbuilding promptly plundered Soleri's forms without engaging with many of the ideas that prefigured them.

3.4 Disasters

The term 'Arcology' has now survived Soleri mostly as a fixture in fictional dystopias, as in the corporate arcologies of William Gibson's *Neuromancer* trilogy and the monumental pyramid that housed technocrat Elden Tyrell in the film *Blade Runner*. *Blade Runner*'s massive megastructure, set in earthquake-prone Los Angeles, seems precariously placed. Soleri, when asked what would happen to one of his dense urban structures if there were to be a powerful earthquake, admitted it would likely become a giant memorial (Soleri et al. 2017, 34). It's hard to imagine the *Blade Runner* future springing from the Los Angeles we know now—a city that demands the dream of single-family homes and cars for all against any sort of reasonable counterargument. The film's megastructures materialize 1980s racist anxieties of an encroaching Asian-ness, exaggerating the idea of large structures like the Wong Tai Sin public housing estates in earthquake-free Hong Kong into dense and intimidating ziggurats. The techno-orientalist shades of 80s cyberpunk gave outlet to US ruling class's fears about the loss of personal freedom-from-restraint, either by an imagined Sino-scientific socialism or at the hands of a futuristic Japanese corporate feudalism that the United States had itself unwittingly unleashed. In these scenarios, the arcology

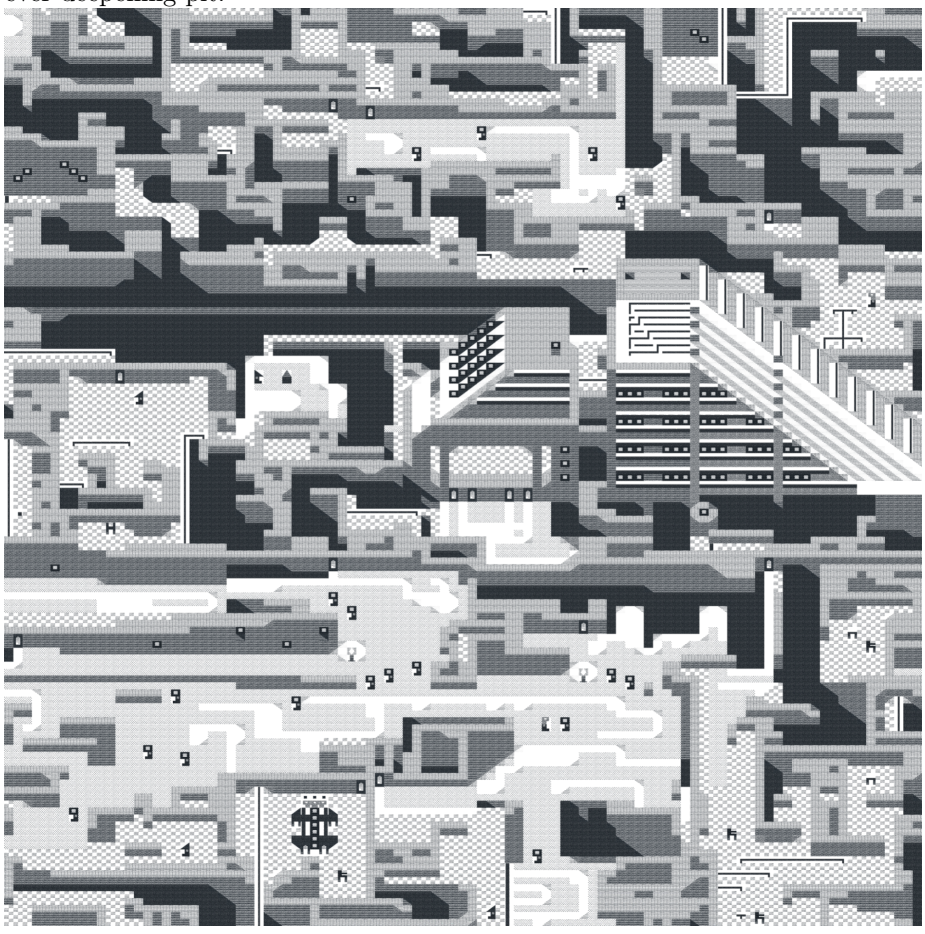
always stands as a termite-mound symbol of doom—either a stronghold for the rich that cannot be entered, or a hive for a collectivized, oppressed human. During the pandemic, as I designed my dwarven megastructures, Western White fear-mongering about Asia reached a fever-pitch over rumored origins of, and starkly-contrasting state responses to, the novel coronavirus. The fear of being locked inside a megastructure is emblematic of individual and economic anxieties that cowed the United States into its haphazard and ineffective response to the spread of COVID.

Disasters are often an important part of simulation games. One of the pleasures of *SimCity* is unlocking "God" mode, revealing commands that unleash tornadoes, earthquakes and Godzilla-like monsters on one's own creations. Games like *SimCity*, *Populous* and *Civilization* (barring multiplayer modes) allow save states—if the player makes a mistake, they can simply revert to a past save, avoiding the repercussions of their choices, creating a sort of branching quantum immortality common in digital games. *Dwarf Fortress*, lacking user-controlled save states[7], has a way of emphasizing the narrative potential of catastrophe in a way that other simulation games do not. The game saves when quitting and does not provide a way of storing multiple saves, pushing the player to accept failures and tragedies as part of play, even to the point of civilizational collapse (the player community repeats "losing is fun!" as a mantra). A fortress where all citizens have starved or been murdered (or have abandoned the territory at the player's admission of defeat) remains a persistent part of the game world. A ruined or abandoned fortress can be reclaimed by the player later, or left to the natural entropy of the simulation, adopted by herds of gazelle or families of foxes sniffing at your absconded dwarves' scattered mismatched socks. If the player chooses, the situation that led to the fall of the civilization can be addressed with a new group of dwarves and new strategies, but there will likely be a big mess to clean up. Calamity in *Dwarf Fortress* is difficult to avoid, and during times of intense play over the course of the pandemic, I watched more than a few disasters unfold. One of my dwarven cities saw every adult dwarf slaughtered by a poisonous "forgotten beast" that I had foolishly provoked with a small militia. The monster, seemingly satisfied, retired to a body-strewn cave to rest, while the now-orphaned children of the fortress played unsupervised in its bloody hallways. Over the next few game days, an unattended library I had built on the surface of the city attracted fleets of visiting scholars, mathematicians, philosophers, and troupes of poets who socialized and collaborated on great works... as the orphans died of dehydration, one-by-one, in the structures beneath their feet. I no longer had any agency in the game world other than to watch as this grim spectacle played out.

In many ways, arcology as architecture *is* the chimera of a utopia, as Baudrillard warned—a quest towards the unattainable, solving a series of problems in such a way that new problems will almost certainly be created. The Arcology Mode of play serves as a laboratory for experimenting with these ways of thinking,

7. In the commercial version of the game, the game concedes more control over saving to the player, allowing for the option of saving different "timelines" of a world.

as dangerous as they may be. The arcology, both in our hypothesized mode of play and in visionary architecture, is a *symbol of a possible or impossible future*, a dream of reorganization, of a new stability that is inevitably also an imagined community. Imagining a community means defining what turns strangers into kin, and as a result who is *not* included in that community (Anderson 2006). Imagining (often fictional) shared identities was a catalyst for social change in the past, trading one set of problems for another, building nationalism over the ruin of feudalism (with its own new host of cataclysmic problems). Social structures are already being built and negotiated all the time, however, regardless of whether they are enshrined within a futuristic walled city. To assume that design and architecture are alone the tools needed to address problems caused by violently-policed hierarchies is to build larger and larger facades to hide an ever-deepening pit.

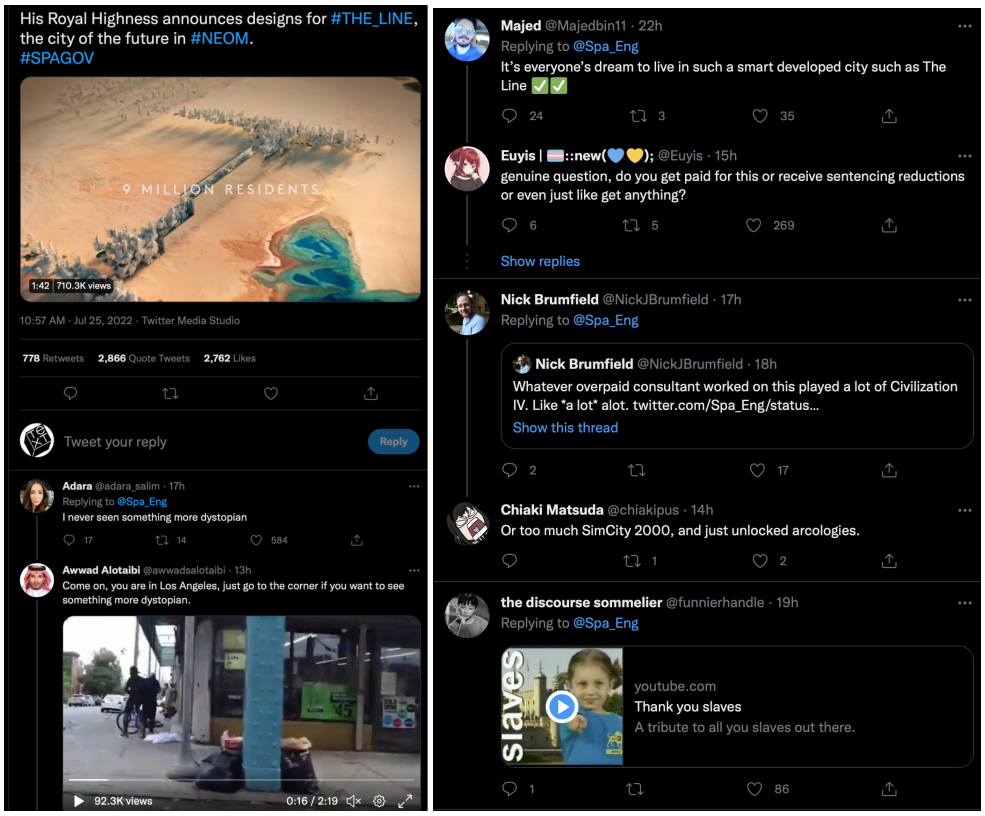


"Archon #55", (Wiggins 2022)

Arcology projects seek to design not just built forms and imagined communities; they describe the type of power that would be required to build them.

What would it take to mobilize the massive amounts of labor required to build such a thing? What would those relationships look like? The Saudi state, a notorious human rights abuser, is both an entity capable of building an arcology and perhaps the foremost candidate for who should not build one. [8] One Twitter user left a well-placed "Thank you, slaves" meme from the show *Wonder Showzen* in the responses to the Saudi press release for The Line. Twisting and distorting Soleri's ideas into an enormous, solid, "invisible" wall surrounded by desert is a frighteningly apt symbol of a new eco-fascism that could be in store for our future. Efforts to reify such forms into the built environment should be met with an interrogation of the power that could build such a thing and a scientific analysis of the harms and benefits of such projects. Promises of sustainability and reduced environmental impact are part of the visionary hand-waving of these projects, but the bigger the vision, the bigger the suspicion that the shadow of that power will necessarily occlude our ability to accurately judge the results. Within the laboratory of the Arcology game mode, a strange light shines. The ability to radically reimagine power, self, society and the built environment seems like a daunting and doomed fiasco for an out-of-control id, but there are a multiplicity of ways to carry out such an exercise, as visionary play shows us. Redesigning the megastructure of power is the first great project that we must carry out if any projects that follow are to be just.

8. Three members of the Huwaitat tribe have already been sentenced to death by the Saudi government for protesting their forced eviction in the development of the NEOM area (Moore 2022)



"The Line" twitter thread (2022)

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Chapter 4

Towards a Frontier Mode

The eschaton of neoliberalism is not the singularity, it is the zombie apocalypse.

From our contemporary viewpoint, envisioning a future that doesn't involve collapse is increasingly challenging. Part of the allure of catastrophe fantasies lies in their absolution of responsibility, removing the need to address the many problems that *lead* to collapse. In this fantasy terminal landscape, there emerges a corresponding visionary architecture and an imagined-self—a self capable of enduring apart from society. Videogames provide a platform for the performance of that capable-self, operating in a reimagined *frontier* where societal bonds and obligations have evaporated. The ideas of primal wilderness and exhausted wasteland mirror one another in the popular consciousness as places where the notion of personal freedom from restraint eclipses ideas of societal freedoms. This notion is so compelling to some audiences that it has breathed new life into the once-fading genre of the Western, and is intrinsically tied to the success of 'zombie' media. I would like to propose a Frontier Mode of gaming— once again using our notion of a mode as being a lens through which one may understand the formal qualities and cultural contexts of a game. This mode encompasses several genres and a cluster of game features. It also includes specific fantasy architectures and notions of masculinity, and backgrounds fatalistic assumptions about humanity and the future of society. A full exploration of the Frontier Mode would also include an interrogation of the workings of white supremacy, and how throughout history, "whiteness" has been a condition of impunity granted to groups willing to become complicit to power. The shadow of whiteness is the declaration that land is "wilderness," resources are "unclaimed" and (non-white) people are "animals". Granting whiteness to one means stripping humanity from another.

4.1 The Oregon Trail

When proposing a Frontier Mode of games, it's inevitable that the educational videogame *Oregon Trail* (MECC, 1985) will spring to mind for many. The game simulates the experience of traveling the Oregon Trail as a pioneer in the 19th century, and it has been played by millions of people over the years. When I was a child, the game was a sort of candied-medicine dangled as a carrot for students who were good during some classes. We played it, however, only to get to the "fun parts"– namely a hunting game in which a stick figure fires single pixel bullets at fleeing animals. With a little practice a player could pile up hundreds of pounds of food, especially if a bear appeared on screen. The other feature we found entertaining was the ability to leave rude epitaphs on grave markers for each of the characters in our parties who died of various diseases and

hunger. The game was created to illustrate the hardships and dangers of making an historical cross-country covered wagon trek, but the image that remained with me from playing was of the wilderness teeming with inexhaustible piles of felled meat.

My epitaph in Oregon Trail for the Apple II, (MECC, 1985)

Oregon Trail the videogame was loosely based on the experiences chronicled in a book of the same name—*The Oregon Trail* by Francis Parkman, a travelog first published in 1849. Parkman, who was also a historian, took the trip in 1846 and wrote extensively about his experiences. The book provides a detailed account of life on the frontier and of the Oregon Trail, which was one of the main overland migration routes on the North American continent, leading from the Missouri River to the Oregon Territory.

The narrative starts with Parkman and his companion, Quincy Adams Shaw, departing from Saint Louis in spring, following the Oregon Trail westward. The duo spends the initial part of their journey with a group of Oglala Sioux. They lived, hunted, and traveled with the Sioux, and Parkman provides a detailed account of their lives, culture, and the challenges they faced.

Parkman offers descriptions of bison hunting, native warfare, the grandeur of the prairies, the Platte River, and other distinctive features of North American plains geography. He also outlines the dangers and difficulties faced by the pioneers in their journey westward, such as illness, conflicts with indigenous peoples (in characterizations that are at times cartoonish in their bias and barely sublimated malice), environmental hazards, and difficulties in securing food and supplies.

Parkman was an aristocrat, heir to a Boston merchant fortune, who loathed

the poor agricultural workers and subsistence farmers of the west, but also held high the ideal of an abstract frontiersman ranger.

Writing about Parkman in his book *The Virgin Land*, American Studies scholar Henry Nash Smith notes—

> During the summer of 1812, following his sophomore year at Harvard, Francis Parkman made a trip through northern New York and New England. After spending several days admiring the scenery along the shores of Lake George, he noted in his journal:
>
> "There would be no finer place of gentlemen's seats than this, but now, for the most part, it is occupied by a race of boors about as uncouth, mean, and stupid as the hogs they seem chiefly to delight in." (Smith 1978, 51)
>
> [...]
>
> Parkman's antithetical attitudes toward backwoods farmers and the hunters and trappers of the wilderness illustrate the fact that for Americans of that period there were two quite distinct Wests: the commonplace domesticated area within the agricultural frontier, and the Wild West beyond it. The agricultural West was tedious; its inhabitants belonged to a despised social class. The Wild West was by contrast an exhilarating region of adventure and comradeship in the open air. Its heroes bore none of the marks of degraded status. They were in reality not members of society at all, but noble anarchs owning no master, free denizens of a limitless wilderness. (Smith 1978, 52)

4.2 The Frontier

Frederick Jackson Turner was an influential American historian in the late 19th and early 20th centuries. He was born on November 14, 1861, in Portage, Wisconsin, and was educated at the University of Wisconsin and Johns Hopkins University.

Turner is best known for his Frontier Thesis, also known as the Turner Thesis, which he first presented at the American Historical Association's annual conference in Chicago in 1893. His thesis argued that the American frontier was a key factor in shaping the nation's democratic institutions and unique national character. He suggested that the continual westward expansion and the existence of an "unsettled" frontier provided a safety valve for economic and social pressures in the more populated East. He argued that the frontier offered endless opportunities for economic and personal reinvention, creating an environment that fostered the unique American concept of "rugged individualism." This process of continual rebirth, he proposed, was the defining element of American history and identity.

In *The End of the Myth*, historian Greg Grandin critiques Turner's thesis, examining how Turner's romanticized depiction of the frontier overlooks the

violent and exploitative aspects of North American expansion. Covering three centuries of American history, Grandin's text follows the fireline of frontier from the Royal Proclamation Line of 1763 to its termination with Donald Trump's border wall, where the proposition of boundlessness turned back on itself. According to Grandin, the frontier was not a limitless landscape of opportunity but a scene of brutal conquest and subjugation, particularly of Indigenous populations, Enslaved Africans and ethnic Mexicans. He also notes that the frontier was often a place of economic exploitation and ecological devastation. Where Turner saw the frontier as a release for the pressures of class conflict and social inequality, Grandin highlights how the promise of the frontier often served to defer necessary social reforms and perpetuate economic disparities.

4.3 The Electronic Frontier

As the popular notion of Frontier has become confused and exhausted by completed maps and dwindling resources, it has found new territory in digital realms. Internet rights activist and former Grateful Dead lyricist, John Perry Barlow, conjured a new conception of Frontier in his 1996 critique of the United States' Telecommunications Act, "A Declaration of the Independence of Cyberspace."

> Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather. (Barlow 1996)

Barlow's "Declaration" offered a libertarian vision of the Internet as a new frontier. He advocated for a cyberspace unencumbered by governmental control, a space wherein norms and ethics can organically develop, unfettered by traditional territorial laws. In this imagined realm of personal and economic freedom, Barlow's appeal effectively served as a promotional facade for the neoliberal "Californian Ideology."

The "Californian Ideology," a term introduced by Richard Barbrook and Andy Cameron in the mid-1990s, encapsulates a unique fusion of beliefs that originated in Silicon Valley. This ideology combines the 1960s counterculture's pursuit of personal freedom with the conservative, free-market principles of neoliberalism.

In this context, Grandin's analysis provides a tool for further critical examination of the 'Frontier' as a symbol. What Barlow characterized as a new frontier rapidly became an advertising vector, the birthplace of surveillance capitalism, a site of free labor extraction, a necro-web wasteland punctuated by commercial walled-garden social networks, and a disinformation machine that instigated a violent mob to attack the US Capitol. Looking from the perspective of our current era, it becomes clear that the Internet has in some ways both realized and wildly diverged from Barlow's techno-libertarian vision.

4.4 Frontier Architecture

The act of building and fortifying a homestead plays a significant role in the Frontier Mode of gaming. In a gaming context, *homesteading* is the creation and development of a home, base or fortress, using in-game resources. A game homestead is connected to the economy of game resources out of which it is built or developed. In the Frontier Mode those resources are extracted from the game landscape (often through shorthanded labor in the form of "mini-games") and from enemy NPC's. As Robbie Fordyce describes in his article *Dwarf Fortress: Laboratory and Homestead*:

> The role of the homestead is to economically support the exigencies of the player in the rest of the gameworld. These games are all generic in terms of their capacity for economic experimentation, and it is less of a case of determining new economic relationships than it is a case of choosing which resources are important within existing relationships. In the face of change, they adopt the ideologies of capitalist economics in a straightforward and uncritical manner, and where they do become interrogative of their economic conditions, then they become outright exploitative. Colonization, in particular, contains at its heart all the violence and racism of the colonial project, and the player has little choice between a program of Manifest Destiny and a lethal attrition, and both programs lead to an eventual form of death for gameplay. (Fordyce 2018, 6)

Over the last decade, there has been a surge in interest in survivalist content, from the explosion of survival reality TV shows like "Survivor", "Naked and Afraid", and "Alone", to the boom in popularity of survival-based video games. This obsession seems to reflect a desire to test our resilience against a bare-bones existence, often set in a hostile environment. There may also be an element of escapism involved, allowing people to experience an alternative to their modern, technology-dependent lives.

This surge in survivalist content has also sparked fascination with the visionary architecture of bushcraft, off-grid living, and survival bunkers, inheriting from a tradition of suburban fallout bunkers designed at the height of the Cold War. These survival fantasies seldomly emphasize the interdependence, resource-sharing, and community-building that would realistically enhance chances of survival during prolonged natural disasters or infrastructural collapse.

4.5 Videogames of Frontier

The concept of the "frontier" in videogames is primarily tied to themes of exploration, discovery, and survival in an uncharted or untamed environment. These themes often parallel the narratives of historical frontiers, where "adventurers" ventured into new lands seeking opportunity, facing unknown perils

and challenges along the way. The frontier in videogames serves as a backdrop for the performance of extraction (mining, hunting, theft), violence, hoarding, building—of actions generally denied in daily life within the bounds of society.

In the context of videogames, a frontier might be an alien planet, a post-apocalyptic earth, a mythical realm, or even a simulated version of the physical world. These spaces provide a canvas for emergent gameplay, where the narrative unfolds in response to the player's actions and decisions. This form of open-ended play capitalizes on the medium's interactivity and capacity to create compelling, dynamic experiences.

Examples of open-world games that incorporate the frontier theme include the *Red Dead Redemption* series (Rockstar), which places players in the wilderness landscapes of the late 19th century American frontier, and the *Fallout* series (Bethesda, et al), which sets players in a post-nuclear apocalyptic frontier. In both series, the notion of frontier provides a context for narrative and gameplay mechanics. While games in these series are both richly realized, the idea of a sprawling and sometimes desolate landscape can also add an excuse for npc interaction and level design limitations or sparseness.

Minecraft is a game that can also be played and critiqued within the Frontier Mode. With overt narrative elements stripped away, *Minecraft* (when played in the "Survival Mode" setting) is a game that quickly moves through simple bushcraft and homesteading to unbounded resource extraction, building and siege defense, setting the standard for Frontier Mode interactions for other games to follow. Minecraft is notable for its accelerated day-night game loop, wherein above-ground work must be completed during daylight and a secure perimeter established before "mobs" of single-mindedly hostile NPCs attack at night, including suicide bombing "creepers" and moaning horror-movie-esqe zombies.

4.6 The Zombie Apocalypse

Zombies have become a staple of videogame design, particularly in the action horror genre. These non-player characters (NPCs) often serve multiple functions, from providing a persistent threat to driving the narrative forward. As enemies, zombies offer a unique combination of challenge and moral simplicity: they are dangerous, relentless, and typically appear in large numbers, yet they are also dehumanized and devoid of reason, making it easier for players to engage in violence against them without ethical complications.

Red Dead Redemption, Undead Nightmare (Rockstar 2010)

Zombies in videogames often embody our deepest fears and anxieties, a common trait in horror narratives. They can represent a loss of control, the fear of death, or disease. They often serve as a metaphor for broader societal concerns, such as the collapse of social order. They also provide an opportunity for lifelike violence without ethical concerns. Contemporary zombie horror media often uses a "Zombie apocalypse" as a background for conflicts among surviving humans who must struggle with one another over resources.

In many popular videogames we see the performance of fantasies of apocalypse where previously settled spaces again become "frontier", where social bonds are eroded, a no-trust world where an aggrieved self survives in a state of negative freedom. The proliferation of "Zombie Apocalypse" media offers a remarkably clear view into a collective cultural psyche. What seems absent from critical writing on this and other survival media are the ways in which diverse representation in apocalyptic fiction presents a way for minoritized individuals to imagine themselves also free from a society that has oppressed them, in an increasingly paranoid hybrid of dream-home and siege-defense survival bunker, a nightmare "freedom" in which one must be constantly hypervigilant.

For every AAA, critically-acclaimed videogame title that includes these themes and mechanics, there are uncountable numbers of "Freemium" mobile games, churned out and iterated at incredible speed, instantly pandering to any perceived change in sales metrics that might constitute a trend. My goal is to increase the scope of my research to include games that evade critical engagement, but which exist in a feedback loop with popular fears and desires.

Zombie Apocalypse media, videogames in particular, seem caught in a ludo-narrative dissonant loop between moody ruminations on morality and regret and the pleasures of enacting fantasies of a capable self, unbounded from society, free of restraint, set loose to murder mobs of barely differentiated animalistic

humans. I think this pattern, which is repeated again and again in games with greater and greater sophistication, is worth scrutinizing for the ideas that the pleasures of gameplay may mask or treat as implicit. "Heroic but morally compromised rugged individual struggling to trust in a world where the majority of humans unreasoningly want to eat [him] and can therefore be killed without remorse" is a premise both so strained and so ubiquitous in games that it can and should withstand a deeper analysis. As in the other modes of games I have examined in this text, I think that the pleasures of the Frontier Mode can be used to interrogate its own subject matter. This sort of inversion of assumed worldview takes place in *Death Stranding* (Kojima Productions, 1999), where a post-apocalyptic frontier deliveryman reconnects isolated fragments of society living in survival bunkers by delivering packages and building infrastructure. Killing an enemy in *Death Stranding* can have potentially disastrous consequences, increasing the challenge of enemy encounters rather than removing the pleasures of action gameplay, while changing the affect of enemy npc deaths.

4.7 The Frontier Mode

In my next writing project I hope to bring some of Grandin's critiques of the symbol of Frontier to bear on a Frontier Mode of games. These are games, especially "Open World" games, that present a digital pastoral (or a digital wasteland) as a site of limitless extraction, freedom from restraint, and siege mentality. I will show a trajectory from rhetoric about the Frontier of the American West to the idea of an "Electronic Frontier ", and how ideas of limitless expansion inherent in the neoliberal project find a site of performance in videogames. In conversation with Frontier Mode games, I plan to include Western and Zombie media in the scope of my text, as well as the associated visionary architecture of bushcraft, the homestead, and the survival bunker.

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Chapter 5

Grotto

> Genealogy has proved itself to be a critique of values, for it has discovered the material origin of them, the body.
>
> *Franco Rella, "From the Aesthetic Sphere to the Sphere of Interpretation," Nuova Corrente, 1975*

Grotto, is an experimental, multiplayer, persistent, web-based game that spatializes genealogy data into an expansive dungeon with over one thousand rooms. The game explores blurry dichotomies of history and fantasy. It also serves as a container for a sprawling, hidden family archive. It has been a generative project for me, serving as a data substrate for several different art projects. For a detailed account of how I conceived Grotto and how it evolved over time, a process journal is viewable online at https://wileywiggins.com/grotto.html. The latest version of the game itself can be played at https://mudroom.rip.

In the previous chapters I have looked at three possible game modes, each a lens for looking at the past, present and future, for imagining relationships between subjects, power, and possible visionary architectures that connect them. Videogames let us perform roles in imagined worlds and systems, taking on different perspectives, imagined selves, and systems of agency and consequence. When faced with the task of building my own game that put these ideas into practice, I tried to imagine what values (or dialectics of values) are connected to each mode, and how I could attain more clarity about each. An idea that I am drawn to in this research was that each mode contained a different sort of visionary architecture and a different game-self which exists in relation to that architecture, implying a relationship between self (or selves) and the world. I decided that the game development process would itself be done in the Arcology Mode, building a world and interacting with it as an indexed database. The game would be played in the Dungeon Mode, entering and traversing it as an occluded, shifting and unknowable space, even though I had built it myself. The subject of the game, hidden just beneath the surface, would be the crime scene of the Frontier Mode, the stories of family, assimilation and isolation, of constructing imagined communities, of resistance and compliance, violence and love, hidden away as notes in reliquaries. Starting with basic hypertext, the project evolved from a simple system of players, items and rooms, and turned into a thousand-room crypt for every individual I could find any credible familial relation to, via data found on commercial genealogy websites and my own research. The grammars of genealogy themselves became a subject of inquiry for me as the

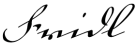
game matured.

5.1 Genealogy as Game Engine

Manfredo Tafuri (the architectural historian and critic through whom we were earlier acquainted with Gianbattista Piranesi), thought broadly about how ideas, values, and methods are passed down through the generations. He invokes Michel Foucault Foucault and Friedrich Neitzche' s "genealogical" relationship between history and historian in his book *The Sphere and the Labyrinth*—

> [...] to link the problem of history with the rediscovery of mythical "origins" presupposes an outcome totally rooted in nineteenth-century positivism. In posing the problem of an "origin," we presuppose the discovery of a final point of arrival: a destination point that explains everything, that causes a given "truth," a primary value, to burst forth from the encounter with its originary ancestor. Against such an infantile desire to "find the murderer," Michel Foucault has already counterposed a history that can be formulated as genealogy: "Genealogy does not oppose itself to history as the lofty and profound gaze of the philosopher might compare to the mole-like perspective of the scholar; on the contrary, it rejects the metahistorical deployment of ideal significance and indefinite teleologies. It opposes itself to the search for 'origins'." (Tafuri 1987, 12)

As a neophyte reader of theory, a sort of double meaning or harmony has developed in my mind while reading about a genealogy of ideas and a genealogy of humanity— the parallel processes of biological and cultural reproduction. Genealogical methods can be used for a number of purposes, and while they may confound a search for origins, that is certainly one of the purposes that they have been burdened with.

In winter of 2023 I found myself combing through the online historical archives of Czech towns. On one long night I painstakingly tried to read scanned pages from a Moravian Parish book dated 1807. The looping lines of tight Kurrent script teetered paat the edge of forming sounds in my mind, but then dissolved into voiceless chicken-scratch. I was looking for the  of "Pavel" and the  of "Fridel" among the pages. [1]

1. Kurrent script is a type of handwriting that was used primarily in lands where the official administrative language was German during the 16th to 20th centuries. It is a form of blackletter script, known for its highly stylized and distinctive characters. Kurrent script was eventually replaced by the Latin script, particularly after the end of World War II, as part of an effort to standardize written German.

In my search, I was trying to find a marriage record between Pavel, my great-great-great-great grandfather, and someone who might have been named Veronika Chrasteka. This is a point in my genealogy that there are no sources for, other than the conflicting data added to the website Ancestry.com by distant relatives that my mother calls "the bad cousins". According to their account, Veronika Chrasteka gave birth to my great great great grandfather Valentine sometime in her fifties, so the veracity of their records is somewhat in question. They do also claim that Pavel and Veronika married in 1807, presumably in their village of Halenkov, so that was at least a place to start looking for records.[2]

My family landed in Galveston in 1879, finally settling in Kurten in 1882 in a community that had already been a German/Slavic enclave for some time. I wonder often who lived on the land in Kurten before the Moravians and their farm. The town was founded in 1864, near the end of the civil war, some time after anglo settlers (under the leadership of Steven F. Austin) murdered and dispersed the native Karankawa people who had lived along the Brazos river (originally known as the Tokonohono). There may have been Tonkawa or Comanche people using the area at one time as well. [3]

I know from Sean M Kelly's book *Los Brazos de Dios* that in 1860 the lower Brazos area to the south of my family farm was a majority Black population (55%) with a very small Hispanic and Indigenous population (Grandin, p.20). I have less information about the populations of the river bottoms of the upper Brazos and Navasota. These areas were less desirable than the lower Brazos lands that were run as plantations, but they were an important foothold area for immigrants and some freed enslaved people after the civil war. Henry Kurten, a German soldier, had purchased a Mexican land grant there in 1864 and created a pipeline for chain migration, where German immigrants could work his land and then establish farms of their own ("TSHA | Kurten, TX" n.d.). During the time that Texas was a slave state, the Germans were seen as an oppositional culture– (Kelley 2010, 46) using a family labor system to work their land.

> Networks rooted in German identity were vital, not only to the passage itself, but to the eventual acquisition of land. To be certain, the pattern in which older migrants employed newer ones brought occasional charges of exploitation, but in most cases it worked. Terry Jordan found that over 77 percent of German farmers owned their own land in 1850, compared with 69 percent of Anglos. In Cat Spring, 71 percent of German households owned property in 1850, and more than 80 percent did in 1860. (Kelley 2010, 47)

When German chain migration slowed, Slavic laborers like my family were brought over with the same promise of land. Lured by a letter from a Silesian minister published in a Moravian newspaper promising tracts of plentiful and

2. A search that eventually proved fruitful with the help of Czech genealogist and *Piráti* (pirate party) politician Blanka Lednická.

3. The term "Anglo" in Texas history commonly refers to English-speaking settlers of European, primarily British, descent. It became widely used in the 19th century during the colonization period when many settlers migrated from the United States to Mexican Texas.

cheap land, nearly half of the first boat of Czech immigrants died in the crossing or of yellow fever when they reached Texas (Kelley 2010, 46).

Once in Texas, Czech Texans were either considered a non-anglo other, responsible for spreading intemperance (Awkwardly called "Bo-Dutchmen" by their anglo accusers) or considered anglo, depending on whether it was convenient to count them as a bulwark against ethnic Mexicans (Barber, n.d.). Czech Texan communities retained their language and culture for a prolonged period of time due to the location of their homesteads and the maintenance of Czech-only schools and churches (Eckertová, n.d.). Assimilation was a lengthy process that was not completed until my grandmother Dorothy's generation.

My fascination with my Czech family stems from the fact that when I was growing up, my mother and I often went to visit my great-aunts on the farm in Kurten. They still spoke a Moravian dialect of Czech, and they still used an outhouse and a well for water. They produced almost all of their own food, even though everyone living on the property was of advanced age. They were a "pocket-dimension" somehow outside of modernity that I was connected to. At some point in my grandmother Dorothy's life, she had been willing to do anything to leave the family farm and assimilate into anglo Texan culture, and from her departure, I exist.

My interest in the family's origins started with a sheaf of shaky, handwritten notes, tracking a genealogy of the Fridel's flight from Moravia after the Battle of Hradec Králové, during the Austro-Prussian war. The family genealogy abruptly ends just two generations before their trans-atlantic migration.

Fridel family members working their potato field in Kurten, Texas (date unknown) The family work system practiced by the Germans and later the Czechs in Texas may have eschewed slavery, but it depended on a patriarchal system of unpaid toil by women and children. "The 'freedom' of the frontiersman, in other words, depended less on having a gate of escape across an endless frontier than on being able to control the labor of his family" (Grandin 2019, 354).

Dorothy Regmund, avid reader of movie magazines, on the Fridel family farm with her aunts and my infant mother.

Genealogical research is strangely addictive. It's not something I would have ever thought I would be interested in until it became part of the process of my game *Grotto*. I had toyed with a free account on an ancestry site before

discovering that there was a standardized exchange format for genealogy data—at the same time that I was enrolled in an undergraduate digital humanities class. A historical data format that could be parsed using the programming language python was excellent material for a beginner like me. The project synced with some ideas I had about videogames as an alternative way to traverse family histories—both activating and concealing them. I imagined that the genealogy data could be turned into a sort of architecture, spatializing time. It seemed like an interesting way to expand out from myself as a subject materially, to talk about things that might still be a mystery to me, the way one might explore a dungeon by torchlight.

When I began to build out *Grotto*, I used genealogy data in that standard format, GEDCOM, as a model for the construction of the dungeon maze.[4] A software parser transcribed names and dates and familial relationships into rooms with inscribed cenotaphs for the dead and connective passages. I imagined that the Czech All-Souls Day holiday *Dušičky* would be the basis of the work—a tour of the monuments for the dead, lighting candles, performing acts of care. But in creating spaces for all of my dead ancestors of record, I found enormous networks of new rooms that dwarfed the branches that I knew.

I had three grandfathers. I never knew my paternal grandfather, Jack "Red" Wiggins, who died when I was an infant. Red had abandoned my father's family when he was 60, converting to The Church of Jesus Christ of Latter Day Saints (LDS, or informally by outsiders "The Mormon Church") in order to marry a much younger woman. My only contact with Red was attending his funeral as a toddler. I am told he lay in his casket in garments, and that my mother and grandmother stood out as the only strangers among the rest of the attendees. LDS is preoccupied with genealogy, for both cosmological and cultural reasons. The LDS church encourages its members to research and document their family history and ancestors, with a particular focus on the history of the Church. This practice is based on the belief that individuals can be sealed to their ancestors through sacred ordinances performed in LDS temples, and that this can help families to be together in the afterlife. The belief that these practices allow for deceased individuals to be retroactively converted to the Church of Jesus Christ of Latter-day Saints without their consent has proved highly controversial. This is seen by some as disrespectful to the deceased and their families, particularly those who may have practiced different religions or held different beliefs. Additionally, there have been instances of prominent figures, such as Holocaust victims and Jewish individuals, being posthumously baptized despite objections from their living relatives and religious leaders. While the Church has made efforts to address these concerns and limit the use of posthumous baptisms, the practice remains a point of tension between the Church and other religious groups. The amount of genealogical research conducted or overseen by the LDS church and its adherents is staggering, however. Historian Donald Akenson claims in his

4. GEDCOM (Genealogical Data Communication) is a standardized format for exchanging genealogical data between different software programs and databases. It was developed by The Church of Jesus Christ of Latter-day Saints in the 1980s and has since become a widely accepted standard for genealogical data.

book *Some Family*—

> [. . .] at the present time [2007] the largest pool of information on specific identifiable individuals who comprise the human race has been assembled by the Latter-Day Saints, bigger than any government data pool will ever be. The standard release form that LDS asks owners of family histories, and other databases to sign, explains that this is "so the data from your materials can be used to create a common pedigree of mankind." (Akenson 2007, 1)

After his conversion, my grandfather Red had deeply researched his own family, the Wigginses and Beuhrings (whom I knew little-to-nothing about). While doing research on my matrilineal Czech family, my family tree ballooned in size as the ancestry site I was using connected to the ghostly architecture of Red's past research. Almost a third of the maze in Grotto had already been built by Red—the portion of the dungeon that is the most mysterious to me.

J.R.R. Tolkien is worth revisiting in this discussion of religion and genealogy. While it may seem jarring or insulting to some to compare religious narratives and fantasy literature, as we've touched on in chapter one, the 'marvelous' category of fantasy literature sometimes taps into religious or mythological modes of storytelling. A myth, whether positioned as real or more-than-real by the culture that retells it, demonstrates a pattern of behavior to be repeated, creating a value or the basis for ritual. Fantasy can filter cultural myths through an authorial voice situated in the author's own historical position, bending and adapting the myth to connect and contrast with the author's time. Bridging the gap between discussions of religious and fantasy narratives, it's intriguing to see how both J.R.R. Tolkien's fantasy works and the doctrines of various religions, including the Church of Latter Day Saints, incorporate genealogy as a significant component of their narratives. The tenets of the LDS Church are too intricate and, over time, too variable to delve into detail here., but it's worth noting that they have (historically) harmonized with some of the problems that we previously noted in the fantasy works of Tolkien, such as racial essentialism, extrapolating biblical cues into a convoluted narrative that positioned northern Europeans as being the inherently superior descendents of the Israelites (Akenson 2007, 442).[5]

In *The Lord of the Rings*, genealogy is used to establish the lineage of important characters and to connect them to the larger narrative of Middle-earth. Genealogy is used to establish a sense of historical continuity and mythology

5. Until 1978, the LDS church had a policy that denied black men the priesthood, which is essential for leadership positions within the church. This policy was based on the belief that black people were descended from Cain, who was cursed in the Bible, and that their skin color was a sign of their inferiority. This belief was held despite evidence to the contrary and was used to justify discriminatory practices within the church. Nineteenth century Mormons believed that First Nations tribes were their distant cousins— descendents of Israelite tribes who had become dark-skinned due to sin. This resulted in some disappointment when Mormon-baptized indigenous peoples did not magically become light-skinned after being submersed (Akenson 2007, 27).

that permeates that fantasy world. The genealogies are also used to establish a sense of hierarchy and power, as certain characters are shown to be descendants of legendary figures. Maps, language and genealogy give texture and an almost bureaucratic sort of believability to Tolkien's fairy stories, while embedding his beliefs that character is inherited. In the Icelandic Sagas that Tolkien drew upon for his fantasy books, genealogies also play a central role in establishing the social and political hierarchies of the characters and their families. Many sagas begin with a detailed genealogy of the protagonist's family, tracing their lineage back several generations and establishing their position in the larger community. These genealogies are often used to explain the motivations and actions of the characters, as well as to reinforce the idea of inherited honor and reputation.

In The Old Testament, genealogy is used to establish the lineage of important figures, such as Abraham, Moses, and David. These genealogies also serve to connect these figures to the larger narrative of Yaweh's plan for humanity, and to establish a sense of continuity and historical progression. The genealogies are often used to illustrate the fulfillment of prophecies or to establish a sense of divine mandate for certain characters. Genealogy is a story, set in grammars that claim historicity and assert the universality of family structures that are anything but universal.[6] They also create imagined communities out of groups of people with common ancestry who are, for all practical purposes, strangers. Akenson writes:

> The Old Testament genealogies are artistic in nature by virtue of their being a massive metaphor. They account for human life, religious practices, and dynastic and geo-political events "through a metaphor of biological propagation." Thus, world history necessarily becomes a form of family history. This is a metaphorical framework so strong that the biblical tales could not be told in any other way: if the stories jumped out of the framework of genealogical narrative they would not be biblical. It is as simple as that: the covenant between Yahweh and his people is between an imperious god and an imperial sperm bank. As Yahweh promises Abraham, "I will make thee exceeding fruitful, and I will make nations of thee and kings shall come out of thee" (Genesis 17:6). (Akenson 2007, 292)

Genealogy is a very different mode of history writing than the work of historical geneticists, who create a picture of humanity's history by investigating the genetic variation that exists within and between populations and how this variation changes over time. In some ways genealogy is like counting individual grains of sand in order to study a beach (and frequently losing count). Such an

6. Claude Lévi-Strauss's "The Elementary Structures of Kinship" (1949) marked a major turn in the study of kinship systems within the field of anthropology. The work aimed to elucidate universal structures underlying human kinship by applying a structuralist approach, drawing analogies to linguistic structures. However, the ambitious goal of identifying a universal 'grammar' of kinship structures proved elusive. Critics pointed out the difficulty in applying Lévi-Strauss's models universally, given the diversity and complexity of kinship systems across different cultures. (Akenson 2007, 270)

approach to history does reorient one to the vastness and interconnectedness of humanity, however. Moving through my family tree person-by-person inside my game has also made me realize how little of my ancestry I have any knowledge of or affinity for. I also found in my research just how much of what I knew from family lore contradicted historical records, and how much of the lived experiences of family members was left out of those records.

Data silences that might be ignored in a spreadsheet can become vast oceans once they must be traversed "on foot" in *Grotto*. The work of the genealogist (of bloodlines or of history) is the worms-eye view of the scholar with no hope of origin or grand-unifying theorem, not the lofty view of the philosopher staring down at a completed map. The difference between genealogy as practiced by the Church of Latter Day saints and others, including genealogists not of family pedigree but of historical values and ideas (as Neitzche and Foucault describe), is that the Mormons are convinced of an (at least theoretical) origin-point to their history, an original patriarch.

Akenson, like Ahmed, considers how words orient us—

> Other terms in our compromise vocabulary will become clear as we move along, but I must thump the pulpit very hard on one word. It is a noun that implies action: a coded verb, really. In our examination of the grammars of genealogical narrative, we must think primarily of lines of genealogical ascent, not descent. [...]Yes, it would be nice to be God and look at things from the top down, but that is not our present calling. And false omniscience (which letting ourselves think we can look from the top downward certainly is) leads to one's postulating paradigms and then forcing the data into them.

In *Grotto* we as players are descending through genealogy in the most literal way, to climb or descend a stairway leads the player back or forwards one generation, respectively. The orientation the words "up" and "down " give us in the context of the dungeon are different from the lofty scholar's, however. We imagine ourselves descending into darkness and becoming lost, not peering down from a safe height with ever-deepening sight, as in the Arcology Mode.

Grotto inherits as much of its design patterns from the node-based *Hunt the Wumpus* as from roguelikes, starting with a structure that seems settled—a family tree—but then confuses that structure. A single room is viewed at a time as a map, but there are no consistent compass directions. Having entered the room of a child from the direction of a parent, a player finds that they are reoriented, and the inverse direction of their last move may not be the way back.

Both roguelike games and *Grotto* have a sort of information architecture that is traversable, but can be conceived as spreading in infinite directions. The dungeons of roguelikes are procedurally generated, space-filling mazes that could extend as far as the game developer and the capacity of computer hardware allow. *Grotto's* architecture (using family tree charts as its blueprint) flows from a biology that knows no origin point, and will theoretically continue to grow with each new generation. "Recession ad infinitum" (Roncato, n.d., 24) as an

architectural feature can only exist in videogames and in a sort of imagined architecture that can never progress past sketches.

The dungeon built from data asserts its own authority and solidity, but relics, carried by players through the maze of *Grotto,* provide slippages and portals from one time and person to another. Ahmed continues to play with the connotations of words in describing a sort of queer pathfinding that cuts through the assertion of straight genealogical hallways—

> Queer orientations are those that put within reach bodies that have been made unreachable by the lines of conventional genealogy. Queer orientations might be those that don't line up, which by seeing the world "slantwise" allow other objects to come into view. It is no accident that queer orientations have been described by Foucault and others as orientations that follow a diagonal line, which cut across "slantwise" the vertical and horizontal lines of conventional genealogy, perhaps even challenging the "becoming vertical" of ordinary perception.

Akenson reminds us that genealogies are narratives that serve cultural desires (Akenson 2007, 77). In the case of cultures that emphasize patrilineal lines, they may even be fictional narratives, as paternity can only be established for certain very recently. In the case of the Latter Day Saints, the narrative of genealogy follows a very strict grammar, presumably back to a biblical Adam. It's a patriarchal structuring of humanity that disappears social arrangements that don't fit within it. While Ahmed's work focuses on the ways in which queer experiences are excluded from dominant cultural narratives, Akenson's book explores how family histories are often constructed to support preconceived notions about identity and heritage.

In stepping through the architecture of my family dungeon, I located rooms that corresponded to two of my mother's cousins. The Burkhalter brothers were two gay boys, one of whom was an amateur ventriloquist (who amazed the family children by throwing his voice into the nearby woods). Their father was physically abusive and dominated their immediate family. My mother remembers the time her Aunt broke down the Burkhalters' door and struck the father in defense of the boys, throwing the house into turmoil. The genealogy data that I have access to gives me only the driest impression of them— that they lived and died, one young. It doesn't tell me that one of the brother's died by his own hand, just that he served in the Korean-American War. It tells me that the surviving brother married, had children and divorced. It's only through a surprisingly candid obituary that I can see that the longest-lived of the two brothers came out as a gay man late in life, and his funeral was attended by his partner of many years. "I remember at a family funeral he came up to me, smiling," my mother said of her cousin, "and he took my hand and asked, 'Sheryll, have you had a good life?'" I inscribe all these things within relics, to be kept carefully safe in the otherwise cold cenotaphs of the dungeon. Reading a name from the obituary, I inscribe a room in the database for this partner,

and a relic traces a slantwise path between the pair[7].

Edmund Husserl famously used the example of a writing desk to explain his concept of intentional orientation. He argued that our consciousness is always directed towards something, and that this intentional orientation is what distinguishes conscious experience from mere sensation or perception. The writing desk is a familiar object that we have a mental image of, and this image helps us orient ourselves towards the desk when we interact with it. We know that the desk has a flat surface, drawers for storage, and is typically used for writing or other similar activities. This mental image allows us to navigate the desk space without having to constantly re-orient ourselves.

Ahmed expands the example of the writing desk to include the perspectives of those in the domestic space who might have radically different orientations towards the object—

The desk that is clear is one that is ready for writing. One might even consider

> the domestic work that must have taken place for Husserl to turn to the writing table, and to be writing on the table, and to keep that table as the object of his attention. We can draw here on the long history of feminist scholarship about the politics of housework: about the ways in which women, as wives and servants, do the work required to keep such spaces available for men and the work they do. To sustain an orientation toward the writing table might depend on such work, while it erases the signs of that work, as signs of dependence. (Ahmed 2006, 30)

Who in the house has the time and access to use the writing table to write? What orientations towards the spaces and objects in the home are turned against those assumed to be default? In reading Ahmed's book, I was struck by an image I had not witnessed firsthand but now know that it has occurred— my mother cleaning the "mud room" of my grandparents' house after her step-father's suicide (the room where his locked roll-top writing desk sat), sparing her half-sisters and mother the experience. I think about how she grew up in that family as the remnant of her mother's previous marriage. The details of her parents divorce seemed sordid— my grandmother had carried on an affair and left my biological grandfather Milton for his foreman Bob at the construction firm he worked for. As a result my grandmother had ascended in class—but the costs to her were high. In early 1950's Texas, adultery was a criminal matter. My mother remembers the police being involved when my grandmother's affair was discovered. My grandmother was a practicing Catholic as well, and the subsequent divorce and remarriage resulted in her being denied communion for decades. This is the context my mother pulled into the act of scrubbing the

7. The punctum to this heartbreaking/heartwarming story is that, in order to find out more about my relative's partner, I looked through both of the pair's posthumous facebook profiles, which were filled with incendiary right-wing memes that they had posted, despite the men having lived together for over a decade as, (according to one of their obituaries) "special friends."

mudroom floor, and it informs how she was oriented towards that space. It also informs how I oriented myself to that same space where I spent so much time with the diligent but non-productive 'work' of dungeon exploration (in the Atari 2600 game *Swordquest*), and of the exploration of a completely symbolic house (of the Atari game *Sneak n' Peek*), mapping out its 'hiding places.' Ahmed's text considers the phenomenology of those with marginalized orientations. In my current work, I am now considering the phenomenology and orientation of a child towards the world. I can still feel the largeness and seemingly purposeless complexity of that world around me. I can remember being highly sensitive to the moods and cryptic speech and actions of the adults I knew, and of having the dawning awareness of the vastness of the unknown—crowding around the tiny crayon-sketched map of what I knew.

Grotto began as an attempt to make my art pieces and writing *less* accessible. I have found over the years that I seem more motivated to do journaling and make artwork when I know it is *possible* for others to access it but that there is a near certainty that they will not. I feel overexposed thinking of the things I've made being pulled from their contexts or falling under the attention of hostile strangers. I had experimented with nested hypertext structures for years to protect and structure this kind of work, but it was once I began experimenting with parsing GEDCOM data that I decided to construct a crypt of every known relation I had, and to use that as a place for work. It seemed the perfect way to process thoughts about family and the past that felt especially complicated to me, adding writing to data objects and placing them inside reliquaries linked to people in my family tree. Caring for a room in the maze (cleaning, sanctifying, keeping lit) can release these objects for view. The rooms can be defiled by players as well. The space has become vast as I have done research—much of it I will never visit.

There is a tension between hiding the contents of the game and activating them. I find myself simultaneously wanting to do both. I've built physical objects that are able to connect to the database of the Grotto, allowing actions to be carried out in physical space that affect the state of the game world. For instance, I've built a wooden kneeling pad that records acts of devotion within rooms in the game, using an embedded wireless microcontroller. I've taken an heirloom doorknob found on my family's farm and allowed it to open game doors. A physical book of maps provides codes to peer into cenotaphs and their reliquaries, recalling the way that early boxed computer games relied on their printed manuals to tie the duplicatable software to a physical instance. My hope is to continue work in this manner, tying space to heterotopic place, creating more cracks between these two worlds.

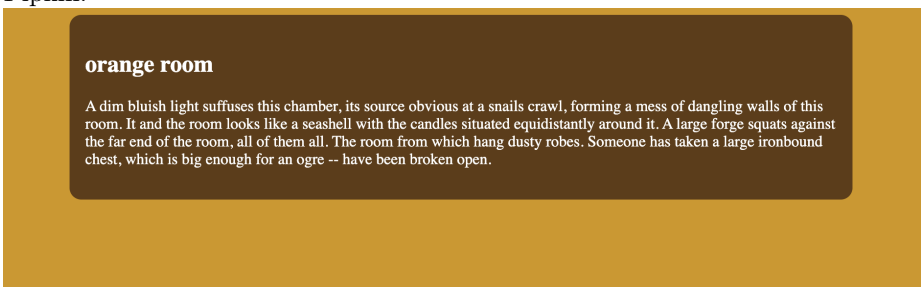
5.2 The Design Genealogy of Grotto

Grotto has both benefited and suffered from a tug-of-war between influences. Early in its development it was text-only, but a resistance to specific descriptive text and a drive towards expansiveness resulted in room descriptions that are

generated from different corpuses of writing using Markov chains. Markov chain text generation is a type of stochastic model used to generate or predict a sequence of possible events, based on the statistical likelihood of such events. This method is often used in natural language processing to generate text that resembles a particular style or source.

A Markov chain is a mathematical system that undergoes transitions from one state to another according to certain probabilistic rules. These rules are based on the current state of the system, and the system's history is not taken into account, meaning it has no memory of the past states it has been in. This is known as the "Markov property" or "memorylessness" (Kirkwood, n.d., 205).

Markov chain generated text is appealing to me for all of its perceived failings—In an era of convincing machine-learning text generation, simple Markov generators with small, hand-selected text corpuses are filled with disjunctive linkages and poetic possibilities. In text game context they are impressionistic but are not "reliable" or "useful" as a description of a space or of functioning game objects that can be interacted with. As I developed Grotto from a few rooms into a multilevel representation of genealogical data, I used evolving text corpuses to symbolize different historical eras. I'm captivated by the disjointed, borrowed nature of early forms of generated text. This interest dates back to my early fascination with cut-up and rules-based writing and has found its place in algorithmic poetry, as championed by artists like Allison Parrish and Everest Pipkin. [8]

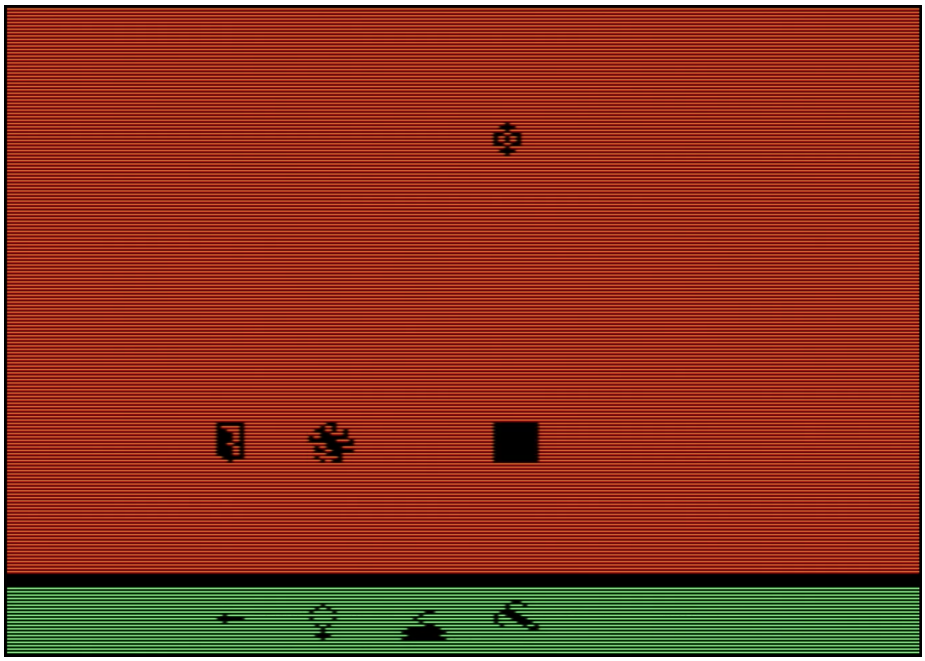


An early instance of a text-only room within Grotto

Early in development I included my experiences with Atari 2600 games like *Swordquest* and *Sneak n' Peek* as subjects, and these inspired me to include iconic graphics as representations of items and characters within the game. To suggest pixel art without the specificity of a computer, I created images of forty by thirty pixel pattern tiles, sketched in horizontal pencil lines. They recall both the wider-than-tall blocks familiar on the Atari 2600, whose scanline-based visuals had a higher vertical resolution than horizontal resolution, and also the graph-paper sketches I did when mapping videogames as a child.

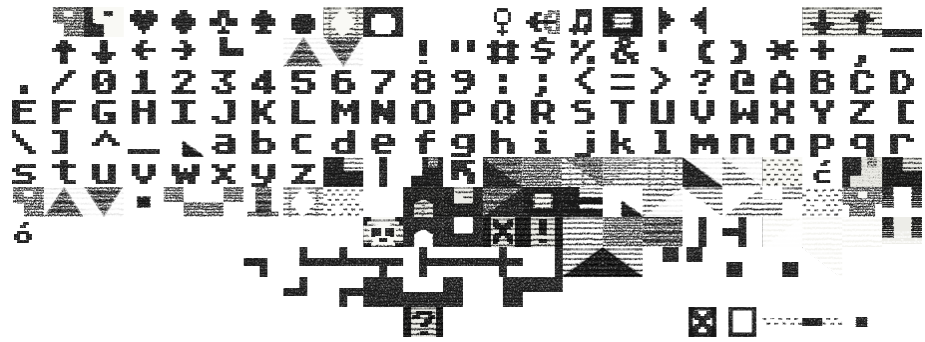
8. See "Digging and Sinking and Drifting: Allison Parrish's Machine Poetics" - *Journal #117 April 2021 - e-flux* (Zhou n.d.) and "A Long History of Generated Poetics cutups from Dickinson to Melitzah" (Pipkin, n.d.)

The "Swordquest"- style early Grotto interface was used with a single-button joystick, which was the origin of the "one-verb-per-object" interaction design of the game



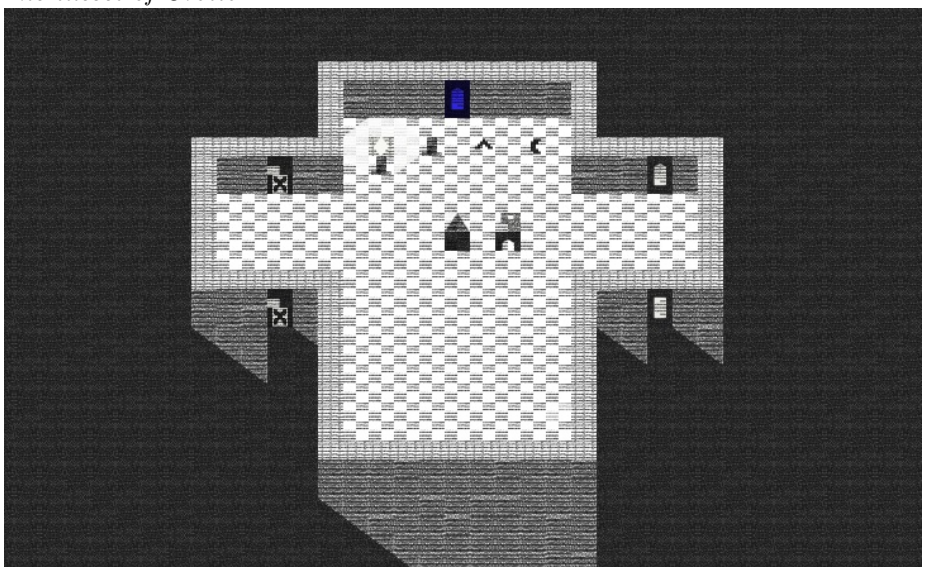
Swordquest Earthworld, Atari 1982

The resulting tiles can be combined into larger representative shapes, at times resembling textile art. I kept my tile palette limited to the characters found in the "code page 437" character set used by many early roguelike games. [9] I found I was able to draw maps of rooms that also felt somewhat like roguelikes, but also established their own visual language, with slight walls and shadowed bases suggesting height, similar to the wall-floor-slice levels of *Dwarf Fortress*.



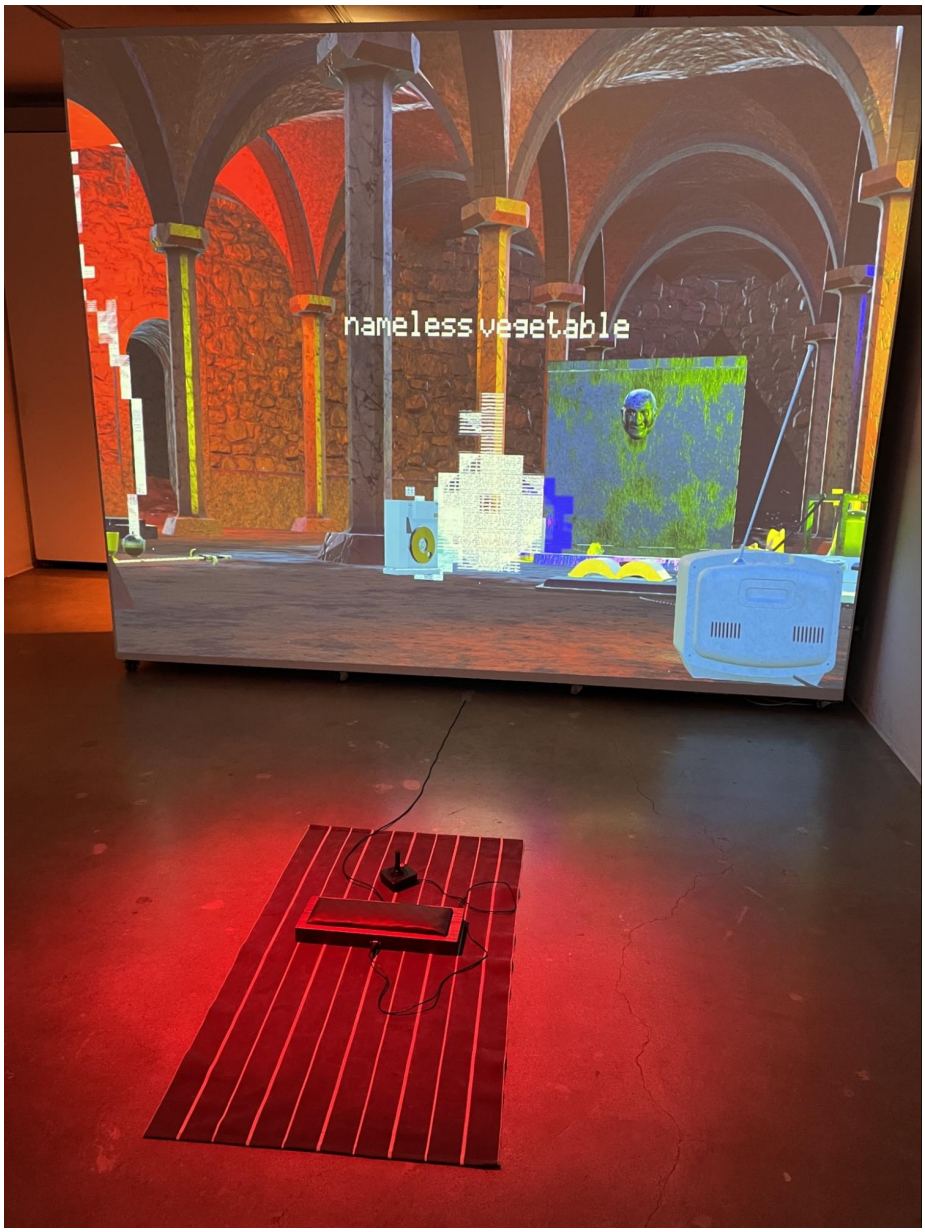
9. Code Page 437 is the character set of the original IBM PC (personal computer), developed in the early 1980s. It is also known as CP437, OEM-US, OEM 437, PC-8, or DOS Latin US. The set includes a mix of alphanumeric characters, special symbols, Greek letters, and graphical line-drawing characters, totaling 256 in all. It was widely used in the early PC environments and became a standard in the DOS era for creating user interface frames and borders in text-mode applications.

The tileset of Grotto



A room in Grotto

The first solo-exhibition of *Grotto* featured a single room in the maze (which was then only twenty rooms in size) fully detailed in 3D with textures. The room could be examined and interacted with using a Virtual Reality headset, but I quickly moved to wall projections for simplicity and accessibility in the gallery space.



"Mud Room", UCLA Broad Center Graduate Gallery, April 5th, 2022 (Wiggins)

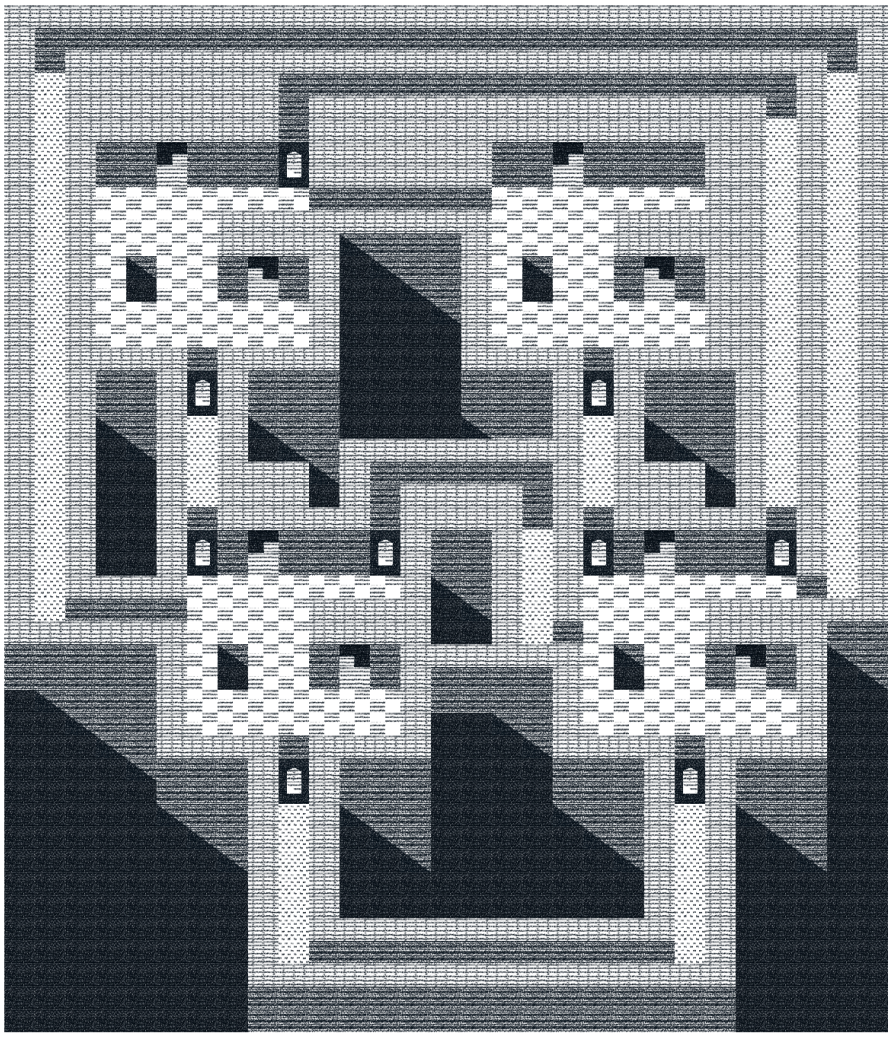
A heavy wooden kneeling pad allowed a player to kneel before a cenotaph inside the projected room and an attached Atari joystick allowed them to clean the floor of the virtual dungeon room. *Mud Room* only showed a single room in the then-small maze as specific rendered 3D objects, and I introduced the piece by suggesting that this was the room in which I dwelled, acting as an NPC

in my own game. The kneeling pad was meant only for me, and I was tasked with daily acts of devotion to the space that included keeping it clean as other players dirtied it.

Detail from "Mud Room", UCLA Broad Center Graduate Gallery, April 5th, 2022 (Wiggins)

The different interaction design referents that the game draws from—the node-based map of *Hunt the Wumpus*, the top-down visual maps of roguelike games, the single-button and joystick navigated inner-chambers of *Swordquest*, and the textual descriptions and verb-palettes of early graphical and text adventure games, all have left a mark on the now idiosyncratic design of the *Grotto*. The fact that the game is essentially a web page, connected with a standard web application database, has also left it with a strange, asynchronous feel. The realities of taking patterns established by simple single-player games and applying them to a multiplayer space with hundreds of rooms has also had unusual results. Since the game cannot be truly turn-based because it is multiplayer, it has a system in which the maze accrues entropy as players carry out acts within its space. Entropy is bounded by individual floors of the dungeon. Each non-player character in the game has an entropy limit amount that, when reached, triggers them to take an action. Some NPCs (like the Wumpus) are deadly, entering their room results in an instant player death. Some NPCs are simply hostile. They will make a move to kill a player once their entropy limit is triggered, which means that a player may be able to exit or bash the hostile character with

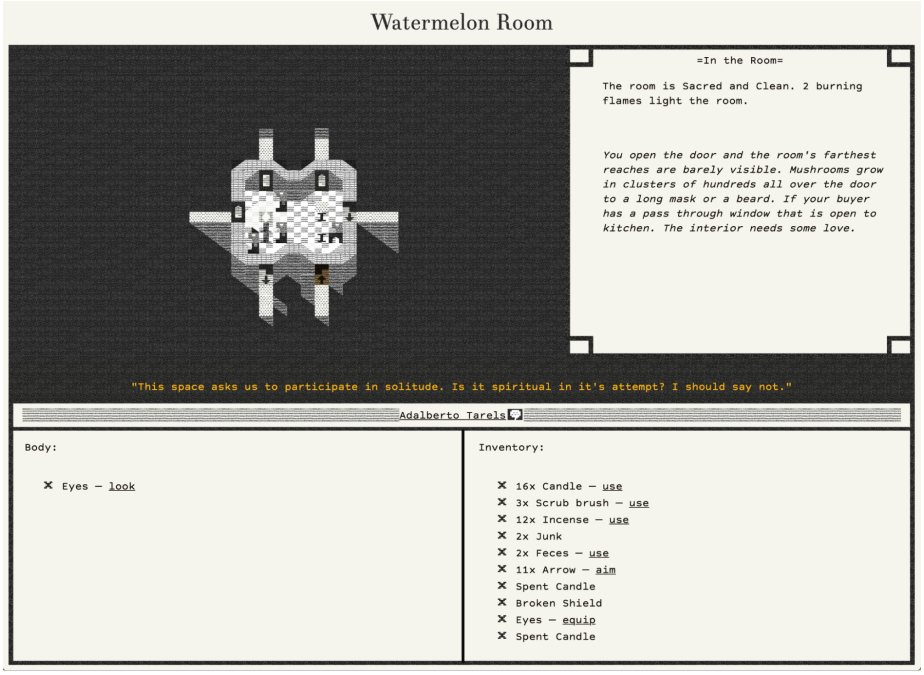
a shield into an adjoining room before an attack is carried out.



"Sibling Rooms," (Wiggins 2023)

Each room in *Grotto* currently has three attributes— sanctity, cleanliness, and brightness. Placing lit candles, lighting incense and cleaning the room with a scrub brush item can change these values. Player characters begin play with different sensory organ items, such as eyes, ears, and noses. These organs have a verb that allows the player access to an item's detail page, which can hold many different kinds of content. In the cases of the relic item type, details can include writing, images, 3D models, and a provenance of which characters have held the item. Since different sensory organs are bounded by different room attributes

(a nose can detect items in a room even when it is pitch black, using its 'sniff' verb) character classes can gain knowledge of room contents differently from one another.



Grotto (Wiggins, 2023)

In an early iteration of the game I decided to assign absurd player classes (Human, Robot, Animal, Obelisk, Vegetable, Bird, Ghost, Fungus) based on the results of a questionnaire, mimicking the morality-test-as-character-generator opening of *Ultima IV: Quest of the Avatar* (Origin Systems, 1985). Characters generated from the seemingly arbitrary questions about family relations at the beginning of *Grotto* have equally random skills, mimicking the parametric skills of role-playing games. The purpose of these skills (picked from a list of hundreds of words like 'thriftiness' and 'hygroscopicity' . . .) is unknown to the player though.

5.3 Dungeon Keeper, Dungeon Dweller

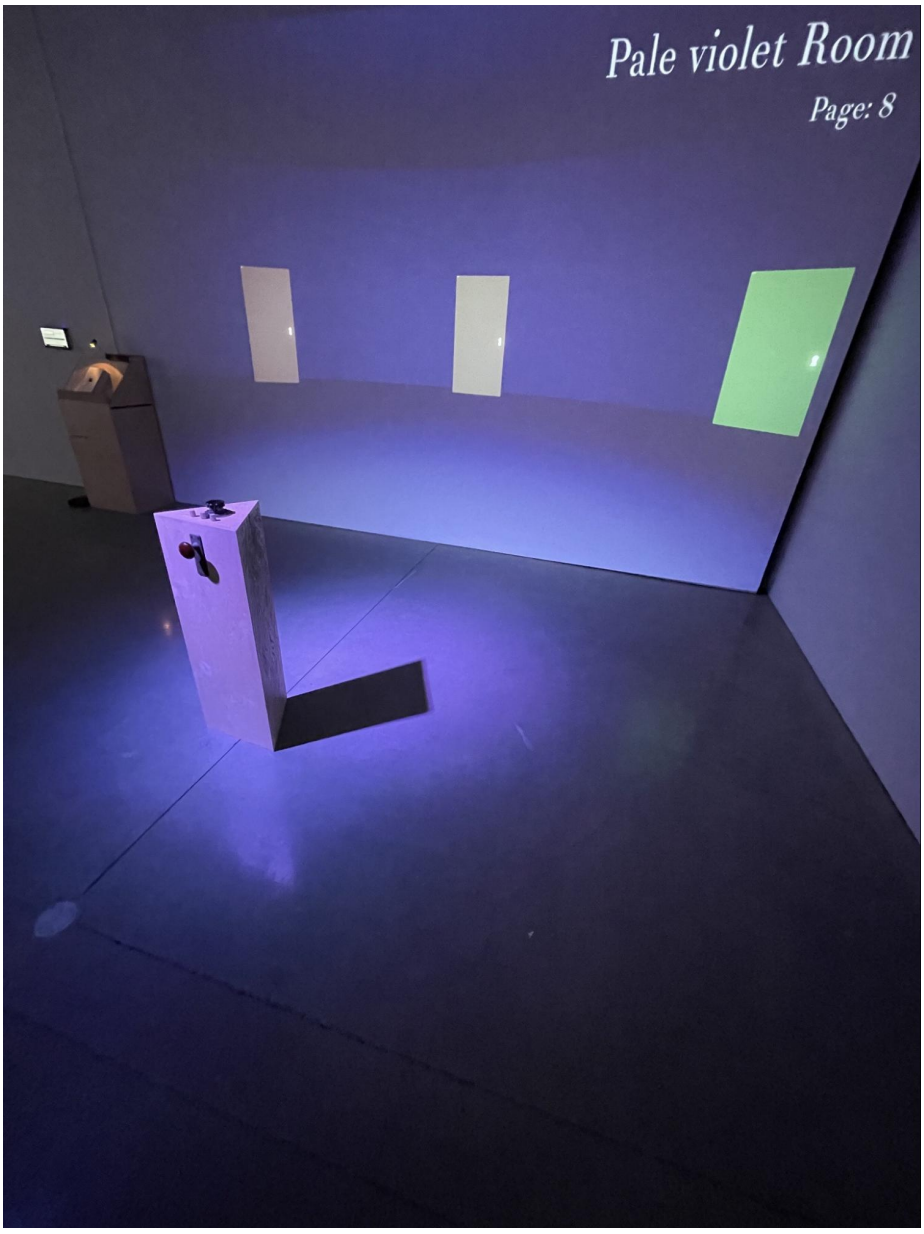
Dungeon Keeper is a strategy video game developed by Bullfrog Productions and released by Electronic Arts in 1997 for the PC. The game combines elements of real-time strategy and god game genres, allowing players to take on the unconventional role of a dungeon keeper, whose goal is to construct and manage a dungeon, protect it with traps and minions, and ultimately conquer the world by defeating heroic forces trespassing within their dungeon as well as rival

dungeon keepers.

After demonstrating different views of *Grotto*, including an administrator view, in which the interface of the game is replaced by database pages of items, NPCs, characters and rooms (themselves populated by humble spreadsheets that I maintain outside of the game), a suggestion was made by an advisor that maybe I was, in fact, playing the role of dungeon keeper within my own game. This returns to a conceit I floated earlier, that *Grotto* is a game *played* in The Dungeon Mode, but *developed* in the Arcology Mode. Moving between these two modes suggests a shift in how the game world is apprehended (true) and a shift between different game-selves. The game-self question is muddy but interesting—when I access the database it's usually to cheat and give myself a candle or an arrow, and I don't generally imagine myself as the character I am playing, reaching into the database to magically produce an item. This is, however, a normal interaction in early MUDs (Multi User Dungeons), in which a player character might be granted "wizard" access that allows them to create and describe items within the world of the game, while they are playing. I have at times toyed with the idea of making the quest object of *Grotto* an item that, when viewed, shows a logged-in administrator's view of the game, allowing the game world to be changed.

The comparison with my role in the game and the idea of a dungeon keeper doesn't completely fit for me, but it's provocative. Even when I am dealing with the spreadsheets or database views that support the game, I don't feel as though I am in control of the spaces of *Grotto*. Because the labyrinth of the game was generated from genealogy data rather than designed by me with players' experiences in mind, my role in my own game feels more like an NPC, tending to a small portion of the dungeon, bemused or irritated by adventurers who barge through, but rarely hostile towards them. I never picture myself as the original builder of the dungeon, just a steward, or maybe only a factotum, within it. The game is still overwhelming when viewed as an index from 'above' or when traversed 'on foot.' Rather than a dungeon-keeper/architect, a sort of creative referee mirroring the role of Dungeon Master in table-top roleplaying games like Dungeons & Dragons, I feel much closer to the character of Tenar in *The Tombs of Atuan*. A dweller-in-the-dark granted some limited, ceremonial power. Game studies academic Espen Aarseth introduced the terms "scripton" and "texton" in his book "Cybertext—Perspectives on Ergodic Literature". According to Aarseth, "textons" refer to text strings as they exist in a database, while "scriptons" are the strings as they appear to readers or users of the text. I don't believe that a structural view of the game as data and a view of the game from the perspective of a player are different sides of a stage, with me pulling ropes on one side and the players performing on another. In *Grotto* these perspectives are porous. For instance, in my MFA Thesis project *Doors*, a 3D view of rooms in *Grotto* navigated using a family heirloom doorknob as a controller, it is possible to 'cheat' and view relic items using interfaces that are not available during normal play, using the game's web API.

"Doors", UCLA New Wight Gallery, May 18, 2023 (Wiggins)



"Doors", UCLA New Wight Gallery, May 18, 2023 (Wiggins)

There is something about the unwieldiness of *Grotto* that makes it feel like a real place to me, instead of an inert, known quantity. The size of the maze, and concerns about network performance for multiple simultaneous players means that tasks such as checking every room state for the amount of time each has been kept clean by players require creative solutions. In that particular case the

answer was to have individual roving NPCs, called "factotems" check the rooms during their wanderings, which both kept the game performant and added a level of realism to play. Factotems could be killed. Locked rooms that were already neglected could be forgotten for a time. Systemic solutions to problems also create unforeseen behaviors which can surprise and confuse player and developer alike. One of the interesting features of the game—sense organs that allow interaction with items and characters in dark rooms—came about because of a rendering bug that made sprites visible on top of a blacked-out room.

Game development is a complex process, involving regular detours and interactions with the tangible aspects of coding, which may often diverge the project from the initial artistic intent. This process, largely invisible to players, can also result in unique textures and nuances within a game. The playful, sometimes antagonistic relationship between game and player means that bugs and imperfections can become an accepted (and sometimes) exploitable part of the character of a game (an entire culture of "speed-running" games involves the careful cataloging and use of game glitches). I believe that in some ways these uncontrollable elements bring a game to life, and expose some of the otherwise invisible labor and material qualities to the player.

I'm fascinated with the game *Dwarf Fortress* because I feel that it has this living quality, and I've seen how that quality energizes its community of players, who act as "scientists" to create working models of its system (Martinez-Garza 2015). *Dwarf Fortress* is also unique in that it encompasses all three of the game modes I've discussed in this writing. The early-game of *Dwarf Fortress* is a homesteading game in the purest sense and at the peak of play it becomes an arcology game. After a fortress collapses, its ruins may be revisited in the game's "Adventure mode", which is explicitly a classic dungeon crawl game, with an individual player character exploring the darkened ruins of a space that had potentially once been built by the same player. While it's outside of my abilities and resources to create a game on the scale of *Dwarf Fortress*, the creation of which has occupied nearly twenty years of the developer's lives, I'm fascinated by how it works as an ever-evolving, living work in conversation with its players. I'm also very interested in how it can straddle three modes of play, keeping the pleasures of gameplay that are features of each mode, yet it can expose and test the otherwise implicit value systems of each. Simple tweaks to complex systems, such as moving assumptions of value from "the world" to the individual opinions of characters in the game radically transforms play from the sorts of simulation games a player might be accustomed to. I'm seeking these same sorts of discoveries. If I had total control and predictability over a game, it would feel static and lifeless. Instead, I seek to create games that feel alive, surprising, and in a state of constant change, complete with their own history.

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Conclusion

The modes of videogames I have defined in this thesis—The Dungeon, The Arcology, and The Frontier—serve as distinct lenses through which to view the interaction between games and society, and the ways in which they influence our perceptions of history, identity, power, and place. A mode is different from a genre by virtue of its relation to the real. Furthermore, a game mode finds another dimension of meaning through the relationship between the self that the player enacts within it and its constructed world. These modes, while originally defined in the context of computer games, are also rooted and reflected in larger social narratives and can be examined in various domains of human activity, from art and architecture to politics and cultural evolution.

The Dungeon Mode, rooted in the exploration of hidden pasts, invites a reflection on how we approach history, both on personal and societal levels. The excavation of an occluded past mirrors the mechanics of a dungeon crawl, the practiced actions of a thorough search tracked on an incomplete map prefigures the situations of the Frontier Mode, and have the potential to reveal the power dynamics, secrets, and contradictions embedded in our relationship to history and fantasy.

The Arcology Mode, centered on the simulation of an unfinished future, illuminates the complexities of power distribution and societal structure, presenting players with the opportunity to rethink established notions and interact with the concept of a utopia that is always in flux, never finalized. This understanding underscores the idea that the future is mutable, an experiment perpetually in the making.

The Frontier Mode, in its confrontation with a perennial present, exposes the inherent violence and destructive potential of unchecked individualism and expansionist ideologies. Here, there are opportunities for game experiences to engage with Turner's frontier ethos but problematize it, critiquing the notion of freedom as freedom-from-restraint and pointing toward a more collective understanding of social freedoms.

My thesis project, *Grotto*, manifests the concepts encapsulated in these three game modes in an interconnected environment that invites players to explore my own limited conceptions of history, future, and present through the play experience. The game acts as a microcosm, enabling a critique of societal constructs and power dynamics through its symbolic game-objects and designed interactions. It is ever-growing and evolving, a versioned architecture that never stabilizes.

Ultimately, the exploration and delineation of these game modes in the context of Grotto serve to underscore the broader point of this thesis: the potential of games as a medium for encoding complex social narratives, exploring diverse perspectives, and challenging prevailing ideologies. This opens the door to a deeper appreciation of the role games can play in enriching our understanding of ourselves and the world around us.

By grounding this exploration in my personal journey as a player, artist, and researcher, I have sought to contribute a unique perspective to the ongoing dialogue about videogames, demonstrating that games can function not only as vehicles of entertainment, but also as powerful tools for introspection and critique. The modes I have outlined provide a basis for future research and design, offering a new way to analyze and understand the complexities of computer games and their place within our cultural and sociopolitical landscape.

As we venture further into the 21st century, with its ever-accelerating pace of technological and cultural change, the modes of gaming I have discussed will continue to evolve, adapting to and reflecting our shifting societal narratives. It is my hope that this research will help to illuminate the richness and complexity of the gaming experience, and that it will inspire other scholars and artists to further explore the potential of games as a medium for critical thought and imaginative play.

Acknowledgements

The completion of this MFA thesis has been an arduous and rewarding journey. College had never seemed like an option when I was growing up– the resources weren't available, and I had resisted the Texas public education system to the point of self-sabotage.

It was through the love and support of my friends and partner that I was ever able to imagine first community college, then a transfer to UCLA to complete both a BA and MFA in the Design Media Arts department. I'd like to first thank those who advised and encouraged me to take the first steps in this process: Katherine Garcia-Holmes, my parents Sheryll Greer and Ramsey Wiggins, Everest Pipkin, Rachel Simone Weil, Richard Linklater, and professors Kristen Schilt, Patrick Jagoda, Melissa Osborne and Paolo Pedercini. I'd also like to thank my community college teacher Mike Stevens who passed this year. He will be missed by all who were lucky enough to know his kindness, humor and loyalty. I express my profound gratitude to all of these individuals who have contributed to my growth as an artist and scholar.

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-Wiley Wiggins, June 2023