

## EVEN IN ARCADIA: A SITUATIONIST GAME ABOUT REPRESENTATIONS OF NATURE



a Media Studies Senior Project  
built by Phoebe Shalloway,  
advised by Tom Ellman,  
and submitted May 3, 2018.

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## author's note

Dearest reader: welcome to the virtual space that is my project. I'm so happy you're here!

This project takes the ideas of the Situationist International (see section I.3) as the starting point for an investigation of how representation (through art, conversation, story) and play (especially playful interaction with one's environment) might enable the radical rethinking of harmful cultural ideologies. Over the last few months I built a game called *Even in Arcadia* that prototypes the application of these ideas to a critique of humans' relationship to 'nature' under global capitalism. My game depicts an imagined future in which the logic of capitalism has expanded unchecked and nature has been entirely replaced by its image. I ask players to use this space as a sandbox in which to consider presented ideas and explore/discover embodied reactions to these ideas.

What follows is my written accompaniment to *Even in Arcadia*—in part my attempt to organize linearly the network of ideas out of which the game involved, in part my own analysis of the finished game. As I mentioned, my game is only a prototype, and my own understanding of humanity's flawed relationship to 'nature' and of what art can do about it is limited by innumerable factors. As a storyteller describing the game's creation, I have the privileged perspective of being the person who lived that story; as an analyst I have no more authority than anyone else who takes time to consider my project. I believe that everyone who engages with this project becomes its co-creator—in fact, its success is dependent on this idea— and so I invite you to dispute or discard anything that I say in the coming pages in favor of your own interpretations/thoughts/feelings. I cannot present the following thoughts as definitive conclusions. I can only bring the ideas I have encountered thus far into conversation and present this conversation to you as best I can, in order to see what we can make of it together.

If you're inspired to share with me your own interpretation of my project, other works that you think shed light on its themes, your own thoughts on these topics, or you'd like to be in touch for any other reason, please reach out to me at [phshalloway@vassar.edu](mailto:phshalloway@vassar.edu). I'd love to hear from you!

## I. A SITUATIONIST FRAMEWORK FOR ART AND ACTIVISM

### 1. “First, we believe that the world must be changed.”<sup>1</sup>

Human societies are full of problems: they are hierarchical, cruel, unequal, short-sighted, wasteful; and perhaps their most insidious aspect is that they hide their own insufficiencies from their inhabitants, disguising what they really are by presenting an image of themselves as good and even natural. Many things that we take for granted as part of our everyday lives are in fact profoundly destructive social constructions: gender, race, capital, garbage, roads... We fail to notice their strangeness because society privileges a way of seeing that presents them as the unquestionable rules of life, and so we internalize them as such. A society's rules and ways of seeing reinforce one another, thereby locking themselves in place and rendering invisible the fact that they are socially constructed. This is true today under capitalism; this may also be the fate of any system of social organization, in which case resisting this process will never stop being necessary. Sociologist C. W. Mills describes his discipline as a lens to “make the familiar strange.”<sup>2</sup> Until we discover a way of seeing that allows us to notice the strangeness of our society's rules, we will not question their place in our everyday lives. But, hopefully, once we recognize them as strange, we will also begin to relegate them to the unfamiliar.

Making the familiar strange is an essential goal for media-makers as well as sociologists. Media Studies scholars at Vassar take it as a given that the medium used to tell a story (or to convey any information) affects that story/information and how readers engage with it. A medium *mediates*—that is, it stands between an idea and the recipient of that idea. It is a lens, a way of seeing, and it affects how its subject is seen. This is what Marshall McLuhan means by his famous formulation, “the medium is the message.” Many of the media objects most important to me reveal something I hadn't previously noticed about the world. By doing so, these objects gift me with a new way of seeing.

There are many examples of media that render the familiar strange: some might depict a world where a strange thing does not hold true, thus showing that it needn't in our world either; some might mimic and exaggerate a strange thing to the point where their readers cannot help but recognize its absurdity. But if the ultimate goal is to facilitate change, it is not enough that we recognize the strangeness of society's rules: we must also discover concrete behaviors that we can adopt to change these rules. And such behaviors are not so easy to identify. Many people who *want* to affect positive change in the world struggle with the feeling that they do not have the *ability* to change anything at all. Actions we take in response to problems as individuals often feel pointless in the face of the resistance to change and apathy to suffering exhibited by the massive institutions that are causing these problems in the first place. We must seek a framework for art that both reveals the strangeness of our world and points us towards concrete behaviors we can use to respond to this strangeness.

### 2. Situations

The Situationist International (SI) was a group of writers, rabble-rousers, and would-be revolutionaries who in the 1950s and 60s sought to reject society's dominant logics. Guy Debord, the SI's most prominent member, analyzed how society represents itself in his famous cultural critique, *Society of the Spectacle*, which begins with the assertion that “all that once was directly lived has become mere representation.”<sup>3</sup> He writes that when reality is replaced by its representation, this representation in

turn constitutes a new social reality that obscures all that came before. Culture becomes an image of a culture, society an image of a society; but these images are accepted as real. The collection of all these images is what Debord calls the *spectacle*, and it encompasses commodities, media, and even social relations: all elements of culture and all products of human labor. Constant bombardment by these spectacular images induces a “trancelike behavior” in the populace—a passivity that prevents us from recognizing the world’s falseness and deciding to challenge the logic of the spectacle. The spectacle is additionally expanding to include more and more of reality, its endgame being the total concealment of everything outside of it: “man is more and more, and ever more powerfully, the producer of every detail of his world.”<sup>4</sup>

The Situationists operated first and foremost against capitalism, the prevailing social order of their time, whose logic of consumption “had come to define happiness and to suppress all other possibilities of freedom and selfhood.”<sup>5</sup> One brochure distributed by the SI included a photograph of graffiti reading “ne travaillez jamais,” or “never work,” with the caption: “minimum acceptable program of the Situationist movement.”<sup>6</sup> Debord’s spectacle is specifically the product of capitalism and “corresponds to the historical moment at which the commodity completes its colonization of social life.”<sup>7</sup> But Debord begins his 1957 Situationist manifesto by calling for the instigation of radical change in *all aspects* of life: “First, we believe that the world must be changed. We desire the most liberatory possible change of the society and the life in which we find ourselves confined.”<sup>8</sup>

They were committed and optimistic: “We know that such change is possible by means of pertinent actions. Our concern is precisely the use of certain means of action, along with the discovery of new ones... that will be implemented with a view to interaction with global revolutionary change.”<sup>9</sup> Aha! The SI were attempting to develop and deploy behaviors that can challenge the logic of society and facilitate social change— the same sorts of behaviors that, I argue, artists today must discover.

The behavior in which the SI placed their faith and from which they took their name— their “central purpose”—was the *construction of situations*. “Everything leads to the belief that the main insight of our research lies in the hypothesis of constructions of situations,” Debord writes.<sup>10</sup> Situations are the settings of life: “collective environments, ensembles of impressions determining the quality of a moment.”<sup>11</sup> A place, an experience, and all the elements out of which it is made. The SI believed that these settings can and must be changed.

“We must develop an intervention directed by the complicated factors of two great components in perpetual interaction: the material setting of life and the behaviors that it incites and that overturn it.”<sup>12</sup> The SI’s intervention—against capitalism, war, productivity, commodity culture, conservatism— began with recognizing that the vast majority of behaviors we perform are those dictated to us by the “material setting of life.” This setting encompasses the built environment as well as all the elements of the spectacle: images, commodities, social relations. In a society whose social order is stagnant, the settings of life and the actions that they dictate are monotonous: “A person’s life is a sequence of chance situations, and if none of them is exactly similar to another, at the least these situations are, in their immense majority, so undifferentiated and so dull that they perfectly present the impression of similitude.”<sup>13</sup> You walk into a room and there is a limited repertoire of things you can do: you can sit at a chair; turn the light on or off; throw your chewing gum in the trash can. Each member of society knows what to do with everyday objects because we have learned through repetition over the course of our lives what each is for; these learned behaviors make up the vast majority of our daily actions.

I emphasize that much more was at stake for the SI in the task of intervening in the similitude of all situations than the mere alleviation of boredom—it was a fight against the cancerous spread of capitalism’s logic of standardization into all facets of life. To reject the behaviors incited by the material setting of life was to reject a life in which work and play are undifferentiated, in which commodities and images replace all social interactions, and in which industrialized production replaces the body as the primary determinant of the rhythms of life.

In the same breath that Debord draws our attention to how the world around affects our behavior, he asserts that our behavior can also overturn this world. Life’s setting and behaviors are in “perpetual interaction”—neither is fixed and neither is more powerful than the other. We’ve seen how easily people stop questioning their own actions and fail to notice that these actions are the products of their material setting. But once they do, particular behaviors, applied with intention, have the power to change the world.

For the SI, revolutionary behaviors belonged in every space, at every time. Play was a powerful and viable tool, as play exists “radically beyond the capitalist work ethic”<sup>14</sup> and follows its own rules, not those prescribed by society. One of the characteristics of play, according to cultural historian Johan Huizinga’s influential definition of the form, is that it is limited in time and space.<sup>15</sup> The SI sought to destroy this limitation. They developed playful modes of behavior, including the *détournement* and the *dérive*, which they endeavored to utilize in everyday life to overturn the world’s logics. *Détournement* involves decontextualizing an image and placing it in a new context or in juxtaposition with others—thus making it strange. *Dérive* is a “playful-constructive” method of moving through space that draws attention to the space’s effect on its inhabitants:

“In a *dérive* one or more persons during a certain period drop their relations, their work and leisure activities, and all their other usual motives for movement and action, and let themselves be drawn by the attractions of the terrain and the encounters they find there. Chance is a less important factor in this activity than one might think: from a *dérive* point of view cities have psychogeographical contours, with constant currents, fixed points and vortexes that strongly discourage entry into or exit from certain zones.”<sup>16</sup>

The *dérive* harnesses play as a method of studying the built environment and the behaviors that it incites as well as changing our modes of interaction with it. In their early days, Debord and his friends would *dérive* through Paris for days and even months at a time, searching for “images of play, eccentricity, secret rebellion, creativity, and negation.”<sup>17</sup> Some of these *dérives* sought to study the behavioral effects of the built environment through the newly-invented discipline of psychogeography, some sought to psychologically disorient. All sought to reject the logic of unremitting productivity under capitalism.

### 3. Medium specificity

I discussed in section I.1 how media can facilitate social change but noted that different media have different ways of presenting ideas and affecting their readers. The relationship between the form and content (the medium and the message) of my project therefore requires careful consideration. For my project I chose to tell a story through a video game, and this resulted in a different message than if I had told the same story through a novel, a film, or a traditional written thesis.

I chose a video game as the appropriate medium for this project because I see games as well-suited to making the familiar strange, to utilizing the SI's behavioral tools of the situation and the *dérive*, and to inciting and developing new behavioral tools. All games involve playful behavior, which, as exemplified by the *dérive*, is opposed to the logic of regimented production under capitalism. Play is also opposed to more general structures of hierarchy and centralized power. Americans have historically recognized the disruptive power of play and have tried to suppress playful behaviors such as drinking and gambling—the Puritans believed that these behaviors advertised the idle body and might “disrupt the basic structures of power” in the newly established colonies.<sup>18</sup> Used with intention, play can be an effective and radical tool to employ against dominant cultural logics.

Play can disrupt order, but games also involve rules, and playful behavior can also be used to manifest order by developing and applying new rules to our surroundings. In fact, games work—they are fun, they make sense—only because of their rules. Michael Mateas provides a useful definition of immersion, a defining characteristic of games: “Immersion is the feeling of being present in another place and engaged in the action therein... when a participant is immersed in an experience, they are willing to accept the internal logic of the experience, even though this logic deviates from the logic of the real world.”<sup>19</sup> This definition evokes Johan Huizinga's influential formulation of games as taking place within a “magic circle,” a defined space in which we accept the logic of the gameworld.<sup>i</sup> Within the magic circle, everyday actions take on new meanings. In an abstract strategy game such as chess, where rules are the game's central feature, players can only have a meaningful shared experience because they accept that bishops can move any distance on any diagonal while pawns can move a single space in the forward direction. This is despite the fact that the rules of the everyday world would allow players to pick up a chess piece and move it any distance in any direction.

Players use the rules provided by game developers to interact with the provided environment in the same way that in life we use the rules provided by society to interact with our world. People accept both sets of rules; but there is a critical difference: unlike cultural ideologies, game players recognize that game rules are made-up, and that their adherence to them is just as arbitrary as the refusal to move a pawn more than once space forward on the chess board. This key aspect of games has great potential use in drawing attention to the strangeness of societal rules: simply formalizing these rules in a game might be enough to prompt the player to reconsider their place in society.

In chess, rules are memorized at the outset. In video games, the internal logic of the gameworld is more often understood implicitly or internalized through repetition. Note that from here on, unless otherwise stated, by “games” I refer specifically to video games in which the player adopts a virtual avatar that they control in order to move through a 3D gameworld. Players learn the rules of such a

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<sup>i</sup> Huizinga, writing in 1938, is discussing only pre-digital forms of play, but his ideas have maintained relevance.

gameworld—you will die if you fall in water, you can interact with certain objects and not others, you can run for a limited amount of time before tiring—by playing the game and moving through that world. This echoes how people learn how to behave through repeated interaction with their physical environments as they go about their lives and is why games are an especially promising *situationist* medium: a game is a material setting that incites particular behaviors. Admittedly, this is also true of other media, but games tend to incite more active, intentional, frequent, and embodied behaviors in their players than almost any other medium.

Games can thus lead the players to particular conclusions by provoking particular actions. Within the limits of the game set by its developer, once a player learns the effects their actions, they can begin to shape the gameworld to their desires. Thus, each gameplay experience is different depending on the player's actions. Mateas writes that agency, another important element of gameplay, "is the feeling of empowerment that comes from being able to take actions in the world whose effects relate to the player's intention."<sup>20</sup> The process of co-creation, in which the player has agency over the story, is one of the most tantalizing characteristics of games. By giving the player control over their own experience, a game could depict something strange about the world in such a way that the player discovers it for themselves, and this process of discovery can be much more powerful and impactful than having an idea told to them explicitly.

But the most exciting aspect of games is their potential to provide a milieu in which players can experiment with rejecting or challenging the behaviors incited by their environment. My hope is that games can act as a virtual sandbox for situationist-like play, where players use the "situations" they create through interaction within a digital space to study the effects of their environment on their actions—and then to discover new behaviors that they can apply in the physical world to overturn its logic.

The employment of situationist behaviors in games is already happening. *New Lethes* is an indie game created by David Cribb that presents the player with an environment of contrasts between lights and darks, busy streets and narrow passageways, world elements that are visible or invisible depending on how you look at them. The game is inspired by situationist ideas and explores "the ways in which environments can subtly influence behavior, and reproduce power relations." The demo version of this game, called *On Dérive*, is more explicit in its message: as described in a Killscreen article, it "starts by quoting Debord and then throwing you into a boxy space in which you are constantly moving forward. You steer through a small portion of towers and alleys, enacting *dérive* without a choice, and eventually arrive at a red box stood lonesome in an open space. Then comes the revelation: Without realizing it, you took the path of least resistance, all due to the shape and angles of the architecture and the way it carves light."<sup>21</sup>

*New Lethes'* intention to implicitly guide the player down "the path of most resistance"<sup>22</sup> is echoed by the emergence of communities of gamers applying the same logic to games that do not intend it. *bottomlesspitsingames.tumblr.com* is a gamer community blog dedicated to breaking game maps by exploiting tricks and glitches to reach game areas that developers never intended for them to enter. Here the disorienting experience of falling off the edge of the world is the goal. Such seeking out of disorienting behaviors—in opposition to those dictated by a built space—is precisely the situationists' goal. I'm sure these aren't the only examples of situationist behavior in games, and I hope to discover more in the future.



#### 4. Formal inspirations

My project draws most closely on *immersive sim* games for formal and mechanical inspiration. This genre is defined by its emphasis on creating a believable gameworld with a consistent internal logic and on providing a player-driven experience within this world. An immersive sim makes the rules of its world transparent to the player, and then allows the player to move through the world and decide for themselves how they want to interact with it using these rules. For example, *Deus Ex* creates a player-driven experience by allowing players to choose between combat or hacking, stealth or guns-blazing, and lethal or non-lethal approaches to traversing the gameworld and solving problems. There are always multiple ways to progress through the game; the player can choose the approach they prefer. In *Gone Home*, the main mechanic is exploring the world and examining objects in it, and the game creates an internal logic by defining the objects that the player can interact with consistent throughout the game. For example, you can pick up any book that's set out on its own, but not any book that's placed beside others on a shelf.

*Deus Ex*, and other games such as *System Shock* and *BioShock*, which involve first-person shooter and action-adventure elements, epitomize the classic immersive sim game that laid the groundwork of immersion, environmental storytelling, and player agency that allowed the genre to evolve. *Gone Home*, created by a small team of developers at the company Fullbright, pushes the genre in a new direction, proving that games don't have to involve combat and other traditionally game-y mechanics to be compelling. Instead, their games focus on storytelling and environmental exploration. This is a direction I'd love to see the games industry as a whole explore further and is why I'm so interested in the immersive sim genre.

Fullbright's second game, *Tacoma*, is the game that I've found to be most closely related to my goals for *Even in Arcadia* and is thus my biggest inspiration within the game medium. *Tacoma* draws inspiration from the immersive theater production *Sleep No More*. A work of site-specific theater by theater companies Punchdrunk and Emersive, *Sleep No More* takes place in a refurbished warehouse in New York City, which has been transformed by set designers into an incredibly detailed set of over a hundred rooms spread out across six floors. Actors move through this set and perform scenes in different rooms, while the audience is free to wander around at will, witnessing a scene in one room while others occur elsewhere. Likewise, in *Tacoma*, scenes are enacted simultaneously in multiple areas of the space station setting. However, in *Tacoma* you are observing Augmented Reality recordings of scenes that happened in the past, and so you can play, pause, rewind, and fast-forward these recordings at will. This feature exploits the game medium to provide an interactive mechanic that would be impossible in live theater and affords the player control over the story. However, when playing *Tacoma*, I miss the feeling of immediacy that comes with observing scenes as they unfold in real time.

I had seen *Sleep No More* before playing *Tacoma* and immediately became interested in the idea of translating its narrative framework into a video game. This play, and not any game, was in fact the biggest formal inspiration for *Even in Arcadia*. In *Sleep No More* actors abandon dialogue in favor of kinetic movement: actors run up walls, cling to ceilings, leap on tables, bathe in bathtubs, swing lights around—they always interact with the set around them. When a scene ends, the actors run off to the next room they have a scene in, and audience members can choose whether to follow the character that intrigues them most to catch their next scene, to wander about searching for something else to

see, or to search through the set around them, opening drawers and reading letters to learn more about the world. The performance lasts three hours and the scenes reset each hour, so if you miss a scene you have another chance to see it. But so much happens that it's impossible to see every scene in the show in one or even several viewings.

I was captivated by the world of *Sleep No More* and the agency it gave me as an audience member: everything I experienced felt so much more immediate, intimate, and meaningful because I had discovered it through my own embodied movement through the space and had chosen to give it my attention. The characters and story were endlessly compelling, the knowledge that there were many more scenes than those I'd seen tantalizing. Above all, *Sleep No More* impressed me as an example of *situationist* theater.<sup>ii</sup> Audience members enter the world of *Sleep No More* with the logic of the *dérive*: given no goal or direction, they are “drawn by the attractions of the terrain and the encounters they find there,”<sup>23</sup> pulled in one direction or another by the hint of a song, the glimmer of a colored light, or the rush of an actor passing by. The variety of sets—from graveyard to forest to hospital to ballroom—and dramatic changes in music and lighting makes each scene feel like a highly distinct *situation*.

Translating the narrative framework of *Sleep No More* into a video game poses challenges. Most obvious is the question of what changes when the physical environment becomes a virtual one and the living actors become digital characters. A game is an *idea* or an *image* of an environment: a world built of images. My belief that games can be a situationist tool for discovering new behaviors rests on the assumption that behaviors acted out in a virtual space can be translated into the physical world in a manner that maintains their meaning. Evaluating the validity of this assumption is one of this project's objectives.

## 5. Environmental storytelling in games

Another commonality between *Sleep No More* and immersive sims is that both tell stories through environment. When we accept the situationist assumption that ideologies of power are reflected in and reinforced by the “material setting of life,” we realize that our environments are constantly communicating information to us. Video game environments can communicate too. Understanding how environments convey information and applying this understanding to the gameworld will be an important step in developing situationist games.

Games provide creators with the opportunity to experiment with radical new narrative forms and new relations between space, place, and story. However, many games that tell stories spatially do so by taking an essentially linear text and scattering it throughout the environment. While this approach intersperses story with gameplay and exploration in an enjoyable way and successfully provides an incentive for the player to move through the world, its spatialization of story elements is essentially arbitrary. For example, some immersive sims scatter audio diaries throughout their gameworld. Players find and listen to these diaries during gameplay, piecing together characters' stories as they find them. But there's nothing about these narrative pieces that *requires* them to be laid out spatially—they could just as easily be compiled and played as a podcast, for example.

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<sup>ii</sup> I'm not sure whether this is intentional or not—I haven't seen the SI mentioned in any interviews with *Sleep No More*'s creators. My guess is that it is coincidental—but no less valid for being so.

But scattering audio diaries through game space is not the only trick immersive sims have up their sleeves. *Environmental storytelling*—the term game developers use to talk about conveying story through gameworld—is one of the tenets of the genre. In immersive sims, environmental elements such as graffiti, posters, notes, signs, and carefully-placed plot-relevant objects all express information. If many of these elements still rely on text as the conveyor of meaning, this text is at least integrated into the environment. *Gone Home* and *Tacoma* take environmental storytelling a step further, making it their primary mechanic. In these games the player learns about characters through the objects and notes they have left in various rooms. In *Tacoma*, the AR recordings provide context for environmental elements and vice versa. A player might wonder about an object left out on a table, then witness a recording of a character placing it there. The screen capture from *Tacoma* below contrasts a VR recording of the crew preparing for their “Obsolescence Day” party with the party’s scattered remains—crumpled cans and leftover decorations. In this example the objects in the environment were arranged to tell the story of what happened there.



In his article “Game Design as Narrative Architecture,” Henry Jenkins encourages game designers to use their environments to convey story and outlines different ways that this might be done. Jenkins suggests that game designers can learn a great deal from studying theme parks. He quotes Don Carson, a Senior Show Designer for Walt Disney Imagineering: “The story element is infused into the physical space a guest walks or rides through. It is the physical space that does much of the work of conveying the story the designers are trying to tell.” If, for example, the attraction centers around pirates, “every texture you use, every sound you play, every turn in the road should reinforce the concept of pirates.”<sup>24</sup> Set design is another field that might provide game developers with useful tricks. *Sleep No More* provides an environment populated with an incredibly elaborate collection of props and set pieces, each of which reveals information about the show and its characters to those audience members who examine them in detail. Furthermore, the scenes that actors perform almost always involve interaction with the set and its props, intertwining acting with environment to convey narrative.

## 6. Complicating the framework

David Cribb was inspired to make his situationist game *New Lethes* (discussed in section 1.3) because he recognized the shared concern of game developers and the SI: to understand “how seemingly organic movement can be subtly controlled.”<sup>25</sup> While the SI were interested in “uncovering (and undoing) the political structures behind the control,” game designers aim to develop techniques for “guiding the player towards important areas while maintaining an illusion of freedom of movement.”<sup>26</sup> One problem with the radical potential of games to incite new behaviors is that, for the most part, the behaviors available to the player are only those allowed by the game developer. Developers pay a lot of attention to what players are doing. “What can the player do?” is often the first question a developer asks when conceiving of a project; this question arises even before traditional narrative questions like “what is the game about?” or “who are the characters?” In our everyday lives, we have the potential to exercise the full range of behaviors that our bodies allow, even if, as the SI emphasized, we usually do not. In a game—aside from glitches like those recorded on the “bottomless pits in games” blog (discussed in section 1.3)—if the developer hasn’t allowed it, it isn’t possible.

Furthermore, “bottomless pits” bloggers aside, most players do not employ resistant playing techniques. They play games as they’re “meant” to be played, in accordance with the creators’ instructions. While creators like David Cribb and the developers at Fullbright are doing exciting work at the individual and small-group level, and the significance of such indie games to the industry as a whole is growing, the industry is still largely dominated by AAA games developed by corporations with big budgets and huge development teams. As is always the case with corporate-sponsored media, the behaviors that these games incite are not always beneficial, and some actively work to maintain the ingrained world order. In *Games of Empire: Global Capitalism and Video Games*, Nick Dyer-Witthford and Greig de Peuter provide an in-depth discussion of the relationship between video games and the “planetary, militarized hypercapitalism” that dominates the 21<sup>st</sup>-century world, locating games within what Timothy Lenoir and Luke Caldwell have termed the “military-entertainment complex.”<sup>27</sup> This is exemplified by the many first- and third-person shooter war games that double as military propaganda: within the gamespace, they simulate military training, and within the real world, they encourage army conscription. The online U.S.-military-developed game *America’s Army* links to a recruitment site for the U.S. army, and 28% of players click through this link.<sup>28</sup> A resistant, situationist approach to such a game might involve refusing to engage in combat; but the developers have afforded the player nothing else to do once this approach is taken; there is then no reason to continue engaging with the game.

Although Dyer-Witthford and de Peuter reveal this dark side of the games industry, they also assert that games have the potential to resist power. “Games have always served empire,” they write, “from Cicero’s claim that gladiatorial sports cultivated the martial virtues that Rome required... to the Prussian general staff’s Kriegspiel rehearsals of their World War I Schlieffen Plan. But games have also been turned against empire, in ways ranging from the bloodbath of Spartacus’s revolt to the gentler revenges of West Indian cricketers defeating their colonial British rulers.”<sup>29</sup> Following in the footsteps of the Situationist International and scholars like Witthford and de Peuter, I will take up the goal of discovering ways to turn games and play against the global capitalist empire of our time.

## II. REPRESENTATIONS OF NATURE IN THE ANTHROPOCENE

*“And as the moon rose higher the inessential houses began to melt away until gradually I became aware of the old island here that flowered once for Dutch sailor’s eyes—a fresh, green breast of the new world. Its vanished trees, the trees that had made way for Gatsby’s house, had once pandered in whispers to the last and greatest of all human dreams; for a transitory enchanted moment man must have held his breath in the presence of this continent, compelled into an aesthetic contemplation he neither understood nor desired, face to face for the last time in history with something commensurate to his capacity for wonder.”<sup>30</sup>*

### 1. Clarification of terminology: the Anthropocene, capitalism, and ‘nature’

The *Anthropocene* is the proposed name for an unofficial new geologic era—the ‘age of Humans.’ We are now shaping the world around us with the power of a geologic force, transforming the Earth in ways that no individual is responsible for or understands.<sup>31</sup> ‘Anthropocene’ is an unofficial term—its geological validity and precise definition are up for debate, and scholars have suggested alternative names such as ‘Capitalocene.’ I have no authority to say whether or not the term should be officially adopted by geologists, but I adopt it here because I find it to be a highly effective *medium*: the geologic view makes the familiar strange. After growing up in a world caught between the panic of coming environmental disaster and the insistence by climate change deniers that this disaster will not come, the phrases “global warming” and “climate change” have taken on a tired and even annoying tone to me and my friends. Viewing our ecological moment through the lens of the Anthropocene provides a new perspective that once again allows us to recognize it as strange and terrifying.

*Capitalism*, as it was originally defined by Adam Smith, is a different beast from what’s occurring in the world today. Scholars use a variety of terms to distinguish our current word order from capitalism as it was originally defined—global capitalism, neoliberal capitalism, integrated world capitalism. In this paper I use these terms interchangeably and often leave the word ‘capitalism’ unadorned. Please note that throughout this paper, the term ‘capitalism’ refers not to the economic model as it might function in theory, but to the monstrosity it has grown into following its systematic application to our entire world economy.

*Nature* is a term overloaded with cultural meanings, mythologies, and idealizations, and is difficult to precisely define. Where does ‘nature’ begin and end? Although cities, suburbs, individual houses, and all other human-built infrastructures are usually understood as separate from ‘nature,’ these environments could also be understood as part of ‘nature,’ as can everything. Long before industrialization, the invention of agriculture, and the development of the first city-states, no concept of ‘human’ apart from ‘nature’ could have existed. ‘Nature’ and the material setting of life were one and the same, and our behaviors were responses to this unified milieu. If the myth of separation between human and ‘nature’ had not become so deeply ingrained, we might still view cities as a form of natural architecture like anthills or bird’s nests. But now, with humans becoming “more and more, and ever more powerfully, the producer of every detail of [their] world,”<sup>32</sup> with our behaviors being largely determined by environments built by other humans, the opposite categorization has been suggested. Scholars such as Jedediah Purdy have even argued in favor of a framework that obviates

the dualism between humans and nature by subsuming the category of nature into that of the human.<sup>33</sup> How did we possibly reach this point?! A world where many humans never leave their own built environment—where the existence of anything *outside* the built environment is becoming more and more tentative? What sort of world incited such a view and such behaviors?

I have no answers to these questions, I only recognize their existence. Although socially constructed, for this project I must preserve the distinction between human-made and ‘natural’ environments, because one of this project’s central ideas—that environments are constructed to incite behaviors that maintain societal ideology—is applicable only to those environments built by humans. Thus, I will not define the human as a subset of ‘nature’ or ‘nature’ as a subset of the human, but will keep them separate in my discussion. Still, unless quoting someone else, I will use ‘nature’ only in quotes, in recognition of the term’s contested definition.

## **2. A strange and familiar thing: Arcadia under global capitalism**

The way that humans think about their relationship to ‘nature’ in the Anthropocene is the familiar thing that my game, *Even in Arcadia*, seeks to make strange. The following sections delineate the elements of the Anthropocene that my game implicitly and explicitly addresses. The Anthropocene was born out of the meeting of capitalism, colonialism, and empire, and under its logic ‘nature’ is viewed as a resource for humans to exploit without limit. This logic first emerged with European colonialism, whose goal was the discovery and exploitation of as many natural resources as possible. As colonizers gained control over the peoples and environments they encountered, they came to see themselves as the masters of nature as well. T. J. Demos vividly describes this shift in humans’ relationship to nature:

“European colonialism was a regime not limited to the governing of peoples but also the structuring of nature. The colonization of nature, emerging from the Enlightenment principles of Cartesian dualism between human and nonhuman worlds, situated the nonhuman world as objectified, passive, and separate... nature has been colonized in concept as well as in practice. It entailed a multifarious, complex, and at times contradictory pattern of bureaucratic rationalization, scientific and technological mastery, military domination, integration into the capitalist economy, and legal systematization in order to manage and maximize the possibilities of resource exploitation. In this vein, ecology was far from the innocent discipline Haeckel named; rather, it comprised “the science of empire.””<sup>34</sup>

Colonialism’s Enlightenment ideology required that humans understand, through rational thought and scientific organization, every aspect of the world. It was not enough to discover; discoveries must be organized and exploited. Colonizers gathered specimens of newly-discovered plants, which they brought back to Europe for study and display in botanical gardens. These gardens were each a “microcosm of the world” that sought to “bring through the language of metaphor and synecdoche the vast and indecipherable world into a coherent, memorable, and recognizable form.”<sup>35</sup> The same logic would soon be used to bring together the products of industrialization—the commodities created out of ‘natural’ raw materials—at the ubiquitous and popular World’s Fairs of the nineteenth century. The collection of unique and beautiful plants in botanical gardens is one of the more innocuous intersections of botany and empire; at the other end of the scale is the genocide, forced labor, and ecological devastation brought on by the cultivation and export of raw cash crops such as sugar cane

and bananas, or by the harvesting of highly-prized spices such as nutmeg at the expense of the indigenous populations of the islands to which these plants were once endemic.<sup>iii</sup>

Colonizers took such actions without consideration of or care for their consequences. Under capitalism nature is understood as an endless repository of natural resources ripe for extraction. Beyond this, it proclaims that by utilizing nature we improve it: when we turn unrefined resources into commodities we create order out of chaos and give meaning to the world. Under capitalism life's goal becomes the creation of ever more commodities, the accumulation of ever more capital. This is our destiny and divine right, and this ideology has created "a zone where nothing else matters—not bodies, nature, social life, religion, or aesthetics."<sup>36</sup>

John Dryzek defines this attitude towards 'nature' as Prometheism, "an environmental orientation which perceives the earth as a resource whose use is determined primarily by human needs and whose environmental problems are overcome through human innovation" and which "prioritizes human interests over those of ecosystems... or the individual needs of creatures."<sup>37</sup>

Patrick Murphy observes that "the initial wave of Promethean discourse, grounded in colonial expansion and the conquest of wilderness, did not require articulation because its cornucopian assumptions about limitless nature, human ingenuity, and endless growth were taken for granted."<sup>38</sup> But in the late twentieth century, as environmental concerns gained a foothold in popular consciousness, this discourse required first articulation, then reinforcement. People began to realize that it would not only be possible to use 'nature' up, but that this was the direction in which society was rapidly headed. With the emerging rhetoric of limited resources in 1960s and 70s America, maintaining the Promethean order required both the direct support of its backers—corporations and government—and a promotional infrastructure that could systematically condition the public imagination. Mass media is the most apparent central apparatus through which this conditioning is achieved, and the one that Murphy discusses in the most depth.<sup>39</sup>

Julia Corbett, however, discusses in her book *Communicating Nature* how "environmental ideology," or "a way of thinking about the natural world that a person uses to justify actions toward it," is dictated from the ruling class to the populace through not only media but also the built environment.<sup>40</sup> She observes: "A great deal of what is communicated about the environment is almost entirely unrecognized and unstated, and we might not recognize that it's "communication" at all: roads without sidewalks, drive-through service, bottled water, disposable washcloths, food served without dishes, office windows that don't open, big houses, garbage cans. These everyday things have a taken-for-granted quality, particularly for those who feel that the environment exists somewhere "out there" and distant from their lives."<sup>41</sup>

Taking a Situationist eye towards this topic, we understand built environment and media landscape as two elements of the "material setting of life." We also see that the material setting of life both reveals particular societal attitudes towards nature and reinforces those attitudes by inciting particular behaviors in the populace. Roads without sidewalks and drive-through service tell us to spend more time in cars; bottled water and disposable washcloths tell us to use things once and then throw them away; big houses tell us that space, and lots of it, can be privately owned.

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<sup>iii</sup> *The Botany of Empire in the Long Eighteenth Century* by Batsaki et. al. explores these topics in more depth.

In the next two sections, I will investigate two architectural forms that I argue are paradigmatic of our attitudes towards nature in the Anthropocene in order to further investigate how 'nature' is represented in the material setting of life and how these representations incite certain behaviors towards 'nature.' These two forms are the division between interior and exterior, and the straight line of the road.

### 3. Unlimited progress & the straight line of the road

The straight line of the road is associated with myths of progress, innovation, and teleology. This association is illustrated by the metonymous use of the line of the transcontinental railroad as a vision of Manifest Destiny. At the Chicago World's Exposition in 1893, Frederick Turner introduced his seminal paper "The Significance of the Frontier in American History," in which he argued that the moving line of the frontier and the impetus to push this line ever Westward played a key role in the development of American culture and its defining traits of democracy, liberty, and innovation. He also raised concerns that the closing of the frontier would result in the decline of innovation and democratic ideals in America.<sup>42</sup> But the frontier never really closed, it just adopted new forms. After fighting to free themselves from the clutches of the British Empire, Americans exercised their own imperialism to acquire new lands. Now that every inch of the Earth has been divided up and its borders "finalized," unchecked imperialism in the recognizable form it took in the eighteenth and nineteenth century is no longer acceptable, and Americans must seek out new frontiers.<sup>iv</sup> To stop expanding is not an option.

In *A Short History of Progress*, Ronald Wright outlines the significance of the notion of progress in human history. He cites Pollard's 1968 definition of the Victorian ideal of progress as the assumption that human history "consists of irreversible changes in one direction only, and that this direction is towards improvement," noting that this ideal is still commonly held today.<sup>43</sup> Teleological thinking is the explanation of change in terms of an ultimate goal or end point. The ideal of progress insists that this point is the direction in which we are always headed. Francis Fukuyama exemplified this mode of thought when he asserted that our current world system—nation-states ruled by a democratic government and capitalist economy—is "the end of history."<sup>44</sup> Humans believe that the world will progress and improve while continuing to follow the same logic it has in the past. Wright says, "technology is addictive. Material progress creates problems that are—or seem to be—soluble only by further progress."<sup>45</sup> As we witness the 'progress' we've made so far resulting in environmental catastrophe—'disaster capitalism,' in the words of Naomi Klein<sup>46</sup>—we continue to believe that further 'progress' is the solution. Prometheism asserts that human innovation will solve environmental problems: some new technology— a carbon scrubber large enough to cleanse the atmosphere, a wall to keep out the rising tide, spaceships that will carry us off our dying planet—will save us. It's unthinkable that real progress might actually involve 'backward' movement: ceasing to use fossil fuels, disarming nuclear weapons, breaking up big corporations, building cities at the scale of human beings rather than of cars.

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<sup>iv</sup> Some scholars have responded to Turner's concerns by suggesting that scientific progress or the internet are new Frontiers. These are interesting points that I'd love to consider further, but I think that the absence of physical, spatial exploration in these frontiers is significant. With Westward expansion, Americans could see their influence growing on a map and could physically enact the progress of their country by moving Westward. If science and the internet are Frontiers in the way Turner uses the term, their place in and effect on American culture is far less clearly defined than the role of the Western Frontier. For the purposes of this paper, I will confine my attention to spatial Frontiers.



#### 4. The dialectic of inside & outside

To divide space is to commodify space. In *The Geography of Nowhere*, James Howard Kunstler describes how for centuries in pre-industrial America, when land was one of the few outlets for capital investment, land was plentiful and the colonies were eager to have it settled.<sup>47</sup> In order to sell this space efficiently, the national grid was established—“a transcontinental triumph of the abstract over the particular” that divided and commodified space.<sup>48</sup> The division of space and its private ownership divides people as well, both at the national level via borders and at the local level via the private home of the nuclear family.

The division of space into interior and exterior is the foundation on which our entire built environment rests. By marking a space as ‘inside,’ it becomes more valuable than a patch of ‘outdoor’ land. This distinction is fundamentally fictitious: buildings are themselves situated ‘outside’ and no ontological shift occurs in the moment that one passes through the front door. But the distinction is so central to our daily lives and so ubiquitous in our modern world that it has become invisible. Interior space tells us that that we do not live in ‘nature’. We live in houses, we live in rooms, we live in cubes that are laid out according to a rational, utilitarian logic. Floors, walls, and ceilings erase everything beyond their enclosure; even windows sequester away the world behind glass. Dirt on the floor is to be swept away, bugs and rodents killed, all signs of the nonhuman sterilized or eliminated.

Gaston Bachelard writes in *The Poetics of Space*: “Outside and inside form a dialectic of division, the obvious geometry of which blinds us as soon as we bring it into play in metaphorical domains. Unless one is careful, it is made into a basis of images that govern all thoughts of positive and negative.”<sup>49</sup> We have not been careful. This division has grown beyond the difference between the house and the world outside it. Its image is found reflected in the culturally constructed divisions between city and wilderness; mind and body; and, of course, human and ‘nature’.

Cities are the locations at which the Anthropocene’s effects are most concentrated, but also perhaps the locations at which these effects are most obscured. As discussed in a paper by Dixon, Viles, and Garrett, considering cities as human-made ecosystems with new emerging geological forms can be fruitful.<sup>50</sup> But most cities hide their relationship to the world at large, purging themselves of any suggestion of ‘nature’, presenting themselves as worlds where the laws of capital and constant growth overshadow the laws of evolution and natural selection. Pavement lifts the inhabitants of cities off the ground. Signs, images, and information concentrate at frighteningly rapid rates. ‘Nature’ is allowed to enter the city, but its expression must “take place only on our own terms, subject to standards of order and tidiness imposed by official public values.”<sup>51</sup> Animals are not welcome unless on a leash. Plants can grow only where we put them. The city becomes Debord’s spectacle: here humans attempt to create and control every element of their world.

In *Domesticity at War*, Beatriz Colomina discusses the Underground Home, a design for a modern house created by Jay Swayze and exhibited at the 1964 New York World’s Fair. A product of Cold War anxiety, this house took the idyllic suburban home of the 1950s and transported it into a fallout shelter. Buried underground, Swayze’s house turned the distinction between inside and outside on its head by subsuming the inside into the outside—just as the Anthropocene subsumes ‘nature’ into the human and the city allows nature to exist only on human terms. The Home included windows complete with

dioramas that provided a view of 'nature' underground. Swayze saw his scenes as not only replicating the above-ground window, but improving on it: "With traditional homes we must take what we get for views. After looking outside, I decided an artist could do a thousand times better."<sup>52</sup> Colomina writes: "The house was no longer simply a physical shelter, admitting some parts of the outside world and excluding others. It was a machine that created its own weather, its own outside."<sup>53</sup>

Although Swayze's dream of moving America's suburbs underground was never realized, and the arrogance of his assertions is quite apparent fifty years on, the equal absurdity of many current views is still hidden from view. In today's cities as much as the Underground Home, humans use the division between inside and outside—between human and 'nature'—to remove themselves from the world around them and inhabit a world composed entirely of their own images. And yet as much as we try to enforce this distinction, 'nature' always creeps back in. Dirt and insects inevitably find their way into the home. Weeds, pigeons, and rats grow and live profusely in cities. 'Nature' is tenacious, and it will always reject the box we try to force it into.

## 5. The romanticization of wilderness

While visions of technological utopia supported by the Victorian ideal of progress are the default in the Anthropocene, visions of pastoral utopia are common as well. Humans are haunted by the loss of the Garden of Eden, the fall of Arcadia. Wright notes that "For some, Eden was the pre-agricultural world, the age of hunting and gathering; for others, it was the pre-Columbian world, the Americas before the white man; and for many, it was the pre-industrial world, the long stillness before the machine."<sup>54</sup> Some people constructed their own Eden: "the first botanical gardens of the 16<sup>th</sup> and 17<sup>th</sup> centuries represented within the confines of their walls the imagined Garden of Eden."<sup>55</sup> Michael Steiner's article "Parables of Stone and Steel" is an in-depth consideration on the contradiction in American culture between the fetishization of industrialized progress and the romanticization of a pristine 'nature' untouched by humans, which such progress inevitably destroys. He writes:

"This tension between two kingdoms of force—contradictory devotion to nature and civilization, nostalgia and progress—underscores painful paradoxes in American culture... Americans have long sensed a special bond between nature and their national identity... Yet they have also been committed to progress through technology and the conquest of space, forces that inevitably transform nature... Westward-yearning Americans have ravaged the very thing they most cherish, cutting down the wilderness as if it were a hateful presence and then mourning their victim once it is safely laid to rest... The suspicion that we are destroying the very source of our collective identity, that our machines are paving the garden, has been a central theme in American intellectual history."<sup>56</sup>

However, this utopian vision of untouched wilderness is mythological to the core. While humans interpret landscapes "that do not display the technological artifacts they are used to" as 'pristine' and 'natural,' "virtually all landscapes... are products of human intentionality."<sup>57</sup> Even at the time of Columbian contact, North America "was almost everywhere a humanized landscape and its characterization as 'pristine' was to a large extent an invention of nineteenth century Romantic writers."<sup>58</sup> Humans have been shaping natural systems since at least the end of the last ice age, when we played a critical role in the extinction of megafauna throughout the world. Today, there are "no places left on Earth that don't fall under humanity's shadow."<sup>59</sup> The prevalence of the concept of an imaginary untouched wilderness in our cultural landscape reveals that although we define 'nature' as

those aspects of the world that are not human-made, the *image* of nature in the American cultural consciousness is indeed human-made. It was introduced with specific agendas in mind, and is reinforced through spectacular images to maintain these agendas.

Julia Corbett describes how, in the Western landscape painting tradition, “the natural world is distorted, exaggerated, and made sublime to communicate a feeling and a sentiment towards nature.”<sup>60</sup> The earliest landscapes were “imaginary scenes inspired by biblical and classical themes— that is, literary images.”<sup>61</sup> As the genre evolved, paintings were employed to represent actual places. Artists traveled across America in the country’s early days and brought East depictions of the sublime lands that awaited settlers in the West. But these paintings, too, were constructed to convey certain attitudes— narratives of uninhabited lands ripe for the conquest of Manifest Destiny. The indigenous inhabitants of these lands were either absent or depicted as peaceful nomads who would be happy to pack up and move out of settlers’ way, as is the case in Bierstadt’s *The Rocky Mountain, Lander’s Peak* (1863). This is not to suggest that North America does not actually boast beautiful and breathtaking landscapes; rather that such paintings presented these landscapes in ways that implicitly promoted specific agendas.



Consider this painting from the Metropolitan Museum of Art: *A Gorge in the Mountains (Kauterskill Clove)* by Sanford Robinson Gifford, 1862. Its forested mountains and valleys represent the American wilderness in all its glory. But this is actually a composite vista painted from an imagined perspective. The viewer hangs in midair, floating above the rocks and trees of the canyon in a godlike perspective. Gifford could not possibly have observed the landscape from this angle, but by placing the viewer as he does, he creates the illusion of a valley opening up before us. Mountainous barriers fall away before the traveler, who is transported to the promised land where golden light dapples a lush expanse of trees and a clear lake. Everything is beautiful and inviting, and ‘nature’ offers itself

up to humans. The irony of this painting is that we admire the wilderness it depicts precisely because it is devoid of all evidence of human life, and yet early American landscape painters portrayed this land as so inviting in order to entice settlers to come and transform it.



Thomas Cole's *the Oxbow* (1836) shows the next step in the transformation of the wilderness: the successful dominion of man over nature. Cole praises this notion of progress as the shaded jungle gives way to the sunny fields, showing the wild past and agricultural future of America side by side. This image reifies the tension between progress and nostalgia that Steiner observed—while the cloudless sky of the image's right side can be read as making a moral statement about its superiority, there is something undeniably appealing about the lush jungle on the left.

Like Debord's images that take the place of reality, these visions of the American landscape have become more powerful in the cultural imagination than lived experience. This is as true today as it was in the 1800s. Even if one were to travel to these landscapes for themselves, their experience would most likely still be highly curated. National parks maintain trails and lookout points designed to provide the most stunning views, complete with large pay-to-view binoculars that direct attention to choice images of the scenes (and commodify the act of looking). The physical landscape becomes our idea of the landscape. This tendency is found in our built environments as well, where 'nature' is provided in the form of artificial parks and gardens, trimmed and maintained to fit the standards of human aesthetics. Like Swayze's claim that an artist can make a better view out the window of his Underground Home than can 'nature,' humans often seem to believe that we can create even more remarkable landscapes than 'nature' can on its own. Inevitably this is done through capitalism and commodity culture: "the message in any garden store is that a lush Garden of Eden is desirable and attainable with the right purchases."<sup>62</sup>



## 6. Responding to change

Towards the beginning of this project, two images compelled me to focus my attention on issues of the Anthropocene. The first image was that of the Great Pacific Garbage Patch, a colossal accumulation of plastic bags and plastic bottles and little broken-down bits of plastic too small to see, all trapped and swirling in the North Pacific Gyre. Because the smallest pieces of plastic are invisible in satellite images, the precise extent of the Garbage Patch is unknown, though according to a recent study it is over 600,000 miles, or three times the size of France.<sup>63</sup> The landfill, that most distasteful of all human-made geological formations, has colonized our ocean's ecosystems. Microplastics are swallowed by fish and travel up the food chain, settling in our air, water, and bodies. It is beyond our ability to clean up and it will never decompose. The Garbage Patch will circle the Pacific forever, unless...

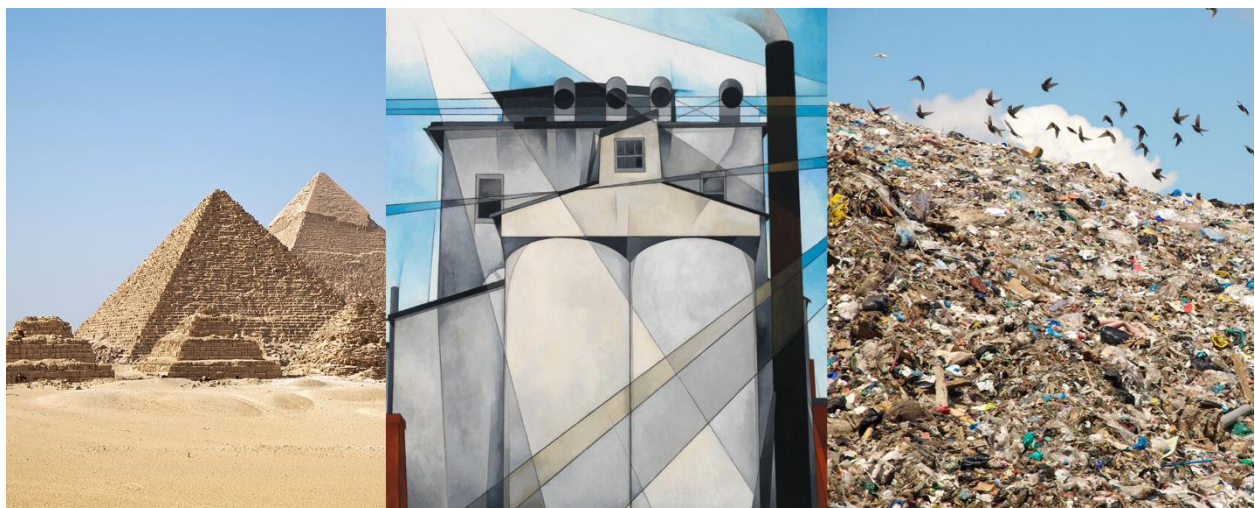


The second image was that of plastic-eating bacteria evolving amidst the chaotic geologies of our endless waste. A friend sent me an article that claimed such a miracle was discovered in a landfill in Japan.<sup>64</sup> I imagined the tiny mutants swarming over the plastic, chowing down on chemicals that scientists have always claimed to be indestructible by natural forces. The Romantics pointed out the sublime in the myth of untouched wilderness, but it appears even more powerfully in those landscapes that we *have* touched and changed. We trash the world and it spits out something with the potential to save us. Bacteria are the twenty-first-century sublime.

Sublime, and strange. Objects that humans no longer want or need are designated as garbage and thrown away; this is familiar. Some of this garbage ends up in 'nature,' on the side of the road, in the

woods, in the water; this is familiar. But that hundreds of thousands of miles of garbage have amassed in the center of the Pacific Ocean—so much garbage that new lifeforms are evolving to exploit it for their survival—these are unfathomably strange happenings.

In *Made to Break*, Giles Slade muses on the relationship between humanity's legacy and its production of garbage in the Anthropocene: "It occurred to me that while the ancient Egyptians built great monuments to endure for countless generations, just about everything we produce in America is made to break. If human history reserves a privileged place for the Egyptians because of their rich conception of the afterlife, what place will it reserve for people who, in their seeming worship of convenience and greed, left behind mountains of electronic debris? What can be said of a culture whose legacies to the future are mounds of hazardous materials and a poisoned water supply? Will America's pyramids be pyramids of waste?"<sup>65</sup>



The center image above is Charles Demuth's *My Egypt* (1927). Its didactic in the Whitney reads: "the majestic grain elevator rises up as the pinnacle of American achievement—a modern day equivalent to the monuments of ancient Egypt." History has brought us from the pyramids at Giza to the fetishization of industry to the production of pyramids of garbage. And capitalism tells us this is progress.

If we imagine our own evolutionary trajectory as a straight line towards teleological perfection, we imagine that 'nature,' as captured in Romantic poetry and American landscape paintings, has already reached that state of perfection. But this is another myth. 'Nature' is all the time evolving, both on its own and in response to human activities. It will continue to create solutions to the problems we make, even if those solutions involve wiping us out.

The myth of a perfect 'natural' state continues to appear in contemporary media. Hayao Miyazaki's film *Nausicaä of the Wind* depicts Earth as a ruined wasteland in which an ever-growing toxic jungle threatens the last surviving remnants of humanity. Over the course of the film we discover that this jungle, whose deadly spores have driven humanity close to extinction, actually evolved to purify the Earth after humans polluted and incinerated it. We see caverns below the toxic jungle where, having



nullified the poisons from the Earth above, its petrified trees crumble into sand. The film's final shot shows a single sprout with green leaves emerging from this purified ground.



This ending particularly irks me because the film comes so close to getting it right. As we learn about the toxic jungle we come to marvel at the beauty of an ecosystem that at first seemed fearsome and repulsive. But the final shot undoes this work, claiming that the jungle is *not* beautiful in its own right: after purifying the Earth, it is fated to fade away, making way for that image of 'pristine nature,' an environment innocuous to humans, so that we can once again inherit the Earth. But this is an injustice to the toxic jungle and a misrepresentation of evolving systems. Miyazaki's toxic jungle would not do the work of purifying the Earth only to recreate a paradise for the humans who polluted it, and after we ruin the world, it won't grow backwards towards some Biblical state.

Permanence is a human-constructed myth: cities, monuments, and feats of infrastructure are built with the presumption that they will stand forever, that future travelers will "look on [them] and despair." Humanity's inability to look to the future and see how the world will change and how our current actions will stand the test of time is part of what has allowed the environmental crisis to get as far as it has. Life is just trying to survive. The world will change and evolve to accommodate our effects, but it will do this work for its own benefit, not ours, and we must evolve as well, to coexist with this new world.

Climate change on a catastrophic, global scale is inevitable now. What Naomi Klein terms 'disaster capitalism' has moved well past its tipping point. Its effects will define my generation. How will we respond?

We *must not* respond by maintaining our faith in the teleological straight line of progress, in the Promethean assurance that everything will be fixed by some new technological innovation (Elon Musk won't save the world). Likewise, we *must not* respond by turning to a romanticized image of 'pristine

nature'. That image was fake in the first place and changes to 'nature' cannot be stopped. We *must* observe how the world around us reacts. Like the plastic-eating bacteria, we *must* look for new and unexpected ways to interact with our environment that will ensure our mutual survival. A role of artists in our time can be to prepare society for a positive response to the coming changes. We can make strange our world and behaviors so that we might break out of society's rules and develop new ones. If the bacteria can do it, we can do it, too.



### III. EVEN IN ARCADIA: IMPLEMENTATION

#### 1. Even in Arcadia, there I am

My project's title is a partial translation of the Latin phrase *et in Arcadia ego*, which I first encountered in the eponymous painting by Nicolas Poussin. Poussin's painting depicts shepherds in Arcadia— an ancient Greek province described by classical writers as an idyllic pastoral paradise—crowding around a large tomb and pointing to the words carved on its face: *et in Arcadia ego*, or “even in Arcadia, there I am.” Here the ‘I’ is understood to refer to death. Poussin has set up an ironic contrast between the youthful Arcadian shepherds, typically portrayed in idle merriment, and the shadow of death, which is present even in their green landscape. He reminds us that even in paradise we cannot escape our mortality.



For my project, I repurpose this quote to refer not to death's inevitability but to humans' ubiquity. Even in the most apparently wild landscapes left on Earth, the effects of people on the environment are now always and everywhere visible. In the sixteenth century, the Italian explorer Giovanni de Verrazano wrote letters back to Europe about the 'New World,' which he and his friends “baptized 'Arcadia' on account of the beauty of the trees.”<sup>66</sup> They admired this new Arcadia for its pristine 'natural' beauty (see section II.5 for further discussion of the myth of untouched 'nature'), despite the fact that the Americas had long since been shaped by their indigenous inhabitants.<sup>67</sup> Today, our

influence over the Earth has become so complete that we have inscribed our presence on its every inch, whether by agriculture and infrastructure, the transport of invasive species around the globe, the pollution that saturates our air and water, the warming climate, or the myriad other human-induced changes to the world. In *Cities and Natural Process*, Michael Hough describes his jarring but inevitable encounter with humanity in nature: “I made a journey to the Hudson Bay lowlands, searching for an image of the great unspoiled Canadian wilderness, free from the sights, sounds, and pressures of the urbanized world. Yet one day, a pink object, lying in the tangle of sedges at the edge of a pond, caught my eye. It was the rubber nipple from a baby’s bottle.”<sup>68</sup> In *Et in Arcadia ego*, Poussin challenged the myth of Arcadia as a place of eternal youth and joy; in *Even in Arcadia* I use his words to make the point that the existence of a ‘nature’ untouched by humanity was always already fictional: no matter how deep into the wilderness you journey, we are already there.

## 2. Making Arcadia strange: an overview of my goals and strategies

In Part I, I laid out a framework for using Situationist theory to create art/media that challenge power structures by making the familiar strange—in other words, by making apparent the socially constructed nature of certain cultural logics that have become so deeply ingrained in a society as to appear natural. In Part II, I presented my research into the issues, emerging from capitalism, colonialism, and the Anthropocene, that I intended to address using this framework. Drawing inspiration from media like *Sleep No More* and *Tacoma* that I view in conversation with situationist theory, I created a video game called *Even in Arcadia* that makes strange the logic through which humans understand their relationship to ‘nature’ as discussed in Part II. The basic fact that this logic is unsustainable and deeply harmful has been rendered invisible by its relentless representation via what Debord terms the *spectacle* and its resulting internalization by the general populace. My hope is that my game can be a space for players to explore behaviors that might be used to overturn the logics of the great empire of “planetary, militarized hypercapitalism” that dominates in our time.<sup>69</sup>

Addressing every point discussed about humans’ relationship to ‘nature’ in the Anthropocene in Part II would have been too large a task for my game. Instead, I focused on presenting a few key ideas: capitalism’s principle of unlimited expansion; its ability to incorporate anything, even nostalgia for something existing outside of it, into its system; and its culture of disposability. The gamespace I created is an ironic, satirical version of ‘nature’ under capitalism that exaggerates these principles in order to provoke my players to consider their strangeness as manifest in our culture today. *Even in Arcadia* is set many thousands of years in the future in a world where capitalism and empire have retained their dominant places in human culture. The Promethean approach to ‘nature’ (discussed in Section II.2) born out of these systems has continued so far as to carry humans beyond Earth and into an ‘interplanetary Anthropocene,’ where they shape the ecologies of hundreds of planets across space and time. Colonizing space kept the Promethean flame alive by providing new access to seemingly unlimited resources, allowing humanity to continue its trajectory of endless progress and growth. Now massive Colonization Corporations own and develop entire planets, selling homes on the hottest new world to consumers the way Apple sells the newest version of the iPhone.

I chose to build an ironic dystopia rather than a utopia in which humans’ relationship to ‘nature’ is more positive because I cannot yet predict the form or even the possibility of such a utopia.<sup>v</sup> I feel

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<sup>v</sup> Harrison Pickering’s 2016 media studies senior project was in part an attempt to imagine such a utopia.

better-equipped to represent the strangeness I see in the world around me in the hope that it will inspire others to consider these important topics.

In line with the situationist goal of constructing “ensembles of impressions determining the quality of a moment”<sup>70</sup> I wanted my game to take the form of a series of *situations* (as discussed in section I.2) laid out both spatially and temporally. I wanted the player to approach this collection of situations with the mentality of a *dérive* (as discussed in section I.2), with no goal, no objective, no right or wrong direction.

In section I.4, I explained how the theater production *Sleep No More* demonstrates the application of both the *situation* and the *dérive* to a narrative medium. Actors move about through *Sleep No More*'s winding set and multiple scenes take place simultaneously in various rooms. These scenes are enacted on a timeline that repeats itself three times throughout the course of a show, so audience members have multiple opportunities to catch each scene. I appropriated this narrative framework for use in *Even in Arcadia*, and populated the gameworld I created with various characters who move through the game in a looping timeline.

Throughout this paper (see esp. sections I.2, I.3, II.2), I echoed the SI's emphasis that ideologies/logics of power—including, significantly, environmental ideologies—are reflected in and reinforced by the “material setting of life.” The significance of this idea compelled me to use my game's built environment itself—rather than cutscenes, character dialogue, or game mechanics—to communicate many of the project's main ideas. In section I.5 I discussed techniques of environmental storytelling as they have been applied to games in the past. As much as possible I tried to employ such techniques when creating my gameworld.

### **3. An interplanetary extrapolation of the Anthropocene**

Humans have colonized outer space in *Even in Arcadia* precisely because this is our obvious next step according to capitalism's logic of endless growth. Following imperialism's colonization of nature along with nearly every stretch of land and group of people on the planet, and as global capitalism is rapidly absorbing every nation-state into its network of centers for the distributed production of commodities, opening the frontier of space for development is one of our only options for continued expansion. Whether a large-scale migration of humans to space is a science fiction pipe dream or a rapidly approaching inevitability, it captivates the capitalist imagination as a grand new way to not have to fix anything here on Earth.

In *Even in Arcadia*, humanity eventually left Earth not because it became uninhabitable, but because they decided it was simply not worth maintaining anymore. Its resources depleted, it had long-since gone out of fashion in favor of shiny new worlds. Now Earth has been so completely abandoned that even its location is lost to history, although it is fondly remembered as “Old Blue.” Humans live in spaceships or hermetically sealed habitation zones on other planets. Governments and nations have given way to competing interplanetary corporations and corporate-owned planets. The largest are the Colonization Corporations, which own, develop, and market entire planets. They survey these planets for potential habitation, and then extract their resources and build spectacular new cities on their surfaces. Rather than repairing their once-glorious cities as they begin to grow old and break, Colonization Corporations routinely open new worlds for business and let the old ones fall into

disrepair. Abandoned planets are declared obsolete, or “obsie,” and become planetary landfills, repositories for the otherwise unmanageable amount of waste this society produces.

If the colonization of space takes today’s logic of unlimited progress to its extreme, the obsie planet does the same for its logic of planned obsolescence. The concept of disposable commodity—the napkin, the single-use contact lens, the plastic fork—is already expanding to encompass more and more of today’s commodities.<sup>vi</sup> The Great Pacific Garbage Patch, discussed in section II.6, is only one of the frightening consequences of disposability culture today. If capitalism continues to grow and expand, the logic of disposability will likewise grow to encompass more and more of our material setting, including eventually entire planets. With access to infinite resources and infinite space to dump your garbage—access that the dream of ‘conquering’ outer space falsely promises to provide—everything becomes disposable, even things once considered sacred. I repeat my quotation of Demos from section II.2: capitalism is “a zone where nothing else matters—not bodies, nature, social life, religion, or aesthetics.”<sup>71</sup>

Except that other things do matter. Exchange value is not an objective measure of an object’s worth. Nothing really is disposable. Things matter because we *give* them meaning, or because they acquire meaning through memories associated with them. Limitless progress is not only unrealistic but fundamentally unnecessary; sometimes what we have is enough.

In *Even in Arcadia*, although society as a whole has forgotten these facts, some individuals have not. On each obsie planet, some of its inhabitants remain behind, whether because they cannot afford to leave or because they don’t want to. Colonization Corporations do not maintain infrastructure that would support communication or transport to obsie planets, and so what becomes of these people is unknown to the rest of society. Perhaps they die, or perhaps they learn to live sustainably on their own worlds, discovering a life outside the capitalist cycle of consumption and disposal. Even among those characters who don’t acknowledge their society’s flaws, who marvel at the innovations that allowed them to conquer the stars, who always buy a new home on the most fashionable planet, even among them, there is a certain nostalgia for worlds left behind, and above all for our original Earth, the site of the Garden of Eden and the paradise it reified. Steiner noted the tension between progress and nostalgia in industrialized America, and I see no reason that this tension would not follow us to the stars.

I mentioned in section III.3 that my game grapples with capitalism’s frightening ability to incorporate anything—even things that seem antithetical to its existence—into its system. Intrepid Interplanetary is a Colonization Corporation that, despite being antithetical to and destructive of any definition of ‘nature,’ recognizes the lingering societal nostalgia for lost ‘nature’ and capitalizes on it. *Even in Arcadia* takes place at the launch party for the newest habitable planet that Intrepid Interplanetary has opened for business. The planet is called Arcadia, and the launch party takes place at its premiere attraction: the Arcadia Botanical Gardens, a “multisensory immersive experience” that claims to offer visitors the chance to experience the ‘nature’ that they have forgotten.

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<sup>vi</sup> *Made to Break: Technology and Obsolescence in America* by Giles Slade provides an excellent (read horrifying) look into the effects of our culture of disposability on the world around us today.



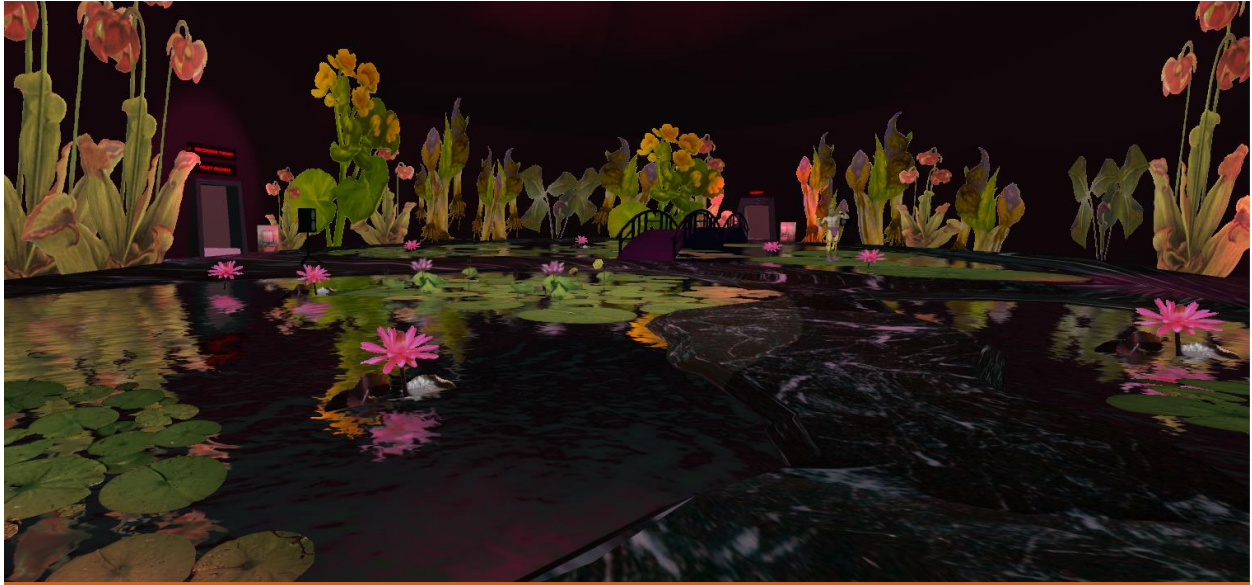
But the Arcadia Gardens version of ‘nature’ lacks all authenticity. The Gardens emerge out of a society that has taken the logic of Swayze’s Underground Home (II.4) to the extreme: all access to ‘nature’ is cut off and all of ‘outside’ is replaced by an endless interior. The people who built the Gardens have never seen a plant or animal, have never walked barefoot on the ground, have never breathed air that wasn’t filtered by an atmospheric control system. The Arcadia Gardens are the version of ‘outside’ that exists inside the Underground Home; likewise, they are the constructed landscapes of American painters (II.5); the version of ‘nature’ that exists in contemporary cities—always only on humans’ terms (II.4); the American Museum of Natural History; Debord’s spectacle (I.2) taken to an extreme that even he didn’t imagine.

If, as Promethean discourse claims, “environmental problems are overcome through human innovation,”<sup>72</sup> one way to solve such problems is to eliminate the environment altogether and provide a technological replacement. When they left Earth, humanity lifted itself out of its own reality and relegated everything that was left behind to the landfill. They situated themselves in a self-constructed world where representation is all that exists, where everything from air to water to food is manufactured and every inhabitable space was built by humans. In the world of *Even in Arcadia*, images not only obscure reality; there is no longer any reality left behind the images. All that humans have left of ‘nature’ are the images that the ‘prelaunchers’ produced of it... and the ability to technologically reproduce it from the genetic level. Just another part of the spectacle, ‘nature’ has become its own image. Most people accept this image as their reality; a state of affairs more similar to our attitudes today in the Anthropocene than we might think. As Corbett notes regarding our contemporary entertainment industry, “in a world of fantastical Disney images... even when we can distinguish the fake leaves from the real ones, we often don’t care which is which and are likely to think that the simulations are fine.”<sup>73</sup>

#### **4. Implementing situations, the *dérive*, and environmental storytelling**

A botanical garden lends itself well to being broken up into distinct areas, and so organizing *Even in Arcadia* as a series of spatial situations was simple. My gameworld includes nine distinct rooms, connected to one another by hallways separated by “semi-transparent airlocks,” which give the impression that each room is a hermetically sealed space. These are the Lobby, Flowers Room, Forest Room, Canopy, Orchard Room, Desert Room, Lagoon Room, Tasting Room, and Administrative Office. The last of these is only accessible at certain points in the game during which characters go inside; the rest are always open for the player to explore. See the title page for an overhead view of all the rooms (a view never seen from inside the game). The Lagoon Room, Desert Room, and Flowers room are pictured below. I constructed each room as a distinct situation by varying the colors, images, objects, and sounds present in each. This variety gives each room a unique atmosphere and mood.

I took every opportunity to embed meaning in the built space. The use of 2D images rather than realistic models for my plants saved me time creating assets, but also suggests that the version of ‘nature’ presented here is flimsy, representational, and imaginary. Plants with gaudy colors and unrealistic sizes attest to the lack of authenticity of their genetic designs. Different trees in the Forest Room simultaneously exhibit their spring, summer, and autumn foliage, while the Desert is perpetually in bloom. The ubiquitous and insistent presence of waste disposal units in every room of the Gardens evokes a culture of waste. A constant mechanical droning sound in the passages between rooms makes audible the industrial processes that were used to build the Gardens.

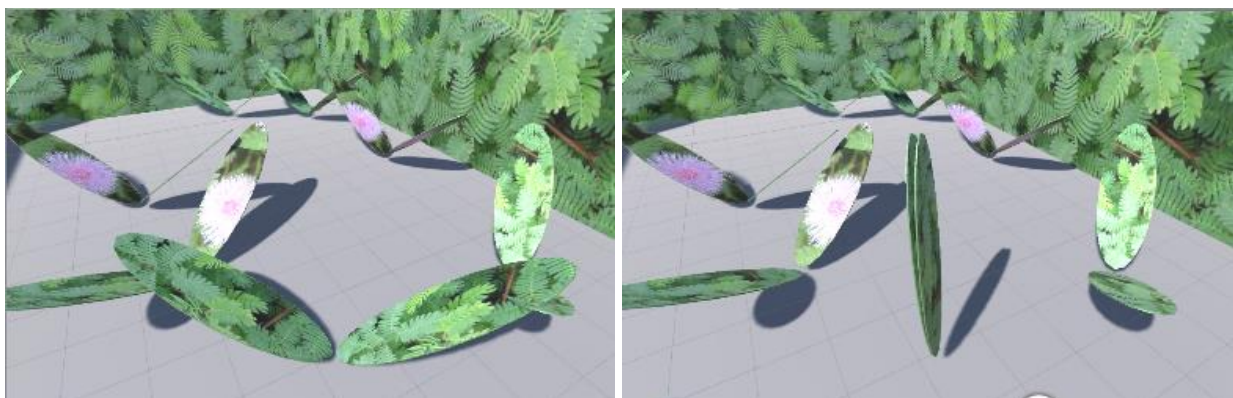


The movement of characters through these different situations also conveys meaning. Over the course of the night, most characters gravitate first to the Lobby, then the Forest Room, then finally the Desert Room. This mirrors the sequence in which these rooms are experienced in the official tours of the gardens (I planned to implement tours in the game but didn't have time). So when characters move through these rooms in the opposite direction of the "official" sequence, their movements take on an oppositional meaning.

This "official" sequence of moving through the game space is not made transparent to the player. Encouraging players to approach the game as a *dérive* was a matter of withholding any instructions or goals about how to move through the gameworld. Aside from purely mechanical instructions (use WASD + mouse to move) and a brief explanation of how the game works in the menu screen (explaining that scenes occur on a repeating timeline), I leave it up to the player to decide how they want to interact with the gameworld. To *dérive* is to enter a space without goals and to let the space itself guide your movements. Since my players have no choice but to enter *Even in Arcadia* without goals, they should fall into *dérive*-like behaviors automatically. Of course, there are certain things I hope my players will do, since I put game elements there to be experienced. But I must remind myself that *any* way a player chooses to interact with the game is valid. I even hope that some players will discover more interesting ways of interacting with the game than those I intended, as that would mean the game succeeds as a situationist sandbox in which new behaviors can be discovered.

I tried to strike a balance between providing my players with space to experiment and drift, but also providing enough clarity and instruction that players don't end up lost, confused, and frustrated. Although disorientation is a situationist tool for rejecting of the orienting logics of science, imperialism, and Enlightenment thinking (I do not provide a game map in the user interface for this reason), players should at least be cued in enough to know that this disorientation is purposeful, or they will be frustrated and stop playing the game (I provide a game map on the wall of the Lobby for this reason).

I did also try creating environments that incite particular behaviors. In the Orchard Room, a Labyrinth promotes lingering contemplation. In the Canopy, pairs of leaves close up in response to the player's touch. These are modeled on the sensitive plant, *Mimosa pudica*, a rare example of a plant that interacts with humans in a manner we can easily perceive, foregrounding the fact that plants are living, reactive beings like us. I became interested in sensitive plants after hearing Harrison Pickering, Vassar College '16, speak about them in his media studies senior project, "Conversational Ecologies."<sup>74</sup> His project shares many of my goals and is a continuing inspiration to me.





These plants prompt the player to consider how the environment reacts to their actions. The pairs of leaves close, but quickly open again, as if inviting the player to touch them again. It is a playful interaction between player and gameworld. In the Desert Room, cacti also interact with the player, this time by asking not to be touched—the player hears their character say “ow!” if they bump into a cactus. These elements encourage the player to pay attention to the plants and whether or not they want to be touched.

I mentioned in section 1.4 that translating *Sleep No More’s* framework from a physical to a virtual space would pose some challenges. The embodied movement of the actor through the set is important to *Sleep No More* and is what gives each scene meaning—choosing to direct your attention to a scene is more powerful than sitting in front of a stage and having that scene presented to you. However, this is also true in the game world. Although the player is removed from their body, they control an avatar—a virtual body—with which they move through the world. The feeling of immediacy that comes along with being in a room with living actors is lost, but I tried to offset this loss by creating lively and visually interesting characters. Interacting with fictional characters is still a meeting between consciousnesses, of sorts.

Despite the challenges posed by applying *Sleep No More’s* framework to a game and the changes the framework necessarily underwent, the digital medium also allows for interesting new possibilities. One of the most interesting aspects of *Sleep No More* is the way it disrupts the traditional relationship between audience and actor. Audience members become part of the show and are present in a scene as it unfolds. As the audience’s role shifts from viewer to participant, the role of the viewer is decentralized. Scenes are not only performed *for* the audience; they will be performed *whether or not anyone is there to witness them*. This creates the impression of a world that exists in and of itself, beyond the scope of the viewer’s experience with it. In most video games, anything that happens happens because the player does something—enters a room, pushes a button, approaches another character. A game in which scenes occur on a timeline unrelated to the player’s actions disrupts the traditional relationship between player and game and destabilizes the player’s place at the center of the gameworld. In a digital game, unlike in the real world, scenes are not limited by factors such as the fatigue of actors or audience members and can loop indefinitely. This infinite repetition adds much to the game’s suggestion of a world beyond the player.

## 5. Characters

While *Sleep No More’s* scenes are wordless, kinetic movement pieces, my scenes consist of written dialogue between characters. Character animation was well beyond my abilities for this project, a fact that limited my ability to tell stories through interaction between characters and their environment, as is done in *Sleep No More* and *Tacoma* (1.5). Instead, I used the tools I had at my disposal and created a cast of characters who communicate information about their world to the player through their conversations with one another. My game center around five characters who were involved in the creation of the Arcadia Botanical Gardens. While developing these characters I drew inspiration from the ensemble cast of Alan Moore’s *Watchmen*, each member of which views their world through a different moral framework. Each main character in *Even in Arcadia* has a different attitude towards the state of their society and a different take on whether Arcadia is really a paradise or a mere representation of one.





Two of the Gardens' designers, Jack (above, middle) and Lio (above, immediately to Jack's right), clash over their differing opinions towards Arcadia. Both of them recognize that they live in a flawed world, and both initially envisioned building a utopia that would reconnect humanity to the 'nature' it had forgotten. Lio stills clings to this vision and wants to stay within the walls of the Arcadia Gardens forever, which he views as sanctuary removed from the ills of society. Jack, however, quickly became disillusioned with the concept of Arcadia, recognizing that it is not removed from society, but exists within it is beholden to its logic. Deeply in love with Lio, Jack allows him to convince her to remain in Arcadia, but is tormented by the knowledge that in doing so she is complicit in a system she hates.

Ozymandias (above, left), the CEO of Intrepis Interplanetary, never questions his internalization of capitalism's logic. Any conflict in his character arises out of concern for his legacy, an essential concept for him because his is a life dedicated to the accumulation of capital, an accumulation he must ensure is preserved. Unfortunately, in a world of disposability, creating a lasting legacy is a matter of some difficulty. Ozymandias's name references the ancient king about whom Percy Bysshe Shelley wrote in his famous sonnet. In the poem, a traveler discovers a ruined statue of King Ozymandias with a plaque instructing readers to "Look upon [his] works and despair," but nothing else remains for miles around. Shelley's poem captures how "even the greatest men and the empires they forge are impermanent, their legacies fated to decay into oblivion."<sup>75</sup>

Writing most of the individual scenes between these characters was fun and easy, but shaping the overall structure of their stories was a challenge. Writers of games, hypertext, and other digital media have been experimenting with writing non-linear narratives for years, but this was my first sizable attempt to tackle the task. The player will experience my story repeatedly and out of order. Assuming that most players won't catch every scene, I tried to communicate the same ideas in different ways through multiple scenes to account for this. I also tried to imbue each character's arc with a cyclical ambiguity—some scenes in the game have different interpretations depending on the order in which

you encounter them in. For instance, Jack's first scene is an argument with Lio in which she tells him she wants to leave Arcadia. As far as we can tell, this is a decision she has made alone. But at the end of her loop, we witness another character—Kanami, above, far right—convince her to leave Arcadia. Jack hesitates at the last minute and says she has to talk to Lio about it first. Then the loop resets, and she goes off to tell him she wants to leave.

Jack, Lio, Kanami, Ozymandias, and M-Oshana (above, between Ozymandias and Jack) are the five main characters in *Even in Arcadia* with fully implemented timelines, meaning a player could follow them through the game's entire loop. There are an additional handful of supporting characters who show up for a scene or two but whose timelines are not fully implemented—in the future I would like these characters to have finished loops in which they explore the Gardens and make comments that the player might overhear.

## IV. EVEN IN ARCADIA: EVALUATION AND FUTURE PLAY

### 1. Evaluating success

To have succeeded according to the situationist framework I laid out in Part I, *Even in Arcadia* must promote critical engagement with the issue of how ‘nature’ is represented under capitalism by making its familiar aspects appear strange; it must also facilitate the discovery and employment of concrete actions to overturn the societal logics that render this issue invisible.

At the moment, it is difficult to evaluate the extent to which my game succeeds or fails with regards to the goal of facilitating the discovery of new types of actions. Such actions would not be coded into the game but would be discovered through playing it—and so far I’ve spent a lot more time coding than playing. I got feedback on the game-in-progress when I enlisted around ten or fifteen of my friends and peers to playtest it at the beginning of April, but I haven’t yet done the same for the “finished” version. Until I have the opportunity to observe how players engage with this version, I can’t make any claims to its success. Granted, to create a game that facilitates new behaviors was a really challenging goal to set for myself, and I’m not sure I ever actually believed it would work. Yet I think it’s both a *possible* and a *necessary* goal for mediamakers, so I gave it my best shot, and I’d like to experiment with the idea more in future projects.

I’m have more confidence in my project’s success at the goal of making the familiar strange by creating a gameworld that extrapolates the logics of our time. At the outset I was concerned that players would interpret the game in ways antithetical to my intentions. This essay gives me a platform to say, “Just in case it wasn’t clear, the world depicted in this game is bad!!” But most people who play my game won’t read this essay, and unavoidably not all of my players will pick up on the irony of the world I’m depicting. According to my own author’s note at the beginning of this document, my game is in the hands of my players to interpret for themselves, but if the interpretation is far enough removed from the ideas I’m trying to convey—“A botanical garden in space! So cool! I want to go!”—I will have utterly failed at creating a game that makes strange capitalism’s image of ‘nature.’ Worse, I will be feeding into the very narratives I’m trying to critique. But from talking to people who played the game-in-progress, it doesn’t seem like this concern had much foundation, as the themes of capitalism, disposability, and the falseness of the Arcadia Gardens project overall seemed to resonate with them. However, I had already at least briefly described my project to a good chunk of these people. As I hear from more people who play the finished game without that context, I hope that the irony of the world will come through to them as well.

While I think that the world I created succeeds overall in providing a lens through which to view our time, I must admit that my creative strategies were somewhat muddled at times. Despite representing an ironic dystopia, I imbued it with certain utopian hopes. I wanted to create a world of false images that would make apparent the insufficiency of our contemporary understanding of ‘nature.’ But I also hoped that this world would incite positive behaviors in my players. I wanted to depict a society dominated by an exaggerated version of capitalism’s logic, under which situations are, according to the SI, “so undifferentiated and so dull that they perfectly present the impression of similitude.”<sup>76</sup> But I also structured my gameworld as a series of distinct situations and attempted to differentiate them

as much as possible. My project adviser, Professor Tom Ellman, asked me recently, “Does your world constrain behavior or free it from constraints?” and I had to admit that I wasn’t fully sure.

In order to work through this muddled logic, let me add a point of nuance to the previous paragraph’s contradictions. *Even in Arcadia* exists on two ontological planes simultaneously: there is the gameworld, which I made, but there is also the fictional Arcadia Gardens, which the characters in the game made. Perhaps it is possible that the fictional Arcadia Gardens are a dystopia and incite negative/harmful behaviors in the characters who inhabit it, while the non-fictional gameworld I made incites positive/beneficial behaviors in its players. There is already an inherent difference in behavior between characters and player: characters move through the space with directions and goals, while the player *dérives*. All satirical works present their readers with a fictional world on the understanding that the reader and the work itself both reject the logic of this fictional world. So, to respond to my adviser’s question: the fictional Arcadia Gardens constrain behavior; my gameworld frees behavior from constraints. At least, I hope!

Another question that my adviser posed is: “Who is the agent of change who creates the situation that undermines the spectacle? Game player? Game author?” This question points to a key tension in my work and in all game design—the tension between developer’s intention and player freedom. Ideally in my work, player and author are collaborators who both become agents of change when put into contact with one another. I created spaces and situations, but my players will change these spaces by their very presence, creating new situations in the game beyond those I imagined. To have the player approach the game as a *dérive* means that I must avoid giving the player instructions as much as possible. The more I constrain my player’s behavior by guiding them towards particular actions, the less the game allows for behavioral experimentation in which players can create the situations that most successfully undermine the spectacle in ways that are meaningful *for them*—more meaningful because they discovered them on their own through exploration and experimentation than if I had suggested them.

Finally, my adviser pointed out that critiquing the spectacle through a video game—or any media object—presents some inherent ironies. Art, being an artificial, human-made thing, is complicit as part of the spectacle. Is it possible to critique something from within it? Luckily, irony was the goal with *Even in Arcadia*. It is ironic that I chose to use a digital medium—just about the least ‘natural’ thing there is—to discuss issues of ‘nature.’ But for a game about a botanical garden that alleges to recreate ‘nature’ in space via technological means, that irony is the point. Perhaps the spectacle includes anything created by people; perhaps it only includes artifacts that reinforce the logic of capitalism. Whether or not it’s possible to create media that exists outside the spectacle, I have to believe it’s possible to create media that challenges it.

## **2. *Sleep No More* in the digital context**

I’m pleased with how my translation of *Sleep No More*’s narrative framework into the game medium worked out. My timeline is never affected by the players’ actions, as is more or less the case in *Sleep No More*—barring some dramatic and disruptive audience behavior. This was my original plan for *Even in Arcadia*, but as I was developing ideas for my project in the summer of 2017, I corresponded with Steve Gaynor, one of the indie company Fullbright’s founding members. I briefly explained my ideas to him, and he expressed concern over my intention to take away all control over game events from

the player, writing in an email: “The time loop feels good in a physical setting like *Sleep No More*, but... I wonder how tedious it would feel to get past a certain point in the loop, want to go back to it, and just have to wait through the whole thing again in a digital context.” This was an issue that he and his team solved in *Tacoma* (discussed in Section I.4), which also involves scenes that play simultaneously in different areas, by allowing the player to play, pause, fast-forward, and rewind these scenes at will. We considered possibilities for allowing the player to revisit scenes in my game. In the end, however, I decided to stick with my original plan.

To allow the player control over the scenes would break the illusion of a world independent to the player’s engagement with it. It would also too easily point towards a clearly defined goal for the player: to experience every piece of dialogue. This would take away from the *dérive*-inducing effect of being placed in a living world and allowing oneself to be drawn through its contours and towards its attractions. Some players will still adopt such goals for themselves, but I prefer to avoid reflecting them in the mechanics. Of the people who playtested my game, a couple did wish that some mechanic provided more incentive to engage with the conversations. But, encouragingly, most people liked the way that the conversations work. However, I was bothered by responses that the dialogue moved by either too quickly or too slowly for some players. I didn’t want slower readers to have trouble following the conversations, nor did I want to bore fast readers by leaving each line on screen for an excessively long time. I’m working on a feature that will allow players to change the speed of the game so that they can tailor it to their reading speed. This feature isn’t working correctly yet, but I intend to include it the next version of the game. Technically, this feature would also allow players to fast-forward through dialogue by increasing the speed or to pause the game by setting the speed to 0. I’m okay with this since it will be a feature tucked away in the menu instead of the UI, and players will only get to use it if they realize that they can. It’s a bit more like an easter egg than a main mechanic.

It occurred to me that my game’s endlessly repeating cycles are an appropriate reflection of the way that people and societies get stuck repeating particular patterns, as described in section I.1. My characters, stuck in cycles of repeated actions, are doomed to make the same choices over and over again, just as their society repeats the prelaunchers’ mistake of believing ‘natural’ resources to be infinite. The repetition also evokes the standardization of life under capitalism from which the SI longed to escape. In this vein, allowing the player to intervene in the game’s timeline could in fact be a behavior that radically disrupts the damaging logics with which the game grapples. Such a radical act of disruption would not be equivalent to giving the player full control over the timeline, however. It would need to be done in such a way that it would occur at a key moment and its significance would be clear to the player. Experimenting with allowing the player to break repetitive cycles or otherwise intervene at key moments in the timeline is an important idea to explore in future work.

### **3. Further consideration of environmental storytelling**

I’m interested in pushing the idea of environmental storytelling as far away from traditional narrative forms as it can go. Originally, I wanted to try to tell a story purely through the environment, using visual and spatial symbols and removing all text and traditional narrative. I wanted my players to understand the game’s story through observing and interacting with this environment alone. I quickly discovered that I’d bitten off more than I could chew with that idea. The more abstract and up for interpretation a narrative becomes, the more it is out of control of the author and ultimately determined by the people engaging with it. By the very act of inhabiting a space, you change its meaning. This is a good

thing—it's why Debord believes that our behaviors can overturn the logic of life's material setting. But it also makes the job of an aspiring environmental storyteller very difficult.

I experimented with conveying story information through the world through color, shape, and symbol. In the Orchard Room, for example, I wanted to evoke the Garden of Eden, and so I chose pomegranates as one of the fruits growing there and put a snakeskin texture on the central staircase to reference the garden's serpent. Multiple people have told me, unprompted, that this room reminds them of the Garden of Eden, so at least here, something must be working. But the problem with using shared cultural symbols to imbed narrative in landscape is that different readers will have different relationships to and knowledge of these symbols, and so they can either include or exclude.<sup>77</sup>



However successful such subtle attempts at environmental storytelling were, one of the most effective scenes in the game is when the Orchard Room catches fire, and M-Oshana has to release the room's airlock to suck the fire out. This also causes all the trees in the Room to fly up into the sky, then tumble back to the ground in chaotic heaps, removed from their orderly placement in circles. This wordlessly conveys the power of a single human to completely lay waste to a beautiful 'natural' area in one fell swoop. I think the game could really benefit from more moments like this. They are more work to implement and require specific code (as opposed to systems-driven code). But this is a way of telling stories not through the static environment but through the *changing* environment. This feels like the way to go with environmental storytelling in the future. Such stories are not only spatial but also temporal. In a future game I'd like to have the story and environment change together. This could involve varying the lighting, objects, or colors of each room/spatial situation throughout the course of the timeline. Rooms could also change on a repeating cycle that is a different length than the conversations, so the two could interact in different ways, creating different situations.

Another way to tell temporal spatial stories is to include more interaction between characters and their spatial setting. As characters walked around, they could periodically drop trash on the floor of

the Gardens—reflecting how humans today leave the ground littered with trash everywhere they go. This simple interaction between characters and their environment would convey a lot. I could also give the player the ability to interact with this trash: picking it up and throwing it away would be one form of resistance, but would still reinforce the dominant narrative that garbage *is* garbage. It would be really great if I could hint at some way for players to reclaim this trash and make use of it again—turn it into art? Plant a flower in an empty cup?

Another idea I had was that each main character could have symbols or colors that follow them around and affect the rooms they enter. Ozymandias's symbol, for example, could be the forget-me-not flower, since he wants to create a legacy and be remembered. These flowers could appear around him in each room he enters, using the rhetoric of plants and flowers that the Gardens use to convey something about his character.

### 3. Next steps

*Even in Arcadia's* completed timeline lasts a half hour before repeating. My original plan was to have it last five minutes—but somehow the script grew to be twenty pages or so, and once I had all these conversations written I was determined to implement them! I'm glad that the game has a substantial amount of content, but making the timeline this long took a huge amount of time and effort and became, along with the environment itself, the core of the project. I'm okay with this because I really like the story and characters that I created, and I enjoyed sitting with the same characters for an extended project and getting to know them. But focusing so much effort on the conversations meant that I didn't have that time to put towards other components of the game. I had a lot of ideas that I didn't get to implement.

In a future version of my game, I'd like to add some of these mechanics. One of these is tour of the gardens (mentioned in III.4), which could either take the form of an app that visitors could play on their VR helmets (user interface systems) or could take the form of a character in the game who repeatedly walks through the gardens and gives the tour to whoever is there to listen. This be a chance to further explore the way the gardens represent themselves and their understanding of 'nature.'

I also want to make the plants themselves a more central feature of the gameworld in the future. Some of my playtesters said they wished they could learn about the plants in the Gardens, and I wish they could, too! I originally planned to implement the 'Robotanist,' an official Arcadia Gardens App that consumers can download onto their VR helmets (players access it in the user interface) to learn about the various plants. While the Robotanist is active, each plant in the gardens has a floating holographic number in front of it, which the player can input in a text field in the user interface. The Robotanist will then provide information about the plant with that number. While building the game, I researched the relationship between botany and empire and the terrible things that colonizers did to gain access to the valuable plants they encountered across the world. Ginseng, cotton, sugarcane, tulips, nutmeg, and bananas are all examples of plants currently present in the Arcadia Gardens that have devastating colonial histories. The creators of the Arcadia Gardens probably wouldn't want to tell their guests about these histories, however—perhaps someone has been hacking the app to add this info?

Finally, in *Even in Arcadia* I was interested in applying *Sleep No More's* narrative framework to a video game. But I also think that *Even in Arcadia* could make a fantastic live-action *Sleep No More*-style play. The material and virtual versions of the same story could complement one another. A live play like *Sleep No More* is so much more intimate and embodied, but it's also expensive and impractical to see many times, meaning that many audience members never get the whole story. A game could be an inexpensive and simpler way to revisit such a world. Games could also be a useful prototyping tool for theater makers—it's easier to greybox a scene in Unity move some characters through it than it is to build a set and hire actors. A game could be used to plan out and test plays before moving into production, and a polished version could be made available to fans who want to dig deeper into the world of the show. I intend to continue considering the relationship between games and theater in the future, and perhaps collaborate with creators of theater and interactive installation, seeking ways to combine physical and digital media and tell stories through both types of environment.



## V. NEVER WORK: A MANIFESTO

Let's tell stories by building spaces. Let's build spaces in which to *dérive*. Let's rewrite those stale narratives told by and about our cities ourselves plastic nature water media landfills computers roads money gardens land capital and all the rest.

Let's walk hand in hand through this forest, which is one of the remaining forests on our planet, which cannot be represented by the spectacle or by anything else. Let's walk together, our feet leaving scuff-marks as they shuffle decomposing leaves like decks of cards. Can you feel the leaves decaying into dark nutritious dirt? Can you move them by wiggling your toes? This forest won't stand forever and it makes no pretensions to the contrary. When a seed falls here it does not leave an indelible mark on the landscape though it does catalyze irreversible change as it erupts through the soil. There are fossilized seashells on the peaks of the Rocky Mountains and would you believe that all the lakes where I grew up were left behind by glaciers long-ago dissolved into the sea? Glaciers that melt and freeze over tens of thousands of years and as they do so the sea levels rise and fall in time. Mangrove swamps sway back and forth with the changing coast and coral reefs offshore creep up and down continental shelves in search of that most pleasurable place that is just the right depth below the surface and the sun. Ecosystems change with the changing world, and recognizing the essential Japanese principle of *mono no aware* they do not mourn the passing of a state of being.

You're invited to join me as I crawl supplicant towards art's ability to contest the grand narratives of our time. Art defined broadly, art in any form, spatial, material, virtual, symbolic, nonsensical, phenomenological art. Art that incites behavior, art that we can explore. When art becomes a material setting of life, when we inhabit images as architectures, when we enter and move through the work itself, then with our improbable hands we contest the logics that the work contests, with our sublime bodies we play and explore and experience pleasure. Our bodies remember many truths about many things that have otherwise been long forgotten. Let the body move through the work and let's observe how it moves and let's remember.

Let's say, hey, games are reactive systems, a game responds to a player and a player responds to a game. So let's build games that encourage us all to be more attentive, more reactive, more accepting of change. Let's build spaces where people play without embarrassment. Spaces that everyone is able to move through safely. Let's develop such a dizzying array of possible behaviors to perform in these spaces that uncertainty is rendered meaningless. A world of sufficient possibilities precludes all certainty in choice. THAT'S OUR WORLD! Still, we can curate little groups of possibilities to pick between—that's what a game is. Playing games provides for the uncertain person a way to answer certainly and correctly.<sup>78</sup> Let's say that playful-constructive interaction with our material surroundings is the certain and correct answer to the stories those surroundings are trying to tell us. Let's say that and let's run with it, hand in hand, through unbuilt space.

Now to let the roots grow through the cracks, the worms eat up the asphalt. Never again to build anything square. To plant grass on every rooftop—like, YESTERDAY. To call down a curse on every American that makes us all forget to mow our lawns. Now to stop crying at the thought of beer cans at the bottom of the sea and to stop throwing things away. To let the minotaur design his own labyrinth. And at long last to offer one more strange idea: let's not imagine a new world. Our bodies know better. This world is here, and it's beautiful, and it's ready for change.

## a footnote on making games

I made *Even in Arcadia* using the free game development engine Unity. Scripting (programming) for the game was done in the language C# using Unity's built-in development environment MonoDevelop, with a little help from an external program I wrote in Java. The game's 3D assets are either created out of basic Unity geometries, downloaded from the Google Sketchup Warehouse, or made myself using the 3D modelling program Autodesk Maya. Most of the visual assets in the game are photos from free online stock photo repositories that I cut out, edited, and collaged in Adobe Photoshop using a Wacom Bamboo CTL-460 drawing tablet. I also used Adobe Illustrator to create the brochures, signs, and text elements that appear throughout the world. The audio assets in the game are also primarily from free online repositories. A more detailed citation of my asset sources can be found in section X.

I've heard many game developers describe being younger and not realizing that making games was something that people—much less they themselves—could do. I'm no different, as I've loved playing games for years and always knew that I wanted to be involved in creative work and storytelling, but I never saw myself as a programmer or game designer—never realized I possibly could—until my adviser, Professor Tom Ellman, introduced my class to a free game development engine called GameMaker Studio. Much to my delight, I realized that the tools to make games are freely available, accessible, and entirely possible to learn to use, and I developed my skills with these tools working on my own projects and on a summer research project with Professor Ellman.

Making a game on your own is difficult and requires a wide range of skills—writing, programming, level design, art, sound editing, 3D modelling. But there are free online resources—tutorials, documentation, development blogs, interviews with game designers—available to help you learn these skills. I'm indebted to Professor Ellman for introducing me to development engines, teaching me the basics, and helping me whenever I got stuck, but most of the knowledge I applied to this project I taught myself on the fly. Making *Even in Arcadia* involved learning new skills as I went, and before I could implement each new element of the game I had to first figure out how to do so. Working on a game is challenging, but it's also a lot of fun and an extremely rewarding exercise in problem solving. If you're interested in game design I encourage you to download Unity, watch some tutorials, and jump in! You can do it if I can!

## ENDNOTES

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### I. A SITUATIONIST FRAMEWORK FOR ART AND ACTIVISM

- <sup>1</sup> Debord, "Report on the Construction of Situations," 29.
- <sup>2</sup> Mills, *The Sociological Imagination*.
- <sup>3</sup> Debord, *The Society of the Spectacle*, 1.
- <sup>4</sup> Ibid. 33.
- <sup>5</sup> Marcus, "The Long Walk of the Situationist International," 3.
- <sup>6</sup> Andreotti, "Architecture and Play," 215.
- <sup>7</sup> Debord, *Spectacle*, 42.
- <sup>8</sup> Debord, "Report," 29.
- <sup>9</sup> Ibid. 29.
- <sup>10</sup> Ibid. 44, 46.
- <sup>11</sup> Ibid. 46.
- <sup>12</sup> Ibid. 44.
- <sup>13</sup> Ibid. 46.
- <sup>14</sup> Andreotti, 215.
- <sup>15</sup> Huizinga, *Homo Ludens*, 9-10.
- <sup>16</sup> Debord, "Theory of the Derive."
- <sup>17</sup> Marcus, 4.
- <sup>18</sup> Dyson, "Play in America," 43.
- <sup>19</sup> Mateas, 21.
- <sup>20</sup> Ibid. 21.
- <sup>21</sup> Priestman, "Against the Illusory Architecture of Half-Life 2."
- <sup>22</sup> Ibid.
- <sup>23</sup> Debord, "Theory of the Derive."
- <sup>24</sup> Jenkins, "Game Design as Narrative Architecture," 5.
- <sup>25</sup> Priestman.
- <sup>26</sup> Ibid.
- <sup>27</sup> Dyer-Witheford and de Peuter, "Games of Empire," xv.
- <sup>28</sup> Ibid. xiii.
- <sup>29</sup> Ibid. xxxv.

### II. REPRESENTATIONS OF NATURE IN THE ANTHROPOCENE

- <sup>30</sup> Fitzgerald, *The Great Gatsby*, 180.
- <sup>31</sup> Allenby, "The Anthropocene as Media," 109.
- <sup>32</sup> Debord, *Spectacle*, 33.
- <sup>33</sup> Purdy, *After Nature*.
- <sup>34</sup> Demos, *Decolonizing Nature*, 23.
- <sup>35</sup> Potteiger, *Landscape Narratives*, 164.
- <sup>36</sup> Demos, 104.
- <sup>37</sup> Wikipedia article on Prometheanism. Web access May 3, 2018.
- <sup>38</sup> Murphy, *The Media Commons*, 42.
- <sup>39</sup> Ibid. 42.
- <sup>40</sup> Corbett, *Communicating Nature*, 26.
- <sup>41</sup> Ibid. 3.
- <sup>42</sup> Turner, *The Significance of the Frontier*.
- <sup>43</sup> Wright, *A Short History of Progress*, 3.
- <sup>44</sup> Fukayama, *The End of History*.
- <sup>45</sup> Wright, 7.
- <sup>46</sup> Klein, *This Changes Everything*.

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- <sup>47</sup> Kunstler, *The Geography of Nowhere*, 25.  
<sup>48</sup> Kunstler, 30. Quoting Daniel Solomon.  
<sup>49</sup> Bachelard, *The Poetics of Space*, 211.  
<sup>50</sup> Dixon, "Ozymandias in the Anthropocene."  
<sup>51</sup> Hough, *Cities and Natural Process*, 307.  
<sup>52</sup> Colomina, *Domesticity at War*, 280.  
<sup>53</sup> *Ibid.* 280.  
<sup>54</sup> Wright, 9.  
<sup>55</sup> Potteiger, 163.  
<sup>56</sup> Steiner, "Parables of Stone and Steel," 40.  
<sup>57</sup> Allenby, 129.  
<sup>58</sup> *Ibid.* 129.  
<sup>59</sup> *Ibid.* 129  
<sup>60</sup> Corbett, 115.  
<sup>61</sup> *Ibid.* 116.  
<sup>62</sup> *Ibid.* 116.  
<sup>63</sup> Liu, "Great Pacific Garbage Patch."  
<sup>64</sup> Netburn, "Newly discovered bacteria."

### III. *EVEN IN ARCADIA: IMPLEMENTATION*

- <sup>65</sup> Slade, *Made to Break*, 7.  
<sup>66</sup> da Verrazzano, "Letter to King Francis 1 of France 8 July 1524."  
<sup>67</sup> Allenby, 129.  
<sup>68</sup> Hough, 98.  
<sup>69</sup> Dyer-Witheford, xv.  
<sup>70</sup> Debord, "Report," 46.  
<sup>71</sup> Demos, 104.  
<sup>72</sup> Wikipedia article on Prometheanism. Web access May 3, 2018.  
<sup>73</sup> Corbett, 121.  
<sup>74</sup> Pickering, "Conversational Ecologies."  
<sup>75</sup> Wikipedia article on Percy Shelley's "Ozymandias." Web access May 3, 2018.  
<sup>76</sup> Debord, "Report," 46.

### V. *NEVER WORK: A MANIFESTO*

- <sup>77</sup> Potteiger, 14.  
<sup>78</sup> Wark, *Gamer Theory*, quoting username "Lo-rez" in the endnotes to section 004.

## WORKS CITED

- Allenby, Shelley and Brad. "The Anthropocene as Media: Information Systems and the Creation of the Human Earth." *American Behavioral Scientist*, Vol 52. No. 1 (2008) 107-140.
- Andreotti, Libero. "Architecture and Play." Tom McDonough, ed. *Guy Debord and the Situationist International: Texts and Documents*. MIT Press, 2002.
- Bachelard, Gaston. *The Poetics of Space*. Beacon Press, 1994.
- Batsaki, Yota, Sarah Burke Cahalan, and Anatole Tchikine. *The Botany of Empire in the Long Eighteenth Century*. Harvard University Press, 2017.
- Coates, Nigel. *Narrative Architecture*. Wiley, 2012.
- Colomina, Beatriz. *Domesticity at War*. MIT Press, 2007.
- Corbett, Julia B. *Communicating Nature: How We Create and Understand Environmental Messages*. Island Press, 2006.
- Debord, Guy. *The Society of the Spectacle*. Zone Books, 1994.
- Debord, Guy. "Theory of the Derive." In. *Situationist International Anthology: Revised and Expanded Edition*, ed. Kenn Knabb. Bureau of Public Secrets, 2006.
- Demos, T. J. *Decolonizing Nature: Contemporary Art and the Politics of Ecology*. Sternberg Press, 2016.
- Dixon, Simon, Heather Viles, and Bradley Garrett. "Ozymandias in the Anthropocene: the city as an emerging landform." *Royal Geographical Society*, 2017.
- Dyer-Witheford, Nick, and Greig De Peuter. *Games of Empire: Global Capitalism and Video Games*. University of Minnesota Press, 2009.
- Dyson, Jon-Paul C. "Play in America: A Historical Overview." James E. Johnson, S.G. Eberle, T. S. Henricks, D. Kushner, eds. *The Handbook of the Study of Play*. Vol. 1. Rowman & Littlefield, 2015.
- Coates, Nigel. *Narrative Architecture*. John Wiley & Sons, 2012.
- Fitzgerald, F. Scott. *The Great Gatsby*. Scribner, 2004.
- Fukayama, Francis. *The End of History and the Last Man*. Free Press, 1992.
- Hough, Michael. *Cities and Natural Process*. Routledge, 2004.

- Huizinga, Johan. *Homo Ludens: A Study of the Play Element in Culture*. Routledge & Kegan Paul Ltd., 1949.
- Jenkins, Henry. "Game Design as Narrative Architecture." *Computer* 44 (2004) 53-68.
- Klein, Naomi. *This Changes Everything: Capitalism Vs. the Climate*. Simon & Schuster, 2014.
- Kunstler, James Howard. *The Geography of Nowhere*. Touchstone, 1993.
- Liu, Marian. "Great Pacific Garbage Patch now three times the size of France." CNN, 2018. <https://www.cnn.com/2018/03/23/world/plastic-great-pacific-garbage-patch-intl/index.html>
- Marcus, Greil. "The Long Walk of the Situationist International." Tom McDonough, ed. *Guy Debord and the Situationist International: Texts and Documents*. MIT Press, 2002.
- Marx, Leo. *The Machine in the Garden: Technology and the Pastoral Ideal in America*. Oxford University Press, USA, 1964.
- Mateas, Michael. "A Preliminary Poetics for Interactive Drama and Games." Wardrip-Fruin, Noah and Pat Harrigan, eds. *First Person: New Media as Story, Performance, and Game*. MIT Press, 2004.
- McDonough, Tom. *Guy Debord and the Situationist International: Texts and Documents*. MIT Press, 2002.
- Mills, C. W. *The Sociological Imagination*. Oxford University Press, 1959.
- Murphy, Patrick D. *The Media Commons: Globalization and Environmental Discourses*. University of Illinois Press, 2017.
- Netburn, Deborah. "Newly discovered bacteria can eat plastic bottles." Los Angeles Times, 2016. <https://phys.org/news/2016-03-newly-bacteria-plastic-bottles.html>
- Pickering, Harrison, "Conversational ecologies." *Senior Capstone Projects*, 2016. 544. [https://digitalwindow.vassar.edu/senior\\_capstone/544](https://digitalwindow.vassar.edu/senior_capstone/544)
- Potteiger, Matthew, and Jamie Purinton. *Landscape Narratives: Design Practices for Telling Stories*. J. Wiley, 1998.
- Priestman, Chris. "Against the Illusory Architecture of Half-Life 2." Killscreen, 2016. <https://killscreen.com/articles/against-the-illusory-architecture-of-half-life-2/>
- Purdy, Jedediah. *After Nature: A Politics for the Anthropocene*. Harvard University Press, 2015.

Slade, Giles. *Made to Break: Technology and obsolescence in America*. Harvard University Press, 2009.

Steiner, Michael. "Parables of Stone and Steel: Architectural Images of Progress and Nostalgia at the Columbian Exposition and Disneyland." *American Studies*, Vol. 42 No. 1 (2001) 39-67.

Turner, Frederick J, and Elfriede Abbe. *The Significance of the Frontier in American History*. Cornell University Press, 1956.

Wark, McKenzie. *Gamer Theory*. Harvard University Press, 2007.

Wright, Ronald. *A Short History of Progress*. Canongate, 2004.

Verrazzano, Giovanni da. "Letter to King Francis 1 of France 8 July 1524." National Humanities Center, 2006. Reproduced with permission from Susan Tarrow, trans. in Lawrence C. Wroth, ed. *The Voyages of Giovanni da Verrazzano, 1524-1528*. Yale University Press, 1970.