DIRT, NOT SOIL:

A UNIT ANALYSIS OF MINECRAFT DIRT BLOCKS AND GAMEWORLD REPRESENTATIONS OF GLOBAL ENVIRONMENTAL IDEOLOGIES

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by

Jordan M. Weagly

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Abstract

Increasing numbers of people around the globe spend an increasing amount of time exploring and deriving meaning from the virtual environments in videogames. This thesis asks readers to confront the fact that videogame environments may shape everyday perceptions of real world nature in both positive and problematic ways.

By combining a range of contemporary voices in the disciplines of videogame studies (Huizinga, Castronova, Juul, Murray, Lehndonirta, Aarseth, Shaw, and McGonigal) and literacy studies (Gee, Hawisher, Selfe, and Ong), I offer the start of a videogame ecocriticism by focusing on *Minecraft* (2011) gameworlds and the environmental perspective that they privilege. In particular, I draw on Ian Bogost's concept of unit operations and unit analysis to identify characteristics of the gameworld—such as the texture and interactive properties of the dirt block—that might strongly interact with player ideologies about nature.

I argue that the privileged position of player over gameworld evident in *Minecraft* represents a dominant contemporary understanding of nature as existing mostly to support human activities. With at least ten million players and millions of non-players who learn about the game through association, *Minecraft* is likely to influence ideologies about humanity's relationship to nature through its gameplay mechanics and environmental representations. *Minecraft* gameworlds also complicate an emerging sense of nature at a moment when children and adults may spend more time exploring virtual environments than natural environments.

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Chapter 1

Influences, Theories, and Virtual Worlds

Situating Videogames, Videogame Criticism, and *Minecraft*

Videogame Ubiquity and Influence

It is my contention that embedded in the seemingly innocuous gameworld environments of contemporary videogames is a persistent tendency to present the world as it is not: passive, unchanging except by direct human intervention, and infinite. It will be my argument that such gameworld environments may reflect culturally constructed modes of understanding nature. I will also argue that the experience of play in these passive gameworlds reinforces a deeply rooted human belief that the world exists solely for our self-actualization and our use.

Videogames, like other media, are cultural artifacts. The creators of videogames live within certain local, national, and ideological boundaries and inherit ways of thinking about and acting in response to the human experience. We call such boundaries and inherited ways of thinking and doing "culture." As videogame creators (programmers, artists, voice actors, and so on) work, they inevitably imbue games with elements of their culture. For example, a World War II videogame made by a US game developer is likely to privilege the subject positions of US soldiers over the subject positions of Japanese soldiers, though this privileging might be a mixture of subconscious and conscious decision-making. Meanwhile, players bring their own culturally-situated worldviews to their experiences and transmit their interpretations of videogame content back into the culture through conversation, published game reviews, and online commenting about videogames. For example, a player might talk with friends about the good and evil guys in a particular game, shaping a culturally-

constructed ethos of good and evil in general. Often this process is subconscious, probably because thinking about our behavior on such a detailed level isn't always practical.

Because we often ignore broader social frameworks for our behavior in everyday life, it is often difficult to distinguish our individual sensibility from the external cultural impetus. A "scholarly" culture, for example, guides and restricts the research, production, and review of this thesis, and it would be difficult for me to avoid conforming to at least some of this culture's norms if I want to succeed. Such cultural guidance is important because humans are social beings, and culture provides us with a sense of belonging and connection to others. The cultural meaning making process is so important to human activity that many contemporary cultures uphold citizens' rights to access a wide range of cultural artifacts. The ideal of "free speech," for example, grants every person an opportunity to contribute to the cultural conversation that inevitably shapes his or her life, through media such as videogames.

Videogames continue to gain influence as a communicative, cultural medium. Similar to books, painting, theater, film, sculpture, and countless other modes of human expression and communication, videogames appeal to a wide range of sensibilities, ideologies, and demographics. Rather than appealing only to a stereotyped base of 18-25 year old males, a report released by the Electronic Software Association (ESA) found that 32% of gamers in the US are 18 years or younger, 31% are 18-35 years old, and 37% are 36 years or older ("Essential Facts" 2). The ESA—which notably is formed by most major game publishers and platform companies—also found that females make up 47% of gamers, leaving a slim majority of 53% for males (3), debunking the myth of male-only interest in the medium even though so many videogames still so obviously appeal to male demographics.

Examples like the National Senior League, which organizes bowling tournaments using Nintendo's *Wii Sports*, provide some proof of the broadening appeal of videogames in recent years. This trend gained steam with the Wii and has strengthened because of ubiquitous portable media, like smart phones and tablets, which can now support both casual and so-called "hardcore" videogames (those favored by the core 18-25 year old demographic). Though the stereotypical age and gender range may disproportionately influence the interests of the industry, videogames can also influence non-gamers at any stage of life. Parents, for example, who have never played videogames before may pick up a controller in response to the interests of their children. Younger siblings want to play games just like their older brothers or sisters. Indeed, transmission of meaning and influence from videogames largely happens through social connections, like those in the home or out in the world.

Rather than being solitary, a majority of players actually make videogaming into a social activity. The ESA found that 62% of gamers play regularly with other people in-person or online, and 78% of gamers play face-to-face with other humans at least one hour per week (5). The ESA also reports that 16% of gamers play with parents, 34% play with other family members, 40% play with friends, and 17% play with spouses or significant others (5). These statistics, however, point only to the actual act of playing the game, of engaging fully with its content. It is perhaps harder to identify how gaming experiences or knowledge of gaming in general gain influence in player and non-player lives. Where exactly the social reality of gaming translates into cultural impact is also unclear, so this thesis is one attempt to identify some paths for further exploration.

Recent legal battles in the US court system provide striking examples, perhaps, of how the social activity of videogaming manifests within a culture. In 2011 the US Supreme

Court ruled that a California law meant to restrict the ability of minors to buy or rent violent video games violated the First Amendment. Succinctly elucidating a perspective useful today, the court held that "video games qualify for First Amendment protection. Like protected books, plays, and movies, they communicate ideas through familiar literary devices and features distinctive to the medium" (Brown v. Entertainment Merchant's Association 2011). The mere fact that the Supreme Court had to address a case concerning the distribution of videogames indicates their status as mainstream entertainment. Similar battles have erupted over many new media in their early instantiations. The novel, for example, was once considered a low-brow form of entertainment, despite its contemporary dominance as the paradigm of Literature.

The specific wording of this Supreme Court ruling sheds light on how videogames might pass down cultural messages. At the very least, the Supreme Court believes that videogames function like traditional literary forms still widely privileged today, but also that videogames offer unique possibilities for human expression. For example, games in a series called *The Elder Scrolls* contain virtual books retelling stories internal to the series' gameworlds. The form of the book and the genre of stories told follow some expected norms—with cover pages, chapters, and a three act format—but the activity of reading a story inside a gameworld is a comparatively novel phenomenon. For example, players can make virtual libraries containing books collected from the gameworld and spend their time reading such books within the context of the game. Virtual books tend to reinforce the lore and history of the gameworlds in which players find them, and may therefore deepen player involvement in gameplay narratives. Such activities derive from traditional reading habits but also represent the unique opportunities offered by gameworlds.

As cultural artifacts, then, videogames add their particular possibilities to a pantheon of culturally important media. What, then, do videogames in particular add? What is special about how videogames appear in and shape cultures? How does the medium reflect the culture from which it springs, and how can it shape that culture once situated within a culture? What are the implications of videogames existing in a time of mass communication and global distribution of knowledge?

Unfortunately, I cannot answer all of these questions in a single thesis. It will take concentrated effort on the broadest social scale to understand our increasingly digitally influenced realities. My focus, therefore, is limited to questioning how videogames may reflect and reinforce cultural perceptions and attitudes about nature. The historic binarization of humanity and nature culminates in our contemporary relationship to this material world, and our media reflect this relationship. Communicative media also allow us to explain and explore this relationship, and the ubiquity of digital media—of computers and the Internet—means that more people can explain and explore their relationship to nature through digital devices.

Videogames exist as a digital medium among many others today. Digital technologies such as computers, smart phones, and videogame consoles are often used as a benchmark for measuring how "developing" nations compare to "advanced" nations. So-called developed nations like the US have a higher concentration of digital technologies, and people in developing nations often strive to gain access to the same technologies as current world leaders. For example, a pamphlet created by the Kenya National Bureau of Statistics announced that 3.6% of households own a computer and 63.2% of households own at least a mobile phone in 2009. Meanwhile, in a comparative example of digital gluttony, half of US households contain a dedicated gaming device, and many households with one gaming

device, mine included, have several ("Essential Facts" 2). The global distribution of videogaming—which privileges advanced over developing nations—probably affects the cultural messages encoded into gameworld environments. The videogame industry will likely privilege ideologies, desires, and cultural norms that appeal to the broadest audience, that is, the audience concentrated in the advanced economies.

Videogames have an important place within the broader global electronics industry. In 2011, the global consumer electronics market reached roughly $284 billion, growing an average of 4.3% between 2007 and 2011 ("Consumer Electronics…Global" 7). Between 2011 and 2016 the global electronics industry is expected to grow at about the same rate ("Consumer Electronics…Global" 11). Meanwhile, videogames accounted for 9.4% of this market in 2011 while the obscure "audio and video" category generated the rest ("Consumer Electronics…Global" 8). This means that as of 2011, the total global market for games consoles reached $26.8 billion, up 5% since 2010 ("Games Consoles…Global" 7). High growth is expected from the consoles market which may reach something like $36 billion by 2016 ("Games Consoles…Global" 10). This means that videogames actually outperformed electronics in terms of growth, albeit by a small margin. Still, the sheer scale of both the electronics and videogame industries indicates, at least partially, their potential to influence audiences that have access to digital technologies and that embed these technologies in everyday life.

Consumer spending on digital technologies is not evenly distributed. For example, the US consumer electronics market alone totaled $91 billion in 2011, with growth expected to continue ("Consumer Electronics…United States" 8-9, 11). Videogames accounted for 9.6% of the US electronics market value, in line with the global market share ("Consumer Electronics…United States" 8-9). This means that the US consoles industry produced $8.7

billion, with this number growing faster than the overall electronics industry at 5.5% between 2007 and 2011 ("Games Consoles…United States" 7). Unsurprisingly, the US consoles market is expected to grow 19.7% by 2016, reaching $10.4 billion ("Games Consoles…United States" 10). Meanwhile, the games software industry in the US alone generated $13.1 billion in 2011 ("Games Software" 7), with a 51.4% projected increase to $19.9 billion by 2016 ("Games Software" 11). According to the Electronic Software Association, the sum of all US videogame markets produced $24.75 billion in consumer spending in 2011, including consoles, games, and peripherals ("Industry Facts" 11). This is a huge segment of the market, and the market will therefore represent the interests of its known audience.

It seems clear that old hegemonies are reflected by the videogame industry's uneven global distribution. Overall, the US market made up 42.4% of the global games consoles market in 2011. Europe made up another 40% ("Games Consoles…United States" 8). "Western" markets and cultures, therefore, make up the vast majority despite the fact that only about one billion of the world's seven billion inhabitants live in these two regions. The Asia-Pacific region accounted for a mere 14.9% and the Middle East and Africa accounted for 2.6%. Meanwhile, games software markets paint a similar picture. Europe accounted for 35.1%, the US made up 34.3%, the Asia-Pacific region made up a not-insubstantial 22.9%, and the "rest of the world" accounted for the final 7.7% of the market value ("Games Software" 9).

Videogames appear as a largely Western phenomenon despite the global distribution of the medium. Sub-Saharan Africa, for instance, is almost entirely nonexistent in these statistics, grouped up with the "rest of the world" in a way similar to the now antiquated "Third World" conceptualization of developing nations. It seems clear that the industry will

create content attractive to its existing European and US demographic. For example, many videogames like *CounterStrike* portray terrorists. When made by Western game developers, are such videogames more likely to represent "terrorists" as white Anglophone citizens from the US or as indistinct Oriental others?[1]

Realistically, I'm sure there are many games portraying a range of conceptualized and recreated "terrorists" from many demographic and ideological positions. Still, it seems clear from the distribution of this essentially industrial medium that videogames are likely to champion the Western subject position, complete with its prejudices and fears. The *Prince of Persia* series of games, for example, privileges an Oriental perspective through the persistent mystification of Persian landscapes and cultures. Despite its problematic depictions of Persia and "Oriental" reality, this series remains popular with games on current generation consoles and a 2010 movie produced by Disney.

[1] In the future, my work will attempt to answer this question. Little analysis exists on cross-cultural representations of people in videogames.

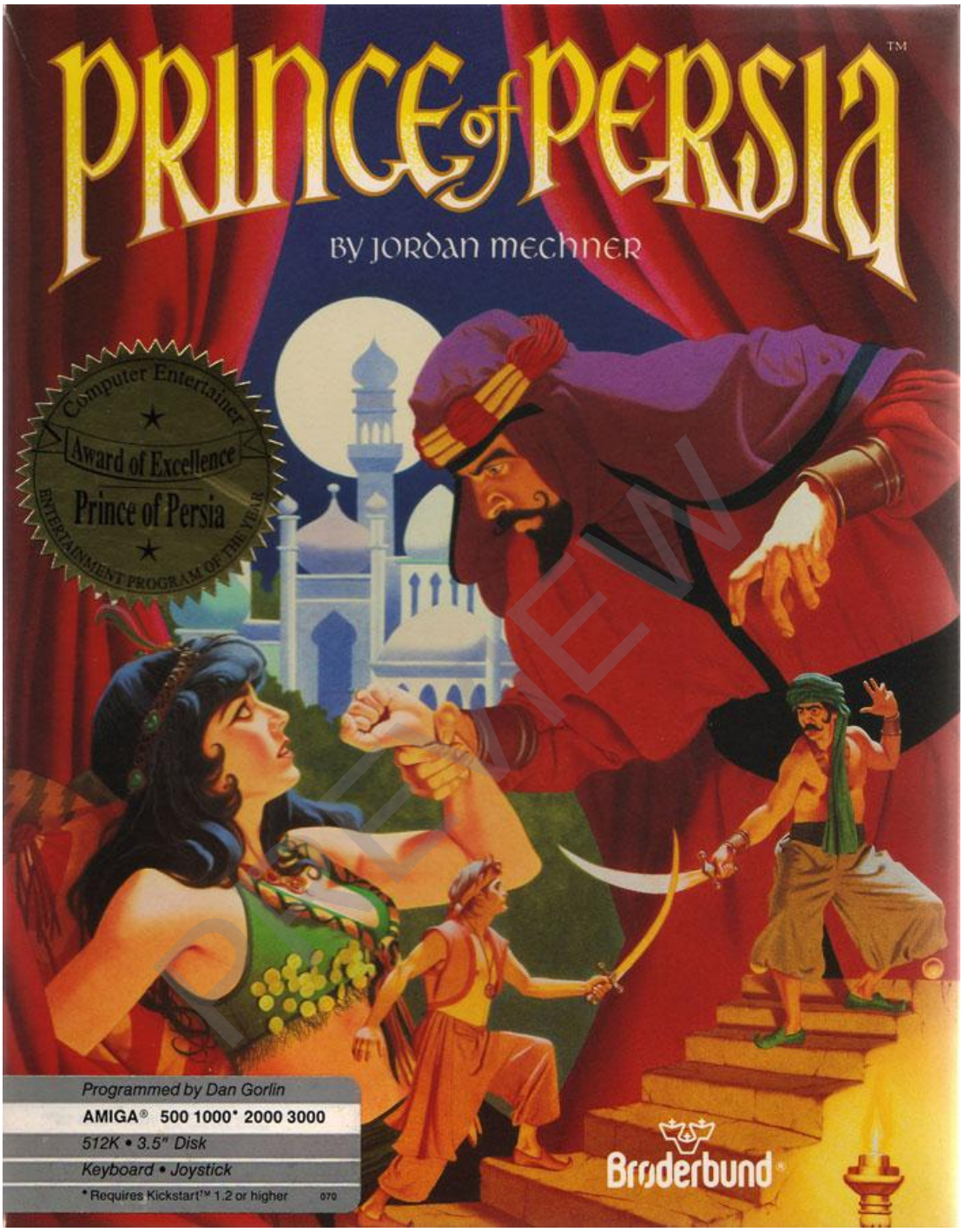

Figure 1.1: The original Prince of Persia box art. Note the mystical depiction of the Middle East, perpetuating Edward Said's concept of "Orientalism" ("Prince of Persia").

Figure 1.2: Disney's 2010 movie carries the same name as its videogame predecessor. Note the same mysticism and Orientalism and tanned white (not Arabic) lead actors ("Prince of Persia: The Sands of Time").

The example of the *Prince of Persia* series illuminates how videogames, like other media, simultaneously reflect and reinforce culture. The first *Prince of Persia* (Brøderbund) game made tangible some Western assumptions about "the Orient." These assumptions were encoded in the box art (fighting, powerless females, evil mustaches), the gameworld (a dingy dungeon populated by monsters and faceless guards), and the gameplay (kill Oriental guards, perform daring feats to overcome intricate and sinister traps, save the princess from the evil and unjustified powers that be). Players experience those assumptions while playing, and these experiences provide a way for players to think about "Persia," much like Disney's *Aladdin* (Dir. Ron Clements and John Musker) probably was the first (and only?) exposure some US children not of Arabic descent had to any Arab societies. Popularity doesn't mean that the representations are true or healthy. It instead indicates that the overall representation of the Orient in those games coincided with the dominant understanding of their audience. Players enjoyed and bought the original game despite its problematic cultural coding, so new games in the series carried similar assumptions now justified by the market.

Videogames, in fact, can reflect and reinforce a range of broader messages. Messages about how humanity should relate to nature should be particularly important at this point, due to humanity's preoccupation with climate change and environmental degredation. Most videogames, unfortunately, seem to contain naturalgameworld environments that are mere backdrops for player activity. Players are rarely responsible for their actions within natural gameworld environments. Real time strategy games that feature large scale technological warfare like *Starcraft II* (Blizzard Entertainment), for example, demand that players constantly harvest finite resources and reward players who can harvest the fastest while producing the most efficient war machines; there is no concern for emissions produced by the industrial war processes of the game mechanics or the effect of harvesting and processing

those natural resources. Such messages, upheld and perpetuated by the economic and cultural success of games like *Starcarft II*, should be challenged. At the very least, game designers and audiences should demand games that challenge problematic social paradigms, like the present day exploitative relationship of humanity over nature.

Though videogames might contribute to an outdated environmental philosophy, the medium might simultaneously provide new ways of thinking about and acting within a world choked by industrious inhabitants who are just realizing the results brought by centuries of burning fossil fuels, producing consumer goods, and failing to crack down on greedy environmental exploitation. *Fable III*, for example, asks players to make decisions for how to manage an entire kingdom, often asking for decisions that balance changes to the environment, human life, and technological progress. If a player chooses, for example, to drain a lake in order to construct a factory, the nearby villages of non-player characters wither and die from a lack of fresh water. *Fable III* makes a heroic attempt at showing how human decisions affect natural environments, but the medieval warfare context likely distracts players from the environmental subtext. At any rate, videogames don't need to uphold destructive, unthinking environmental norms as a rule. Players don't need to succumb to blithe digital messages that represent and champion the worst of human activity.

Happily, others are acknowledging the broad possibilities of videogames for affecting positive change. For example, a recently released game called *Plan It Green: The Big Switch* (Wyse Games), published through a partnership with *National Geographic*, General Electric, and the Center for Science, allows players to build green cities in a comprehensive simulation game. Not only does this game have the potential to introduce young players to the benefits of green technologies and the present dependence on fossil fuels, it has the potential to generate new insights on how to best balance environmental health with human

progress. Expanding the possibilities of games to include such positive messages, and opening audiences to those messages, should be a dominant interest of our contemporary and globally situated societies.

Theory and Format

Several scholars working with videogames have influenced my work. I'm particularly interested in perspectives that illuminate the complicated ways that videogames can influence human behavior and ideologies and how that influence can occur.

Johan Huizinga's 1950 book, *Homo Ludens: A Study of the Play Element in Culture* provided an early cornerstone for modern videogame studies. Huizinga's work explores the essence of play within human activity. Why do we play? How does play impact the broad spectrum of human experiences? How does play help us survive? In Huizinga's scheme, play requires sanctuaries for the activities and rules of games that wouldn't normally be accepted by society. For example, we encourage fighting amongst professional martial artists that we would normally label as criminal if carried out on the street. The discipline I'm calling videogame studies picked up on Huizinga's discussion of this apparent distinction.

> Just as there is no formal difference between play and ritual, so the "consecrated spot" cannot be formally distinguished from the play-ground. The arena, the card-table, the magic circle, the temple, the stage, the screen the tennis court, the court of justice, etc., are all in form and function play-grounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain. All are temporary worlds within the ordinary world, dedicated to the performance of an act apart. (10)

Huizinga's concept that play and the magic circle are essential human activities remains influential, and so does his contention that videogames are set apart from mundane every day activities. Still, some questions remain. How do we define the limits of magic circles, and who participates in this defining? How do we gain access to the gamespaces inside the circle, and who can gain access? How does the play inside the magic circle create

meaning in the rest of our lives? These are essential questions still being worked out, with answers that, of course, depend on contexts. Regardless, it is important to recognize that what happens in the magic circle can have consequences on the total human experience. Researchers have taken an interest in analyzing magic circles precisely because play and the rest of the human experience are deeply connected.

For example, the scale and distribution of the videogame industry indicates that it is mostly Western societies that create, experience, and derive meaning from the medium. People with the greatest, most consistent access to magic circles formed by videogames come from Western societies. Play within these Western magic circles may privilege Western ideologies and exclude others. We can, perhaps, understand what ideologies are privileged in the West by analyzing the narrative and gameplay content of games that prove successful within the broader videogame industry. My interest in how the industry can shed light on the creation and reception of videogames is indebted to Edward Castronova's 2005 book, *Synthetic Worlds: The Business and Culture of Online Games*:

> The thesis of the book is that the synthetic worlds now emerging from the computer game industry, these playgrounds of the imagination, are becoming an important host of ordinary human affairs. There is much more than gaming going on there: conflict, governance, trade, love. The number of people who could be said to "live" out there in cyberspace is already numbering in the millions; it is growing; and we are already beginning to see subtle and not-so-subtle effects of this behavior at the societal level in real Earth countries. (2)

Castronova explores the economic, political, and security implications of videogames with persistent synthetic worlds like massive multiplayer online (MMO) games. This is a helpful perspective. Videogames regularly outperform Hollywood movies. Politicians meet