

Saving the World One Game at a Time? Justice, Digital Play, and *Games for Change*

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Abstract: The Games for Change organization sponsors video game innovations that seek to teach justice and compassion through digital play. Play encompasses many dimensions: learning and growth, perspective taking, self-reflection, critical thinking, and adaptive thinking. However, the educational aims of these games may be diluted by the latent structural qualities within the chosen medium of *digital* play. In addition, religion appears to be an underutilized resource within these games, despite the great promise and potential of religious education. This study relies heavily upon literature review and case studies from within the Games for Change community of practice.

Games for Change: Video Games for Social Justice

Games for Change (G4C) sponsors innovative developments in educational video game design that seek to teach social justice. The website for this nonprofit organization (www.gamesforchange.org/about/) explains that it seeks to facilitate "the creation and distribution of social impact games that serve as critical tools in humanitarian and educational efforts." *G4C*'s annual festival attracts some of the most visionary "video game minds" in the industry and academy, including Tracy Fullerton, James Paul Gee, and Jane McGonigal. *G4C* convenes an annual festival-often referred to as "the Sundance of Video Games"-that attracts over 800 participants every year. *G4C* also curates an online arcade of games (<http://www.gamesforchange.org/play/>), created by cross-disciplinary teams from around the world. *G4C* organizes the games according to domains such as art and empathy, conflict, environment, health, human rights, and poverty. Awarded works and themes include the following:

- *Darfur Is Dying*: refugee survival
- *PeaceMaker*: Israeli-Palestinian reconciliation
- *Ayiti: The Cost of Ute*: Haitian family health

Darfur Is Dying is a narratively-flavored simulation in which the player assumes the burdens of displacement and survival in the midst of genocide. A design team of USC graduate students created the game, informed by seasoned humanitarian aid workers with extensive experience in Darfur. Game play follows two modes. In the first mode, the player wanders across a barren landscape on a quest to fetch water while dodging militia patrols. In the second mode, the player sustains a refugee camp by managing resources, growing crops, and building huts. The game is played through a website that prompts players to learn more about genocide and to intervene. For example, website links invite players to contact government officials, to raise awareness among peers, and to provide financial support. Some critics applauded the game as a consciousness-raiser and discussion-starter. Others suggested that the game may oversimplify the complexities of Darfur (Boyd 2006).

PeaceMaker is a government simulation in which the player assumes leadership of either Israel or the Palestinian National Authority, seeking to broker peace between the two sides. A design team of Carnegie Mellon graduate students created the game. One of the students was a former Israeli Army captain. A Palestinian student at Carnegie Mellon also offered advice to the development team. Game play follows a series of turns in which the player must make strategic decisions that satisfy both political sides. Maps, news reports, and real-world footage of demonstrations and attacks inform player decisions. The game provides player feedback in a variety of ways. For example, public approval bar graphs and line graphs fluctuate while virtual leaders within the game offer their own assessments. Some commercial designers favorably reviewed the game in terms of its playability (see for example, Adams 2007). One team of researchers found that analytical players achieved the greatest success in *PeaceMaker*, and that their religious affiliation is a game play factor deserving of more scholarly attention (Gonzales & Czlonka 2009). Another research team noted that game play produced short-term, explicit attitude change toward foreign nations, although not necessarily long-term, implicit, or behavioral change (Alhabash & Wise 2012).

Ayiti: The Cost of Ute is a family simulation in which the player manages an impoverished Haitian household's pursuit of health, education, and financial security. *Ayiti* was designed by a collaborative team of high school students (first- and second-generation youth Caribbean immigrants) and independent game designers (Gunraj, Ruiz, & York 2011, 267). Players select from among four strategies for success: health, happiness, education, or money. Game play consists of seasonal turns in which the parents and children are deployed to the family farm, work, school, home, or the hospital. The player can also purchase various sundries at a store. At the end of each turn, each family member gains or loses points in terms of health, happiness, and education. The game is played through a website that also offers two workshop curricula: one for debriefing game play and one for investigating the cultural conditions simulated in the game. A post-game survey of approximately 16,000 players indicated that they gained an increased understanding of the complex interrelationship between financial resources, physical health, and survival (Nudell, Brunner, & Pasnik 2007).

Perspectives upon Video Game Analysis

Video games are a *played* medium. Thus, it is helpful to analyze the meaning of play in order to grasp the full range of possible meanings within video games. In *The Ambiguity of Play*, Brian Sutton-Smith (1997) argues that one's understanding of play is a direct reflection of one's ideological presuppositions. Sutton-Smith identifies seven historic "rhetorics" of play that summarize its meanings in terms of these presuppositions. Of these seven historic rhetorics, four of them present perspectives that are useful for this present study: the rhetorics of developmental progress, the rhetorics of power, the rhetorics of identity, and the rhetorics of imagination. Sutton-Smith's primary conclusion does not claim that each rhetoric of play proves useful in its own way. Instead, he creates an eighth rhetoric—play as adaptation—that he suggests may supersede the others. Nevertheless, this present study does argue that every rhetoric listed above can prove helpful in understanding the full and multivalent range of play. Each rhetoric of play—developmental progress, power, identity, imagination, adaptation—colorfully illuminates the similarities between play and learning. For example, both play and learning rest upon the

scaffolding of personal growth and the development of various competencies. Both play and learning engage require decision-making and the exercise of personal agency, often in the service of accomplishment. Both play and learning inform the relationship between self and others. Both play and learning harness the power of imagination and its capacity for creativity. To these, Sutton-Smith adds that play and learning deploy the primal faculties of neural connection, variable examination, and evolutionary adaptation. In other words, Sutton-Smith believes that play is a biological phenomenon that aids species in adaptive survival. Certainly, learning does so as well. Sutton Smith's study proves helpful for this present study, because video game play both requires and facilitates learning. Scholars such as James Paul Gee (2007) and Kurt Squire (2011) argue that video games invite players to explore complex systems. Gee, Squire, and Ian Bogost (2007) argue further that these complex systems are often best understood as ideological "worlds," confronting players with particular points of view through intentional design. Gonzalo Frasca (2004) suggests that video game worlds can create a virtual space not only for consciousness-raising and problem solving, but also for triggering discussions about real-life issues. *Darfur Is Dying*, *PeaceMaker*, and *Ayiti: The Cost of Ute* all engage players in this kind of playful learning.

Some research study video games from the perspective of narrative rather than play and learning. For example, Janet Murray argues that computers are "enchanted objects" that immerse the willing within a liminal space between the external and the subjective, much as narrative does (1997, 99). Just as novels can usher players into deep reflection, so video games can do as well. Also, many video games utilize narrative themes and structures as organizational devices: character and plot developments, textual or verbal narration, and sequential action. However, Marie-Laure Ryan (2001) rightly notes that these narrative elements tend to be quickly forgotten in the midst of action. She also notes that some video games do not easily lend themselves to typical narrative analysis, such as the puzzle-based game *Tetris*. Nevertheless, Ryan argues that all players experience game play in a narratively ordered, phenomenological sense: "First, I did this in the game. Then, that happened next." In these ways, narrative stands alongside play and learning as a possible perspective from which to analyze video games.

In contrast to narrative, video game analysis can also proceed according to the contours of interactive rules and procedures. Janet Murray contends that complex rule-based computer models rest beneath video game narratives, lending power to video game stories and meaning to player actions (1997, 274). Ian Bogost describes these rules and procedures in terms of "procedural rhetoric." Bogost uses this phrase to characterize the implicit and persuasive points of view that video game designers present. Within virtual game worlds, players push the possible limits of those points of view through choice and consequence, action and reaction. Bogost surmises, "This is really what we do when we play video games: we explore the possibility space its rules afford by manipulating the game's controls" (2010, 43). Elsewhere, Bogost argues that this most important moment of study in a video game (2006, 99, 131). Video games are no more "neutral" than any other medium such as music, film, or literature. Video games communicate particular points of view, often on purpose and by design. When persons play video games, they explore points of view-not only those of the designers, but also their own. On the one hand, video games communicate these points of view through narrative elements. On the other hand, video games also communicate through simulation and procedure. Through video game play, learning occurs. And in the case of *G4C*, these procedures, stories, and lessons transpire in the

name of social justice. However, at least one question remains. Do video game players learn the kind of things that game designers want them to learn through *G4C*, given that video games are not only a played medium but also a *digital* medium?

Video Games and the Implicit Curriculum of Digital Play

Curriculum consists of both content and process, both information and delivery system. The content or information that instructors publicly acknowledge and deliberately teach is called the explicit curriculum. In contrast, the process and delivery system by which instructors teach is called the implicit curriculum. Philip Jackson explains that the implicit curriculum consists of institutional values that are embedded within "rules, regulations, and routines." Testing in schools tends to focus upon the explicit curriculum, not the implicit curriculum. And yet, Jackson contends, students learn the implicit curriculum just as well as the explicit curriculum. Indirectly and subtly, the architecture of the learning space teaches its own kind of logic (1968, 33-36). In the words of John Dewey, the implicit curriculum functions as a kind of "collateral learning" through the "formation of enduring attitudes" (1938, 48). The implicit curriculum can be described as an "operational ideology" or worldview that is taught through the learning environment (Eisner 1992, 306).

Many scholars agree that computer technologies propagate an implicit curriculum uniquely their own. Media theorist Marshall McLuhan argues that no medium is a *tabula rasa*- not even the computer medium. All media enhance certain points of view while obsolescing or reversing other points of view at the same time (McLuhan and McLuhan 1998). For example, the invention of the printing press arguably enhanced an independent point of view while rendering communal points of view somewhat obsolete, since readers could learn independently of direct conversation with one another. More particularly, technology philosopher Don Ihde argues that computer technology amplifies certain ways of thinking while reducing or muffling other ways of thinking (1979, 54-65). He contends that computers set the stage for thinking of knowledge in terms of data, bits, and categories instead of as an integrated whole. Curriculum theorist Douglas A. Noble maintains that computers reflect the vision and values of the military- industrial complex that built them, grounded in a root metaphor of the mind as "information processor" for strategic and tactical thinking (1988, 251). Chet A. Bowers cautions that when computers facilitate learning, the minds of both teachers and students gradually conform to the shape of an instrumentalist logic and epistemology that reflects a technocratic vision (1988, 43). In short, computers excel at teaching users to think like computers. The insights of McLuhan, Ihde, Noble, and Bowers cast suspicion upon the implicit curriculum of the video game medium. To its credit, *G4C* curates video games designed to mediate learning about urgent global issues of social justice. Games like *Darfur Is Dying*, *PeaceMaker*, and *Ayiti: The Cost of Ute* are designed to elicit ethical reflection and action. Even in mainstream video game culture, ethical play is on the ascent. However, mainstream video games are produced by commercial studios that primarily focus upon entertainment value and corporate profitability. To commercial studios, ethical tensions simply make video games more interesting, more desirable, and more marketable. The ethical tensions of commercial games are often trite, thinly contrived, and easily manipulated toward the win-condition (Sicart 2009). Video game players often refer to this kind of manipulation as "gaming the system" in order to achieve preferred outcomes, regardless of the

context or intent of the game. In short, video game players understand the instrumentalist logic underpinning their play experience, gladly exploiting it along the path to victory.

Several theorists insist that video gameplay generally boils down to manipulation and control, regardless of moral themes and ethical aspirations. For example, Alexander Galloway argues that video games function as "allegories of control" within an informatic age. In his examination of the commercial historical-strategy game *Sid Meier's Civilization III*, he contends that the player merely learns how to manage an algorithmic system, not how to appreciate history (2006, 90-91). Similarly, Nick Dyer-Witheford and Greig de Peuter argue that the computational nature of video game play extends the values and vision of Empire—an ideology of domination best known as global capitalism. Patrick Crogan traces the history of video games to computerized military simulation (2011, 168-169). Just as cybernetics emerged as a predictive military science for the sake of controlling contingencies, so video games extend that cybernetic logic: video game players as field marshals, deploying digital assets for virtual victory.

What Do *Games for Change* Teach?

Video games present unique challenges for study. Unlike books, video games cannot be read in a linear manner. They lack indexes for easy reference to individual chapters and pages. Unlike films, video games unfold according to player agency, not a director's vision. They allow players to proceed according to multiple and alternative paths. Unlike songs, video games require hours—not minutes—in order to "listen once" fully from beginning to end. They cannot be started and stopped with a rewind or fast-forward button. In order to fully investigate any particular video game, it must be played repeatedly from beginning to end while taking care to uncover each nook and cranny. With that caveat, this study offers only provisional assessments based upon tentative investigations of *Darfur Is Dying*, *PeaceMaker*, and *Ayiti: The Cost of Ute*. I have examined each of the games in this study for several hours each, not only through game play but also through reading game documentation, through email correspondence with members of the design teams, and through viewing game play recordings online at YouTube. I have not played all of the games through to completion. However, my investigation has been sufficient to note commonalities across the games, particularly in relation to their implicit curriculum. That is the focus of this study.

Darfur Is Dying, *PeaceMaker*, and *Ayiti: The Cost of Ute* utilize feedback systems that overtly reflect the instrumentalist logic of the computer. The lives of Darfurians, Middle Easterners, and Haitians are essentially represented by numerical scores in terms of militia threat, camp health, water supply, food supply, number of surviving family members (*Darfur Is Dying*); national security, militant activity suppression, public opinion and sympathy, sectarian unrest (*PeaceMaker*); and health points, happiness points, education points, financial resources, number of surviving family members (*Ayiti: The Cost of Ute*). In addition, each of these games tracks numerical gains and losses across game days or years, through on-screen dashboards and graphs. Each game utilizes a third person, top-down visual display of the play field—a bird's eye (or field marshal's eye) perspective. By design, the player's attention naturally fixates upon impersonal systems of contingencies rather than personal life stories. Thus, game victories hinge upon strategic resource management. However, occasional narrative and aesthetic elements lend a tone

of depth and drama to these games. For example, *Darfur Is Dying* oscillates between strategic resource management in the refugee camp, and a more subjective experience of fetching water from a well. While fetching water, the player selects a family member to control. As the player sneaks across an arid landscape in a first-person perspective, militia jeeps regularly appear on the hazy horizon, closing in quickly. The player must hide behind rocks, scrub, and animal carcasses in order to avoid capture. When captured, family members are permanently removed from play as their tragic fates are reported. This part of game play feels very tense. *Darfur Is Dying* also presents brief, pop-up, text windows in camp that each lend a sentence or two of flavor. In *PeaceMaker*, the game responds to each player choice with a short, multimedia documentary clip of relevant Middle East activity. Though brief, these documentary clips vividly enhance a sense of presence and place for the player. *Ayiti: The Cost of Ute* attempts the same through a few text-based reports on each family member's status and well-being. All three games also use sound effects and music to enhance a sense of player immersion. In addition, all three games link the player to more information about the social, cultural, and economic conditions that provide the context for play. In *Ayiti: The Cost of Ute*, most information links lead to a few paragraphs of in-game text. The host website for *Ayiti* also includes links to instructional curriculum. In *PeaceMaker*, the information seems limited to a timeline of events in the Middle East, along with the short documentary clips. However, *Darfur Is Dying* provides the player with the richest array of options by far. Some of these links are strictly informational, while others invite the player to respond through contacting a congressman, donating funds, or mobilizing friends. However, some of the links for *Darfur Is Dying* seem currently unsupported or broken.

In summary, all three games present simulated environments of rules, menus, and feedback loops in order to mediate digital play for learning about social justice. Players navigate those environments on a quest for developmental progress in terms of their personal expertise and in terms of improving the simulated environment. All three games present a series of cases in which players must make hard choices, reflect upon their own values, and think creatively. To varying degrees, all three games use narrative flavor to intensify the play experience. In every game, however, the narrative flavor seems to pale before the calculating, procedural logic of play. It would be too harsh a critique to reduce each game to an ideology of Empire or capitalism, even though each game organizes play in terms of strategic systems management. Nevertheless, the digital nature of video game play certainly extends the "allegory of control" that characterizes a technocratic world:

- The computer presents itself as the tableau for game play
- The computer processes game play according to digital values
- The computer provides feedback in digital terms
- The computer requires players to select their actions from discrete menus
- The computer challenges players to predict and exploit algorithmic patterns

In these ways-and perhaps others-the digital play of the computer medium implicitly preaches a gospel that systems thinking and problem-solving can save the world, even while the video games in this study explicitly teach about social justice issues.

Religious Education as a Contributor to *Games for Change*

Generally speaking, the video games in this study do not meaningfully incorporate the resources of religion or religious education into game play. In the case of *PeaceMaker*, religion merely provides an historical and cultural backdrop for the game. On occasion, holy sites are marked by terror and violence. The design team felt that religion was a contentious issue that shouldn't be "pushed." Nevertheless, they acknowledged that players would integrate their own convictions—religious or otherwise—into game play choices (E. Brown, personal communication, September 17, 2012). Some researchers suggest that playing *PeaceMaker* might assist in perspective taking, thus reducing "the effect that religious and political preconceptions may have on our actions" (Gonzalez & Czlonka 2009, 4). In the case of *Ayiti: The Cost of Ute*, the design team intentionally left out religious considerations due to the constraint of resources for game development. They considered incorporating Voodoo as an indigenous medical treatment option, but decided otherwise. Religious inclusion was limited to the labeling of some schools as either Catholic or Protestant (B. Joseph, personal communication, September 3, 2012). In the case of *Darfur Is Dying*, the design team recognized the interrelationship that exists between religion, society, culture, politics, and history. However, they chose not to incorporate religion into the game due to other complexities competing for attention within their simulation. To their credit, the design team did consult with religion professor Donald E. Miller of USC. In the final analysis, their design methodology was "informed and inspired" by his three-step pedagogy for genocide studies: 1) emotional investment at a personal and narrative level, 2) systematic analysis of contextual forces, and 3) access to some means of immediate and tangible intervention (S. Ruiz, personal communication, September 10, 2012). In all three games, the design teams faced difficult decisions about what to include and omit in their simulations. After all, a simulation that includes "everything" would be called something like "real life!"

In contrast to the games in this study, some mainstream commercial video games problematize religion as an ideology that sponsors aggression. Doctoral student and Huffington Post blogger Greg Perreault (2012a) notes that video game narratives in the role-playing game genre deploy religion as a motivation for violence. Perreault explains:

It doesn't appear that game developers are trying to purposefully bash organized religion in these games ... I believe they are only using religion to create stimulating plot points in their story lines. If you look at video games across the board, most of them involve violence in some fashion because violence is conflict and conflict is exciting. Religion appears to get tied in with violence because that makes for a compelling narrative (Perreault 2012b).

This is not a new phenomenon in gaming. The original tabletop pen-and-pencil role-playing game *Dungeons and Dragons* (Gygax & Arneson 1974) situated all friends and foes along an alignment taxonomy that swung between the dualisms of law and chaos, good and evil. Multiple pantheons of gods, devils, and other supernatural figures provided ample motivation for crusades and quests of all sorts (Kuntz & Ward 1980). Alongside military simulations, *Dungeons and Dragons* seems a logical progenitor of the video game phenomenon (Donovan 2010, 53-54), with its low-tech commitment to statistical calculation, strategic resource management, and procedural logic (Donovan 2010, 53-54). The computer simply provided a more efficient way to

commodify morality and calculate the effects of religion as a source of power in game play. In this sense, *Dungeons and Dragons* remediated the "myth of redemptive violence" (Wink 1992) within an emerging cultural domain: good guys eternally fighting bad guys in the name of ideology. Without doubt, gamers are used to linking religion, violence, and ideology within role-play. However, religion has much more to offer than ideology. Religion is more than a flag to wave or a banner to bear in the name of leadership and alignment. The textured complexity of religion includes story, symbol, and ritual. These phenomena give shape not only to individual experience but also to social order and cultural norm. Religion is not merely a private realm-it impinges upon public life. Religion encompasses the inseparable but often bifurcated dimensions of aesthetics and ethics. Religious words such as liberation, justice, peace, and hope are greater than ideological words such as capitalism, democracy, technocracy, tribalism, and nationalism. Religious words call their hearers into the dimension of the transcendent-an all-surpassing vision of beauty and morality. Religious transcendence describes and directs us to a mystery that cannot be contained in mere ideology. Religion can awaken wonder and reverence within us as we contemplate sacred interconnections within ordinary life (Whitehead [1929] 1967; Phenix [1971]1975; Huebner [1993]1999; Harris 1996; Moore 2004). In that vein, religious education stubbornly holds to the conviction that learning must transcend *mastery* in order to encounter *mystery*.

What would this kind of religion look like in a video game? If religion is merely a matter of ideological alignment, then the commercial video game designers already do a fine job of things: lawful good and chaotic evil are that is needed in order to motivate game play. If religion is merely a matter of private experience or personal conviction, then designers need not worry about religion because players will bring their own religiosity with them into game play. However, if religion is a matter of transcendence, then how can designers meaningfully simulate it within the digital, mechanized environment called a video game? Perhaps an answer is implied within the wisdom of a statement that is often-perhaps apocryphally-attributed to Albert Einstein: "Not everything that counts can be counted, and not everything that can be counted counts" (O'Toole 2010). Video games typically mediate game play via digital dashboards. Is that prominence deserved? By design, computers calculate. Must users monitor calculations in order to use computers? Are scores an unavoidable fact of the video game play experience? Do video game players really need to see "behind the curtain" in order to navigate complexity, or can designers deploy non-numeric alternatives when presenting complexity? Can religion and religious education suggest alternatives? If religion encompasses transcendence-as this study suggests-then what kind of computerized models or methods could adequately represent or mediate transcendence? It is a strange thing to imagine eternity captured in time, or infinity captured in space. Nevertheless, this notion is central to my own religious tradition, in which the divinity became human (John 1:1-14). This notion is also central to the phenomenon of art itself: plucked strings and brushed strokes of paint that usher us into the sublime.

The following suggestions present a modest proposal for reimagining video game play in religious educational terms. I cannot claim novelty across this entire list of suggestions. Years of literature review and personal experience with video games inform this proposal. Nevertheless, these ideas for religious education's engagement with video games have emerged throughout my dissertation work and other writing (Hayse 2009, 2010, 2011):

1. Conceal the calculations, scores, and digital dashboards of video game play. In their place, provide narrative and other forms of qualitative feedback. This could minimize the cybernetic reductionism of video games while instead eliciting a deeper form of discernment that is religious in nature. I find an archetypal example of this in Richard Garriott's classic role-playing game *Ultima IV: Quest of the Avatar*.
2. Increase the complexities of moral models and ethical dilemmas. Many games use a strict, binary system of morality. In these games, ethical choices do not tend to present dilemmas that are worthy of the name. Instead, these games deploy ethical forks-in-the-road as thinly veiled-and sometimes quite meaningless-devices toward in-game rewards: "If I'm a good guy and I pick option A, then I gain reputation points. If I'm a bad guy and I pick option B, then I get a bigger gun!" In contrast, ethical dilemmas that rise above this kind of banality can provoke critical reflection. A wide range of industry leaders and academics are beginning to explore this question in earnest, including some mentioned in this study.
3. Create player goals that surpass the mastery of algorithmic systems. I believe that Galloway, Dyer-Witheford, de Peuter, Crogan, and others are correct when they argue that many video games extend technocratic allegories of control. To be fair, algorithms and equations *must* rest at the heart of video game calculations. However, this does not mean that video games are obligated to present sociocultural problems and solutions in strictly algorithmic terms. Social justice in real life is much more complicated than gathering and distributing resources. To be fair, it sounds a lot harder to simulate the greater complexities of racial reconciliation than to simulate the lesser complexities of relief work.
4. Utilize the power of epiphanic moments. Currently, most video games don't present a lot of "aha" moments. Instead, play is fairly predictable and the solutions are fairly straight-forward. Daily life can be like that, too. However, the richest moments in our daily lives can mediate perspective shifts that cause a person to reinterpret the subjective meanings of past, present, and future events (Slattery 2012). Video games can achieve epiphanic moments, even without high-tech effects. The epiphanic moment of which I'm writing is hinges upon phenomenology. Life-changing insights are mediated through personal perception and subjective experience. I find an excellent example of the epiphanic moment in Jason Rohrer's indie game *Passage*.
5. Structure a contemplative pace rather than a frenetic pace. Many video games mediate play through time limits. As players race to "beat the clock" in its various forms, pulses race and adrenaline surges. In contrast, video games without time limits can easily engage players in calm, sustained periods of reflection. Religious ways of knowing are at home with contemplation and rumination. I find an excellent example of game play that elicits contemplation in Robyn and Rand Miller's classic adventure game *Myst*.
6. Minimize autonomous agency and enhance interdependence. Video game worlds notoriously set up players as autonomous superheroes, toting guns and swords in

- hand in order to mete out vigilante justice (Lawrence & Jewett 2002). However, real life is more ecological and less anthropocentric, more interdependent and less independent. Even though we depend upon others-human and non-human-for life itself, we stubbornly persist in behaving as if we are the rightful masters of all that we see. Video games and computers are uniquely designed to manage complex systems of mutually influential variables. Within this framework, video games need not play to the myth of the solitary hero. Instead, video games could just as easily render victory impossible without in- game persuasion and partnership. An encounter with the Other, whether real or virtual, can function as an avenue into self-transcendence when players do not simply control the Other as an extension of themselves.
7. Subvert and reverse conventional procedures. By definition, the conventional is so routine that it reinforces the expected. In contrast, religion sometimes undermines the conventional in favor of a new and unexpected vision. In my own faith tradition, for example, Jesus teaches that the first shall be last and that the servant shall be raised up to honor (Mark 9:35). What would happen if video game designers subverted or reverse the conventions of exploring space, racing against time, and accumulating resources? Could such video game play open up the possibility of "thinking otherwise" or the shifting of conventional paradigms? These are key elements in repentance and conversion of any sort. Again, I find an archetypal example of this in Garriott's *Ultima IV: Quest of the Avatar*.
 8. Engineer a sense of yearning. After a while, video game tedium sets in when the joy of discovery dies out. In my own video game play, nothing kills the fun of a game faster than "figuring out how it works." As mentioned above, video game transcendence fades away when mastery replaces mystery. Many video games present players with puzzles to solve, while the best ones present mysteries to savor. Gradually unfolding mysteries can mediate a sense of what C. S. Lewis referred to as *sehnsucht*-a longing for the ineffable and all that it entails (Cornell 1974).

Conclusion

This study suggests that the underlying structure and explicit mediation of games such as *Darfur Is Dying*, *PeaceMaker*, and *Ayiti: The Cost of Ute* each reflect the implicit curriculum of computer technology-what Galloway refers to as an "allegory of control." However, this single factor does not nullify the noble aims and worthy goals of these games. At the very least, these games provide players with digital play experiences that introduce occasions for further reflection. At their very best, these games provide players with a measure of insight into the systemic nature of urgent global problems. Nevertheless, the work of social justice is not only systemic but personal. It is not only statistical but social. Religious ways of learning and knowing can provide valuable and complementary insights into these domains. Religion that seeks continued cultural relevancy would do well to invest further resources in the pedagogical potential of video games. Video game design teams that seek to enrich meaningful game play might find a suitable conversation partner in religious education.

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