

Games, Ethics and Engagement: Potential Consequences of Civic- minded Game Design and Gameplay

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ABSTRACT

This chapter examines ethical ambiguities confronted by the design and play of serious games focused on civic engagement. Our findings derive from our examination of two educational simulation games that focus on contemporary issues related to social and political conflict. We believe game simulations are complex in nature and offer particularly rich environments for cognitive learning. Within the following chapter we examine the relationship between games and learning, specific approaches to game design, and the ability of games to encourage civic engagement. While we found that game participants gained knowledge of curricular content and practiced democratic skills during their experiences with the online simulations, there also occurred unintended consequences. In turn, we believe it is critical to analyze deeper ethical ambiguities related to the consequences of civic-minded game design and gameplay and support research efforts to further recognize and expand upon the development and research of serious games involving civic-minded educational online simulations.

KEYWORDS

civic engagement, simulations, game studies, game design, gameplay, ethics, real-world learning, social issues

INTRODUCTION

Within the following chapter we use two simulation games to focus on better understanding ethical ambiguities that arise from the design and play of games whose themes and content relate to contemporary social and political conflict. Building upon Shaffer, Squire, Halverson and Gee's (2005) argument that games are "...most powerful when they are personally meaningful, experiential, social, and epistemological all at the same time" (Shaffer, Squire, Halverson & Gee, 2005, p. 3), we believe a specific subset of games—**simulations**—offer particularly rich and textured opportunities to explore the ethical ambiguities of design and play. As game designers and researchers, we borrow our definitions of simulations from Aldrich (2006, 2004), de Freitas (2006), and Frasca (2003), noting that participants in these types of games adopt and interact

through defined roles, often work collaboratively, solve problems based upon real-world dilemmas, and are immersed in virtual and in-person experiences with outcomes not easily categorized by wins and losses. Having created and studied games and simulations, we believe that when the dynamics of design and play intersect, the opportunities for learning are as rich as the possible ethical conflicts are complex. As a result, we argue that the importance of games to learning is deepened when the ethical ambiguities associated with design and play are studied and better theorized. In particular, it is our hope that the present research contributes to a growing discussion about the importance of learning, games, and **ethics** as applied to serious games involving civic-minded simulations.

In this chapter, we first exam and substantiate our position on the type of game ‘play’ found within our case studies. In doing so we delve into the role of serious games and the triad that exists between ludology, narratology, and affect. Examination of this triad sets up analysis of our work further by first pulling apart the importance of the third component of the triad, that of affect. In turn, we examine important aspects of affect related to game design and gameplay to further substantiate our research work on civic-minded game design and gameplay. These include; (1) the relationship between games and learning, (2) specific approaches to game design, and (3) the ability of games to encourage civic engagement. Following these sections, our research describes and analyzes two case studies involving educational online simulations that focus learning on civic engagement through participants’ exposure to simulations that place individuals in ethically challenging contexts. These case studies are *The Arab Israeli Conflict* (AIC) and *First Wind* (FW).

Findings from these two case studies are then presented in the form of intended and unintended consequences that affect both game designers and players. Following summation of our findings, we offer important avenues for scholars to consider in terms of potential future research involving serious games and the inclusion of civic content and action. Finally we provide concluding remarks in the form of ethical concerns that we believe should be considered by game designers, players, and individuals who use serious games for learning purposes.

Defining Gameplay

Once thought of as simply opportunities for “play,” games have proven to be far more complex than initially given credit. As Malaby (2007) points out, it is often our misinterpretation about the power of games that impedes our greater understanding of these resources. One salient entrance into our examination of ethical ambiguities and game simulations begins with Frasca (2003) and her discussion of ludology, the formal discipline of **game studies**. While primarily concerned with introducing ludology within contexts of game authorship and narrative, Frasca differentiates between the design of games and the design of simulations as experiences for “experimentation where user action is not only allowed but also required” (Frasca, 2003, p. 229). Building upon a discussion of ludology, Simkins and Steinkuehler further posit that working in combination, “...the triad of ludology, narratology, and affect can help us understand how story, play, and feeling intertwine to create effective gameplay” (Simkins & Steinkuehler, 2008, p. 19).

As we move to examine the second aspect of the triad, we see that narratology within the role of game design and gameplay is described by the differences between “narrauthors” and “simauthors” (Frasca, 2003). Within contextual settings where “winning” a game is seen as a primary objective, and threat of loss is a motivation for rigidly defined success, games are designed by narrauthors who base their narratives upon fixed sequences of cause and effect events. Alternatively, games that allow for different degrees of fate, or possibilities of outcomes, are akin to **simulations** and are designed by simauthors. Importantly, simauthors “‘educate’ their simulations: they teach them some rules and may have an idea of how they might behave in the future, but they can never be sure of the exact final sequence of events and result” (Frasca, 2003, p. 229). The ambiguity surrounding unknown events and results derives from a key characteristic of simulations—the role of rules. As Frasca notes, “Rules... can be manipulated, accepted, rejected and even contested” (2003, p.229). Consequently, simauthors become similar to legislators who “craft laws,” as “they do take more authorial risks than narrauthors because they give away part of their control over their work” (Frasca, 2003, p. 229). We agree with Frasca and believe that simulations, the simauthors who design them, and the events of play all have complex relationships related to rules, control, and outcome. Indeed, we propose it is because simulations invite rule negotiation and the relinquishing of control that they become ripe locations for the study of learning, games, and ethics involving civic engagement.

The third portion of Simkins and Steinkuehler’s triad, affect, guides game designers and players in their ability to further effect the game itself. It is this aspect of the triad we feel most greatly impacts the following two case studies. Simkins and Steinkuehler (2008) note that the “...ability to make choices that affect the game world is one of the most basic in creating opportunities for ethical decision making” (Simkins & Steinkuehler, 2008, p. 16). As a result they argue that their “...first criteria for fostering ethical decision making within the context of a game is fairly simple: Player choices must have the potential to effect change in the world of which they are a part” (ibid, p. 16). Within the case study portion of this chapter, we describe and analyze two cases of educational online simulations that illustrate a variety of ethical conflicts associated with affect, and most notably the effects of game design and play. In critically examining this area of research, it is necessary to first review three important aspects of affect related to game design and gameplay: (1) the relationship between games and learning, (2) specific approaches to game design, and (3) the ability of games to encourage civic engagement.

Games and Learning

During the past few decades researchers have seen increased scholarship related to the educational value of games; from who plays games and what is played, to how games are played and designed, to where games are played (including within school environments) to myriad connections between games as social media and their role in digital literacy. Games can now be defined as “...applications using the characteristics of video and computer games to create engaging and immersive learning experiences for delivering specified learning goals, outcomes and experiences” (de Freitas, 2006, p. 9). As a result, games are now recognized as “...more than a multibillion-dollar industry, more than a compelling toy for both children and adults, more than a route to computer literacy, videogames are important because they let people participate in new worlds” (Shaffer, Squire, Halverson & Gee, 2005, p. 105).

While we do not concentrate on proving whether games should in fact reside within social or educational contexts, or a mix of both, it is worth citing Gee's argument that the "...theory of learning in good videogames is close to...best theories of learning in cognitive science" (Gee, 2007, p. 4). As a result, we argue that this analogy also applies to simulation games and while many would acknowledge that there are in fact both "good" games and "good" school learning environments, the opposite of both is also possible. Further, it is not only possible, but probable, that one could envision a poorly designed and/or underutilized game as much as a poorly planned and/or under-implemented classroom curriculum; one or both of these scenarios may not in fact support strong learning practices. Gee argues that "...good videogames build into their very designs good learning principles and that we should use these principles, with or without games, in schools, workplaces, and other learning sites" (2007, p. 214).

Because games allow players to think, talk, and act in new ways (Shaffer et al, 2005), educational videogames and simulations are frequently being utilized in school settings as "...learning happens best when learners are engaged in learning by making, creating, programming, and communicating" (Bers, 2008, p. 145). Bers (2008), Kafai (2006), and Peppler and Kafai (2007) have built upon Papert's (1981, 1980) long argued stance about the differences between "constructionist models of learning" and "instructionist models of learning," with the former placing learning more in the hands of the learner. Games and role-playing simulations allow for constructionist learning, providing students as players with strong identities, the opportunity to see the world in new ways, and "a real sense of agency, ownership, and control" (Gee, 2005, para 7). Additionally, game cultures feature participation in a collective intelligence, are designed to foster knowledge through creative productive acts (Squire, 2008), emphasize expertise rather than status, and promote international and cross-cultural media and communities (Squire & Steinkuehler, 2005). The educational benefit of constructionist games and simulations as learning experiences is well documented (de Freitas, 2006; Gee, 2008, 2005, 2004; Squire, 2006; Games for Change (n.d.); Papert 1981, 1980).

Since Clark C. Abt's *Serious Games* (1970), **game studies** researchers have increasingly examined the intentionally designed educational purposes of games in contrast to more traditional understandings of games as activities played primarily for amusement. Bogost's *Persuasive Games: The Expressive Power of VideoGames* (2007) defines serious games as "videogames created to support the existing and established interests of political, corporate, and social institutions" (Bogost, 2007, p. 57). In turn, serious games engage learners, keep motivation for gameplay high (de Freitas & Griffiths, 2007), and have led to the emergence of communities of practice that share practical knowledge in pursuit of social change.

Despite growing acceptance that videogames and simulations proactively contribute to learning, some scholars have contested the ability of educational videogames to produce concrete learning outcomes and suggest that if the impact of computer games is to shift from malign to benign, issues of learning versus play, transference of game knowledge to other contexts, and the surrounding social environment must be concretely addressed (Egenfeldt-Nielsen, 2005).

With respect to ongoing discussions about the relationships between games and learning, this chapter examines the ethical ambiguities resulting from games designed to support civic content and action while generating constructionist learning experiences.

Approaches to Game Design

The overall importance of **game design** is evidenced by the fact that serious games have become rigorously “designed experiences,” capable of achieving a variety of educational objectives, including recruiting diverse interests, promoting creative problem solving, creating productive acts such as game modification and modeling, and establishing digital literacies that produce meaning and tangible artifacts (Squire, 2008). If serious games are to serve a purpose greater than play and amusement, effective design elements must guide players’ specific behaviors and attitudes, as well as influence the substantial relationship between players and game knowledge.

Squire (2006) argues that a game’s learning objectives, whether perspective-taking or creative problem solving, are dependent upon a game designed and sustained by “powerful constraints” that promote engagement and foster learning (Squire, 2006). Such powerful constraints acknowledge the thoughtful approach taken to serious game design, an approach aptly summarized by Squire and Jenkins (2003); “Ultimately, educational game design is not just about creating rules or writing computer codes; it is a form of social engineering, as one tries to map out situations that will encourage learners to collaborate to solve compelling problems” (p. 30).

Collins and Halverson (2009) cite Squire’s research on the game *Civilization*, noting that students who played strategy games based upon history began to “...check out books on ancient cultures and earn better grades in middle school” (2009, p. 132). Gee argues that gamers are required to “...draw on resources that reside in other gamers and their associate websites, and social interactions, resources such as strategy guides (‘faqs’), cheats, boards, game modifications, magazines, review sites, Local Area Network (LAN) parties, and even schoolyard trading of Pokemon secrets” (Gee, 2007, p. 8). Effective and intentional game design can encourage a variety of learning activities, from reading broadly across a range of related fields (Squire & Jenkins, 2003), to the self-initiated research gamers are motivated to engage so as to improve game performance (Gee, 2007).

While some have noted that “we are a long way from having tapped the full pedagogical potentials of existing game hardware and design practices” (Squire & Jenkins, 2003, p. 30), designers and researchers have begun to proactively address the question; “How do good game designers manage to get new players to learn long, complex, and difficult games?” (Gee, 2004, p. 15). One possible answer to Gee’s query is to approach game design through a framework sensitive to and supportive of specific values. Both simulation case studies examined within this chapter were significantly influenced by the role of values as an influence upon the design process. In terms of design, the creation of certain serious games can be analyzed using the Value Sensitive Design (VSD) framework, a methodology that examines the relationship between human values and computer systems. Historically, the VSD framework emerged from an interest concerning the inclusion of human values in the design of computer systems such as digital media. VSD primarily focuses upon “enduring human values” (Friedman, Kahn & Borning, 2006, 2001), values such as autonomy, welfare, and accountability—and how these personal orientations are incorporated into the technical development and design of interactive technologies. Accounting for human values in the design process by integrating ethical considerations in development, for example, is accomplished through the VSD approach (Friedman, 1997). The methodological approach to game design offered by VSD is useful for

examining various elements and dynamics central to serious games as educational technologies, and aligns well with the two simulations examined within this paper.

In addition to gameplay that encourages competitiveness and perseverance, a game's content or play might be designed to promote a set of values aligned with equality, conflict resolution, and advocacy—values directly associated with the ideals and practices of an engaged citizen. Game creators and researchers Flanagan and Nissenbaum (2007) argue in favor of such a complementary relationship between game design, values, and civic-mindedness, demonstrating how game design may inherently incorporate certain social and civic values. Educational technologies such as serious games can promote values and engagement “to which the surrounding societies and cultures subscribe. These values might include liberty, justice, inclusion, equality, privacy, security, creativity, trust, and personal autonomy” (Flanagan & Nissenbaum, 2007, p. 2). In turn, serious games can be designed to offer play experiences promoting distinct sets of values, and as such value orientations may directly encourage role-play and democratic skill building in support of civic engagement.

Videogames and Civic Engagement

As game designers and players, we are encouraged by the opinions of individuals such as Michael Mino, director of the Education Connection's Center for 21st Century Skills, who believes that “if we have any hope of saving the **real world** from real problems, we must embrace teaching students through computer games and virtual simulations” (Libby, 2009, p. 2). As games studies researchers, however, we must critically examine such hopes by further investigating the possibility of games that may lead students towards “saving the real world from real problems.” Scholars such as Bennett (2008) have examined the relationship between digital media and **civic engagement**, noting the emergence of new paradigms such as “Actualizing Citizens” who demonstrate a higher sense of individual purpose, personally define meaning associated with civic acts such as consumerism and volunteering, and favor loose networks of community action maintained by interactive technologies.

Critics, however, have questioned how traditional or novel conceptions of civic engagement may be related to or supported by games. Given such concerns, our research draws upon current interest regarding videogames and civic engagement. In addition to designing games to promote democratic and civic values (Flanagan & Nissenbaum, 2007; Flanagan, Howe & Nissenbaum, 2008), games may be designed to include content that is political in nature—such as the activities and tasks characterized by the two simulations within this chapter. Importantly, research has now confirmed that the processes of gameplay, regardless of whether game content is specifically political, can promote dispositions towards civic engagement (Lenhart et al., 2008). In regards to our present research, we define civic engagement gameplay as play that is based upon civic content such as politics, economics, and society; play that encourages democratically oriented skills such as communication, negotiation, and problem solving; play that fosters responsibility to co-create the game; and play that provides advocacy opportunities.

Research by Jenkins (2007a) and Jenkins, Clinton, Purushotma, Robison and Weigel (2006) has documented how digital, internet-based games and other media represent one concrete means to facilitate and engage in interactive participatory cultures that support artistic expression, informal mentorship, collaboration and sharing, social connections, and civic engagement. More specifically, virtual environments and games may be designed to provide “access to a wide

range of information and resources, communication mechanisms for engaging in critical debates, and tools for supporting collaboration and for enabling new expressions of social life, [and] they can serve as powerful platforms for developing educational programs to promote civic education” (Bers, 2008, p. 141). The process of playing digital videogames, especially those games whose content explicitly relates to political and **social issues**, parallels the dynamic and complex nature of the real world and real problems, and “understanding [these social and political problems] involves analyzing cause and effect, multiple viewpoints, and rapidly shifting scenarios. Games easily mirror this fluidity” (Platoni, 2009, p. 1). Indeed, the growing relationship between games and civic engagement is further inspired by the belief that our society can “reimagine the relationship between participatory culture and participatory democracy, embracing new political language and images that mobilize us as fans as well as citizens” (Jenkins, 2007b, p. 1).

The ability of digital videogames to mobilize players as citizens invested in civic engagement is highlighted in the recent *Teens, Videogames and Civics* (Lenhart et al., 2008) study. This study offers a mixed assessment related to specific civic engagement indicators such as following politics, persuading others how to vote, contributing to charities, volunteering, or staying informed about politics and current events, and reveals some encouraging signs related to the relationship between videogames and teenage civic engagement. Some critics noted that the study found no positive correlation between the frequency of **gameplay** or amount of time spent playing games and a significant increase in civic and political outcomes. However, findings did confirm that:

Certain kinds of gameplay do appear to foster higher levels of civic engagement. The social context of gaming offers opportunities for “civic gaming experiences,” in which players have opportunities to help or guide other players; learn about problems in society; think about moral or ethical issues; help make decisions about how a simulated community, city, or nation should be run; and organize game groups or guilds. (Perkins-Gough, 2009, p. 94)

Perhaps the most significant finding of the *Teens, Videogames and Civics* study relates to these “civic gaming experiences.” Study participants who identified themselves as encountering these types of gaming experiences “sometimes” while also having several experiences “frequently”—a full 25 percent of all respondents—reported “much higher levels of civic and political engagement than teens who have not had these kinds of experiences” (Lenhart et al., 2008, p. 75). Specifically, these game players were “more likely to go online to get information about politics or current events, to raise money for charity, to say they are committed to civic participation, to express an interest in politics, to stay informed about current events, and to participate in protests, marches, or demonstrations” (Perkins-Gough, 2009, p. 94). Findings related to civic gaming experiences were statistically significant for all eight of the civic outcomes considered (Lenhart et al., 2008), and have been further supported by additional studies confirming that videogame play can lead towards civic engagement (Library Technology Reports, 2009a, 2009b). Similar to the constructionist education tradition helping to establish meaningful relationships between learning and videogame play, so too has research begun to prove a positive relationship between games and civic engagement.

CIVIC ENGAGEMENT THROUGH GAMEPLAY: TWO CASE STUDIES

Overview of Cases

We believe games are more than playful distractions or theoretical exercises in narrative construction; rather, they can be designed to introduce players to **real world** problems through content and play processes that are serious, a benefit to learning, and a means to engage in civic action and discourse. To design and study games as experiences central to constructionist learning processes, we draw upon Malaby's (2007) analysis of the relationship between games and society. Writing about games as social artifacts characterized by process, Malaby notes, "Ironically, it is how we have sought to account for what is remarkable about games by setting them apart (as play-spaces, as stories) that is the largest roadblock to understanding what is powerful about them" (Malaby, 2007, p. 96). We wish to remove that roadblock and place games front and center in a discussion concerning learning, play, ethics and real world civic engagement. The following two case studies aim to demonstrate how power and meaning are generated as games promote civic engagement and create ethically ambiguous consequences related to principles of design and practices of play.

As game designers and researchers, we investigate **simulations** that draw upon a tradition of constructionist education, invest players in solving problems based upon real world social and political conflict, and—we hope and believe—encourage civic engagement and mindfulness. Simulations, unlike some games, allow players to "replay" history (Collins & Halverson, 2009; Squire 2008, 2006), and this "replay" factor is of particular importance as it can repeatedly expose students to content about political and social conflict, and allow for repetitive participation in play processes and game activities that encourage civic engagement and discourse. Additionally, the play of simulations—which we believe is both powerful and valuable for learning—is, as noted earlier when discussing Frasca's (2003) distinctions between narrauthors and simauthors, textured with dynamics of control and negotiation. Consequently, **gameplay** of these interactive, educational experiences is inherently ethically ambiguous.

Just as the simulations we describe offer players opportunities to adopt and interact through various roles, the authors have themselves "played" many roles in the creation, implementation, and study of each simulation. These roles included game player, mentor to other players, administrator and designer, developer and programmer, professor, research supervisor and finally research assistant. Following the presentation of these two case studies, we offer a comparative analysis related to learning, civic engagement, and the ethical conflicts and consequences that arose from design and play processes.

Case Study One: *The Arab Israeli Conflict (AIC)*

The Arab Israeli Conflict (AIC) is a web-based game that simulates geopolitical crises and negotiations associated with various Middle East conflicts. Hosted for nearly two decades by the University of Michigan Department of Education's Interactive Communications and Simulations (ICS) group, teams of students are assigned roles as politicians and other influential government and cultural leaders who work together in country and organization-specific teams to role-play a variety of political, economic, and social scenarios through online interactions. For example, three students may play a team representing the Israeli government, with students role-playing the prime minister, foreign minister, and chief military commander, while another team of students represents the United Nations and various officials within that organization. Nearly

two-dozen teams, comprised of students at K-12 schools in numerous countries around the world, play the various countries, international organizations, and political entities critical to the negotiation of conflict throughout the Middle East. Amongst its goals, AIC exposes players to civic-minded social studies content such as history, politics, and culture while simultaneously managing the use of this content in simulated teamwork and communication challenges that facilitate processes of conflict resolution and non-resolution.

Figure 1. A screenshot from AIC that shows an example of the game.

Before the play of AIC begins, participating students prepare for gameplay by conducting research about the political figures whom they will be role-playing, the countries they are representing, historical events critical to understanding tensions within the region, and policies that currently shape society and governance in the Middle East. After preparation concludes, play begins for a period lasting approximately ten weeks. While AIC is based upon real world circumstances, once gameplay begins only decisions and events internal to the game change the course of action. For example, were a real world Syrian politician to be wrested from office due to scandal a week after play commenced, the role of the politician within AIC would remain unchanged. As students communicate and propose actions in the best interest of their countries, organizations, or political entities, various groups of adults support and facilitate the progress of play. Classroom teachers provide immediate assistance with both content and decision-making, and an additional group of advisors comprised of faculty and students at the University of Michigan provide technical assistance, guidance in strategy, and determine final actions within the game.

When looking specifically at the interactions between players, AIC is characterized by a variety of play patterns. These forms of interaction occur both in-character, as students play various politicians and government officials, as well as out-of-character, as students make decisions based upon their own ideas or motivations when working with their country teams. In-character communication most frequently occurs online as students communicate with other teams by sending communiqués between characters (a simplified form of email), write and publish press releases to a game-wide audience in order to report on events or comment upon policy proposals (similar to blog posts), and submit action forms (a plan outlining a team's proposed action), which, upon approval from a game mentor, determine actions related to various game scenarios. Out-of-character communication most frequently occurs offline between players on the same country team, and is often related to decisions about the game content and future interactions with other characters and teams.

Case Study Two: *First Wind*

First Wind, also a web-based game, simulates the economic supply chain of product creation and consumption as these processes relate to fair labor and globalization. *First Wind* was developed in partnership between the University of Michigan-Flint's Masters Level Global Program: Technology in Education, and the Fair Labor Organization (FLA), an international nongovernmental organization dedicated to ending sweatshop conditions (Fair Labor Association, 2008). The game was named after the real world Chen Feng silk factory outside Shanghai, China, a factory itself in partnership with the FLA. *First Wind* was piloted for a single semester in the spring of 2008 between four teams of high school and college students in five different locations throughout the United States. Teams of players were assigned to various

roles in the supply chain, including factory workers and managers, business executives, code compliance officers from the Fair Labor Association, and American consumers. The goal of *First Wind* was to provide players with opportunities to construct understandings of economic and political issues, negotiate the complexities of globalization and fair labor, and encourage the translation of learning experiences into advocacy for social change.

Figure 2. A screenshot from FW that shows an example of the game.

Like AIC, *First Wind* began with weeks of preparation as players researched issues and statistics related to labor, production and consumption, learned about the political and economic history of China, and researched the history and policies of fair labor practice. Players also all learned about the Fair Labor Association and its role as arbiter of compliance code, policy, and business partnership related to international fair labor standards. Play in *First Wind* was structured around successive rounds of interaction, with each of the four role-groups leading a weeklong round. Rounds began with a specific action initiated via interactive tools based upon a design structure similar to that of AIC, where action forms proposed a single event or a series of events to alter game-play within a round, and press releases reported on actions or policies to the entire game community. Once one role-group began a round with an action, the three other groups reacted to the initial action, establishing cause and effect interactions between players and teams. Actions and their related communications and press releases began, sustained, and concluded weeklong rounds of play, all of which were guided by classroom teachers serving as simulation facilitators. After completion of four rounds of play, players reflected on lessons learned and created a fair labor best practices document suitable for submission to the FLA and real world businesses as a form of political and economic fair labor advocacy.

Online player interactions and communication in *First Wind* were distinguishable between those that were distinctly in character versus those that were considered out-of-character. In character communication was facilitated online through messages using a simplified email system much like that of the aforementioned AIC communiqués. Such messages allowed players to communicate with other teams in order to discuss events and send messages to fellow role-group members to help in decision-making processes. In character communication also occurred off-line as players worked as a team to make decisions about gameplay, such as submitting action forms or writing press releases. Out-of-character communication also occurred both online and offline. Online, out-of-character communication took place within a reflection forum (modeled after typical blog posts) that allowed players to comment on the progress of the game throughout the four rounds of play. Semi-structured reflection questions facilitated this out-of-character communication within the reflection forum. Offline out-of-character communication occurred as players commented on the progress of the game and reflected upon consequences of action and patterns of interaction that emerged over the four rounds of play.

Similarities of Games Encouraging Civic Engagement

We define civic engagement as play based upon content related to politics, economics, and society; play that allows for the practice of democratic skills such as communication, negotiation, and problem-solving; play that encourages a sense of responsibility to co-create the game; and play that provides game-based and real-world opportunities for advocacy. The following chart outlines similarities of game-based civic engagement that exists across AIC and

FW. Similarities of civic content and action included play with civic content, democratic skill building, co-creation of gameplay, and civic engagement opportunities.

. *Table 1. Comparing characteristics of AIC and FW.*

Case Study Methodology: Game-Based Civic Engagement

Our case study methodology draws upon the qualitative research work of Miles and Huberman (1994), as well as a variety of narrative analysis devices that constitute what Lincoln and Guba (1985) call an “audit trail.” Constructing audit trails for both AIC and FW occurred over many months, and in one case over many years, and included field notes, participants interviews, digital audio recordings, digital video recordings, and reflection and process notes. The following examples of game-based civic engagement draw from this primary research, with information about play and patterns of interaction in AIC from Kupperman (2002) and in FW from Chao and Holden (2008). Each are salient instances of engagement with civic content and action, and are indicative of similar play experiences that occurred throughout both games.

The four characteristics and similarities of simulations encouraging civic engagement from Table 1 are each highlighted with an example from either AIC or FW. Given predominant similarities in design and play between the two simulations, the following examples note instances of play that were particularly salient to a characteristic of civic engagement.

Playing with Civic Content in *First Wind*

Participants in FW engaged, manipulated, and reflected upon play with civic content. A scenario established before gameplay was referenced as a starting point for action and exposed players to the impact of economic policy and instability through a fictitious crisis involving the Organization of Petroleum Exporting Countries (OPEC). Summaries of four rounds of FW play reveal an influence on team choices and decision-making. The first round was characterized by unilateral decision-making regarding regulations for product consumption and distribution, with the factory and brand each creating new independent business partnerships to increase sales. Round two focused upon the impact of economic and health care policies on factory workers and consumers, ultimately resulting in decreased sales and a new brand-initiated company partnership. The third round centered upon negotiations concerning product volume, commitments towards the use of alternative energy and increased health care benefits, and greater consumer confidence. The fourth and final round revealed fair labor code compliance violations, resulting in corporate social responsibility proposals and charges of manipulation and fabrication.

Reflections made by FW participants, after each round, further support the engagement individual players had with civic content and realistic and constructed notions of economic, political, and social power. Data from participant transcripts illustrate interaction patterns revealing how decisions were made as students continued to play with civic content. A reflection after the fourth round by a player of the brand team emphasized how playing with civic content involved selective use of data and manipulation of strategy within fluctuating hierarchies, resulting in decisions intentionally aligned to an ideal win state:

Player 3: "When I'm trying to manipulate or figure out how to win, I'm thinking about how to get over the factory workers, and how to slip by the FLA and I guess I should also want to please my consumers but I feel like I don't think about that unless I feel threatened by them. I assume they'll always be there ready to buy from me unless they're like, 'Amazon,' and then I'm like, 'Oh no no no, wait, wait, wait, wait.'"

Democratic Skill-Building through Play in *The Arab Israeli Conflict* (AIC)

By playing with civic content, participants in AIC developed a fluency in the practice of certain democratic skills. Democratic skill-building occurred as participants debated actions within team groups, chose courses of action, made recommendations or demands to other teams, negotiated solutions, and engaged processes of conflict resolution and non-resolution. By developing and experimenting with certain democratic skills, players' actions aligned to civic values such as equality and independence reflected by their broader society and culture. Throughout the course of the simulation, players and teams in AIC refined the use of democratic skills, established more effective interaction and win strategies, and increased investment in play based upon civic content.

The prevalence of democratic skill building through play is illustrated by a post-simulation reflection by a player concerning the effectiveness of negotiation. The following example demonstrates a player, and that player's team's, struggles with various dynamics associated with negotiation processes, including effective communication, goal development, and resolution:

As Ehud Barak, Israeli prime minister, it was imperative [sic] that the Israeli team constantly negotiate with many teams in order to accomplish any of our goals. Despite numerous attempts to negotiate with many teams, we had trouble negotiating. There was one main reason for this. Many countries could not specifically state their demands or goals, and this made it very difficult to negotiate. Although Israel was willing to negotiate with many countries, we were unable to since the countries we wanted to talk to would not provide us with specific goals which we could work from. If countries did provide specific goals, they usually addressed a separate topic, not the one currently being discussed. In the one case where a country provided very specific and tangible goals, they did not represent the aims of their own country, but that of three others. Therefore, it was impossible to work with that country.

Co-Creation of Gameplay in *The Arab Israeli Conflict* (AIC)

It is worthwhile returning to Frasca (2003) to emphasize that the nature of simulations given their design is one in which it is impossible to "be sure of the exact final sequence of events and result" (Frasca, 2003, p. 229); simulations, by definition, require students to take responsibility in co-creating the game. Participants in AIC did so actively, co-creating the events and outcomes of gameplay based upon their knowledge and interpretation of geopolitics and history, experiences with conflict and negotiation, and individual creativity. Through individual communications sent between players and actions initiated by teams, the simulation's design afforded those participating in AIC unique opportunities to determine the direction of gameplay, raise and debate policy, and create an environment within which to make their own decisions.

A communication sent by a student role-playing Israeli Prime Minister Ehud Barak to Syrian Foreign Minister Farouk al-Sharaa is illustrative of game co-creation. In this example, the broad issue of security in the Golan Heights is discussed in relation to five specific measures. The decision to include and emphasize these measures, however, was initiated through student-centered research and decision-making, just as the broader focus on negotiating Golan Heights security was an issue co-created by participants through play. The communiqué reads in part:

I believe we need to first focus on small details, and not on solving the entire Golan Heights problem. Israel would first like to discuss the issue of security. We believe that before anything can be done in the heights the issue of security needs to be resolved. Therefore, Israel would like to provide some of the security measures that we would like to see in the area, and that we can talk about in our negotiations.

- 1. Israel would like to keep our early warning station in the region.*
- 2. Israel would like a peace keeping force occupy the area after Israel has left, UN or otherwise.*
- 3. Israel would like a new demilitarized zone in the Golan Heights.*
- 4. Cooperation from Israel and Syria to control terrorist and militant groups from travelling through the area into either of the countries.*
- 5. All citizens living in the Golan Heights to comply to strict security measures.*

I believe that by negotiating on these measures can lead to further negotiations dealing with the entire Golan problem. Lets us negotiate about security, and let us meet soon.

Civic Engagement Opportunities in *First Wind*

Following gameplay, participants in each FW team created a role-specific best practices document for use in real world civic engagement activities. For example, students who role-played the Entemo brand executives reflected upon their **gameplay** and then created a document highlighting corporate social responsibility and the protection of fair labor. Students concluded that, “A company that values corporate social responsibility will integrate visionary executive leadership and collaborative corporate governance into its business practice.” Similarly, students who role-played Fair Labor Association code compliance officers stated, “A successful relationship between a factory and the Fair Labor Association (FLA) should demonstrate effective communication, stakeholder involvement, and transparency.” These best practices documents extrapolated game-based experiences to real-world dynamics of a globalized economy. Significantly, these documents were then shared with real-world business owners and representatives from the Fair Labor Association, providing participating students with an opportunity to share lesson learned while advocating for economic, business, and social policy in an authentic civic engagement activity.

AIC and FW offer the field of game studies important findings related to **game design**, gameplay, gaming as civic engagement, and **ethics**. AIC and FW successfully demonstrate how to incorporate content related to political and social conflict in game design. The games also encourage sustained civic engagement and advocacy through accessible, user-friendly platforms and play experiences. These characteristics, however, also present ethical concerns evidenced by various intended and unintended consequences associated with game design and gameplay.

ETHICAL ISSUES, CONTROVERSIES, AND PROBLEMS: INTENDED AND UNINTENDED CONSEQUENCES

The following section is divided into two sub-sections; the intended consequences found across both gameplay and game design, and the unintended consequences that researchers found analyzing participant use of *The Arab Israeli Conflict* (AIC) and *First Wind* (FW).

Intended Consequences

The intended consequences of gameplay and design may result in ethical conflict as students engaged **real world** problems and realistic scenarios constructed and facilitated by the game.

1. Game design characteristics promoted the practice of democratic skills as participants played each game. The games forced players to practice a “messy” process of decision-making that included interacting with other players and teams, in turn requiring communication skills, negotiation tactics, and engagement in simulated civic processes. The design of both games dictated that participants become part of democratic process through their practice of what Swain (2007) describes as “wicked problems.” This process of play was neither easy nor “clean,” and encompassed a complex set of ongoing and to-be-determined outcomes that arose from complex interactions and that could frequently conflict or become ethically challenging.
2. Engagement with civic content and action occurred, though participants may not have intended, or volunteered, to play a game where civic engagement was a norm. From a design perspective, however, engagement with civic issues and processes was an expected outcome of both AIC and FW. While the practice of civic engagement happened by default within these gaming environments, the nature of this engagement is of ethical importance and may be a concern for the design and play of similar games.
3. AIC and FW gameplay encouraged connections between what players wanted to learn and what educators believed they should know. Students may have desired to learn a topic dichotomous to the intentions of the instructor, however these gaming environments were designed to blend the act of play with comprehension of critical content issues. The relationship between expectations of gameplay and content delivery may have led to further ethical ambiguity associated with civic content and action.
4. Constructionist learning principles guided gameplay and encouraged students to make connections between school-based learning and broader engagement with real world political and **social issues**. Gameplay sought to promote civic engagement activities as a way of learning and as a realistic real world activity, rather than only as a school-based topic or assignment. While some players did internalize game roles and transfer knowledge and skills to broader civic engagement issues, this concept of transference may raise ethical concerns related to game design.
5. Gameplay exposed controversial content and scenarios without discrete or “right” answers. The interactive nature of role-play ensured that no single player could anticipate future scenarios or outcomes. Also similar to Swain’s (2007) embrace of

“wicked problems,” difficult and controversial scenarios developed unexpectedly and players were required to work within the game parameters to collaboratively find solutions. As topics and action did not correlate to one single right answer, players were forced to learn from one another and experiment with interventions. In working with one another, ethically complex, and sometimes conflicting, solutions were devised based upon negotiated strategies and interactions.

Unintended Consequences

Unintended consequences related to the implementation games promoting civic content and action also present ethical conflicts and concerns. The following unintended consequences resulted from this research.

1. Play strategies were driven by a desire to win, leading democratic processes within the game to conform to win strategies. For example, as players negotiated policy proposals the quality of content and the democratic action of negotiation frequently deteriorated in favor of quicker, easier, less-equitable solutions. This often led to one constituency emerging more dominant and in a position with a greater likelihood of winning. As players sought to win games they pursued less ethical means of achieving victory rather than concentrating on civic engagement issues or game practices. In turn, the practice of resolving conflicts could become a vulnerability that jeopardized prospects of winning, and was therefore often pirated by players trying to win. Researchers found that some gaming practices were not ethically “clean;” instead, they were based on individual desires to win. In the end, some players’ interest lay more solidly in the basic premise of a game to be won rather than a civic-minded activity requiring cycles of practice and negotiation. Our research found that gaming practices can be ethically ambiguous concerning the motivation and practice of participant gameplay.

2. Alternatively, AIC and FW allowed for civic engagement in meaningful ways not previously considered. Some students sought resources external to the game in order to enhance the efficacy of their play. In some instances this taught players to meaningfully participate as citizens of both the game and the world at large. One such example included a student who began reading the newspaper each morning as part of his participation with AIC. In conjunction with his experiences in gameplay and in relation to life outside the game, this former student carried a new awareness about social justice, advocacy, and civic engagement into his adult life and now seeks out such news on a daily basis.

3. In both games, researchers found that promoting civic engagement required complex political, economic, and **social issues** to be simplified. While useful as a mechanism for clarifying content comprehension and implementing gameplay, this process may have caused participants to believe that civic engagement is, likewise, a simple process. In practice, civic engagement and political advocacy are as intricate and nuanced processes as are the complex real world issues they seek to address.

4. The curricular content and civic focus of AIC and FW placed the central issues of these games (for example, Middle East peace and fair labor) on a pedestal that may have caused participants to believe these issues were of primary importance in the realm of real world politics and civic engagement. Whether these social and political issues are of a greater importance is not the issue. Rather, designers must consider that the real world beliefs of players may become intertwined with the designed focus of a game based upon a simulated reality. The priorities and social values of game designers can become the real world priorities of game players. As a result, possible misrepresentation of the importance of political and social issues can occur, with game designers emphasizing a priority that may, or may not, be either realistic or ethically appropriate.

5. Participants may perceive their individual agency, as it relates to civic engagement, as dependent upon the construct of a game and the medium of gameplay. It is important that games promote civic engagement and knowledge of political and social issues as games have the opportunity to become vehicles for broad civic engagement. However, games should not train participants to believe that this medium is the only mode of individual agency leading towards civic engagement, or that civic engagement is a form of “play” with little to no real world consequence.

FUTURE RESEARCH DIRECTIONS: ANALYSIS OF ETHICAL CONSEQUENCES

In addition to the previously documented intended and unintended consequences related to the design of games supporting civic engagement through civic content and action, researchers were pleased to discover that game participants gained knowledge of curricular social studies content and practiced democratic skills during their experiences with the simulations. Researchers also noted that many players developed new understandings of issues related to social justice, ethics and civic engagement. Furthermore, this body of research caused designers and researchers to reflect upon the idea of what is most important to both gameplay and game design. As a result, researchers found that games could act as vehicles for civic engagement by connecting players to important global issues through civic content and action. When games serve as vehicles for civic engagement we found that players were exposed to controversial content and scenarios without discrete answers. As such, players were encouraged to pursue civic engagement activities more as a way of life rather than only as a topic or assignment. Findings related to conflict and ambiguity, as outlined in the previous section, illustrate the intended and unintended ethical consequences of gameplay and design, and also reveal the following four significant ethical concerns that should be considered by those interested in the relationship between educational gaming and civic engagement.

Forced Civic Engagement and Gameplay

The design of civic-minded games intends for players, whether or not they are interested or aware, to engage in highly structured ethical scenarios and civic engagement activities. In turn, researchers must examine these experiences perhaps more closely than that of players' perceptions towards more traditional games. In other words, an ethical challenge exists related

to game design due to the fact that players may not have agreed to engage in gameplay with civic engagement processes in mind; rather, they may have assumed play was to be of a more traditional process. As a result, participants' experiences can and do have an impact on their perception of the world around them and future game design and research on civics-focused gameplay must take the ethical implications of forced civic engagement into consideration.

Corruption of Democratic Practices

Because the setting of these civic-minded activities is located within the context of a game, winning can threaten to overtake goals of civic engagement and democratic processes. Separate from an analysis of value associated with winning, the emphasis of a win-strategy can corrupt the practice of democratic processes such as conflict resolution, negotiation, and communication. This distortion leads to ethically dubious outcomes as players pursue a strategy to win rather than an ethic of play based upon values aligned with egalitarian ideals. For one player, such as the student who sought out a daily newspaper, this quest for external resources made him more knowledgeable and engaged with game content. Conversely, another player could potentially use similar or alternative strategies to manipulate gameplay. As such, participants may learn that they can manipulate group practices, teamwork norms, and communication patterns so as to win or even 'position' certain other players to win. There are severe ethical implications related to players using civic engagement practices within games as a means for mastery or for winning the overall game. This in turn reveals the potential for further dubious action and the need for extended future research.

Changing Perspectives of Gameplay and Game Design

In examining our findings we realized that one might view many of the intended and unintended ethical consequences from multiple perspectives—namely, from either the perspective of game design or gameplay. This change in perspective sometimes alters whether or not the ethical conflict becomes itself an intended or unintended consequence. This ambiguity, in itself, is an ethical dilemma. While one participant may in fact see an outcome as an intended consequence, another participant may contradict this perspective by taking an inverse approach. In reexamining this body of work, we realize that certain design elements may themselves be ethically ambiguous conflicts related to the relationships between game design and gameplay, and between game designers and game players.

Ethical Assumptions of Civic Engagement Game Designers

Civic engagement game designers have inherent biases about the importance of civic engagement, political advocacy, and social justice issues presented within games. Values are intentional components of game design, are built into the intended consequences of gameplay, and are revealed in the unintended ethical consequences. In revisiting the issue of exposing players to controversial and civic-minded scenarios, we further realize the potential for manipulation on behalf of game designers and note this ethical assumption and potential conflict of interest as an important direction for future scholarship and research.

CONCLUSION

We believe that assumptions made by game developers about civic engagement and specific values orientations must be further examined as central to the process of creating and implementing serious games. Questions must be asked: What qualifies as an acceptable social justice game scenario? How can developers design ethical civic engagement gaming practices? And, how are important social justice, advocacy and civic engagement issues realistically incorporated into game design so they are both relevant to constructionist learning while also limited in ethical ambiguity? As we attempt to accurately portray social and civic causes, do we, as game developers, researchers, and players, do justice to the causes? We support Gee's (2007) arguments concerning the importance of recognizing and developing strong cognitive learning opportunities that not only enhance gaming experiences but also learning experiences inside schools. Given the potential for games to influence students in various educational environments, such as school, we support future research efforts that focus not only on the design of serious games and the implementation of these games, but also on the ethical conflicts resulting from the consequences of that design and play.

In examining our work we believe that game designers and researchers of AIC and FW had good intentions, and valued important educational foundations related to constructionist learning, civic engagement, and **game studies**. However, our findings indicate this is but one perspective, and perhaps an idealistic one, when considering alternate scenarios. Reflecting upon the broader theoretical frameworks of designing and researching games that encourage civic engagement, we believe ethical considerations related to the consequences of gameplay must be taken into consideration. Our findings have implications for game designers creating games and also researchers observing players interacting with games that promote civic engagement values and processes. Additionally, we find that it is not enough to only examine whether events and actions within games are successful or not, lead or do not lead towards winning outcomes, support learning, or encourage civic engagement. Rather, we believe it is critical to analyze deeper ethical ambiguities related to the consequences of game design and gameplay. In turn, we support research efforts to further recognize and expand upon the development and research of serious games that provide all participants, at levels of both design and play, with strong cognitive learning opportunities.

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