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Games for civic learning: A conceptual framework and agenda for research and design

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Abstract

Scholars, educators, and media designers are increasingly interested in whether and how
digital games might contribute to civic learning. However, there are three main barriers to
advancing understanding of games' potential for civic education: the current practices of formal
schooling, a dearth of evidence about what kinds of games best inspire learning about public life,
and divergent paradigms of civic engagement. In response, this article develops a conceptual
framework for how games might foster civic learning of many kinds. We hypothesize that the
most effective games for civic learning will be those that best integrate game play and content,
that help players make connections between their individual actions and larger social structures,
and that link ethical and expedient reasoning. This framework suggests an agenda for game
design and research that could illuminate whether and how games can be most fruitfully
incorporated into training and education for democratic citizenship and civic leadership.

Introduction

Building on the legacy of educational software, educators are deploying digital games for
formal and informal civic learning in new ways.[1] Off-the-shelf entertainment software and
online games are making their way into social studies, history, and government classes
(McMichael, 2007; Squire, 2006). Nonprofits, governments, and academics are increasingly
designing "serious games" on civic themes (Bers & Chau, 2006; Bogost, 2007; Squire, 2006;
Jenkins & Squire, 2003). Electoral and issue campaigns are creating games for their websites

(Bogost, 2007). Some civic educators and youth are adapting or modifying existing games to generate their own learning tools (Jenkins, 2006).

Growing interest in the uses of console, online, and mobile games for learning appears to align well with recent research on the pedagogy of civic education. This research finds that some of the most effective methods for building knowledge, skills, and dispositions required for democratic citizenship include fostering youths' abilities to express opinions on issues, practice civic problem-solving and decision-making, and engage in collaborative group learning, project-based learning, and simulations of real-world events (CIRCLE & Carnegie Corporation of New York, 2003; Feldman, Pasek, Romer, & Jamieson, 2007). Games incorporate many of these interactive and experiential learning techniques. For example, simulation games allow students to explore strategies for managing complex systems such as cities, nations, and civilizations, while contending with multiple variables (military, economic, diplomatic, geographic, and so on). Role-playing games permit players to explore institutional, geographical, and temporal settings that would otherwise be inaccessible, allowing players to learn from the consequences of choices made in the world of the game that would be impractical or dangerous to experience directly. Games are often played in the company of others, and increasingly through online networks, providing opportunities for collaboration and discussion about civic matters between players.

The nascent research on digital games in education has provided glimmers of hope that games might contribute to civic learning. Playing or developing games may increase students' motivation to learn and drive them to consult sources outside the game, inspire critical reflection on history and politics and how they are represented, provide multiple viewpoints on contested events and ideas, allow players to draw on distributed knowledge and develop skills in leadership

and collective action that can be used to tackle real-world political problems, or afford opportunities to explore ethical choices and develop empathetic understanding by projecting oneself through an avatar into places and times otherwise inaccessible (Gee, 2007; Mitchell & Savill-Smith, 2004; Jenkins, 2006; Simkins & Steinkuhler, 2008; Squire, 2005; Squire & Jenkins, 2003). Although these specific claims about the benefits of games are still mainly speculative, there is good evidence that youth who play games that incorporate civic experiences are more likely to be civically engaged. The first nationally representative study of game play and civic engagement among Americans aged 12-17 (Kahne, Middagh, & Evans, 2008) found a significant relationship between the frequency of teens' civic gaming experiences (such as playing games that simulate government processes or focus on social or moral issues) and their "real world" civic engagement (such as expressing interest in politics and raising money for charity). The same study found that more frequent players of all games were not more likely to be socially isolated or civically disconnected. A survey cannot establish causality – i.e., whether civic game play sparks civic engagement or prior engagement stimulates civic game play – but it does indicate that game play in general does not dampen civic enthusiasm and that having civic experiences in games may inspire or reinforce civic activity beyond the game. Unfortunately, less than 10 percent of teens reported having many of these civic gaming experiences frequently, suggesting that game designers and educators are not yet incorporating them widely.

There are three impediments to broader implementation of games in the civics curriculum, which is needed to explore how games might contribute to a more active and engaging citizenship education than many students have received in the past. First, contemporary schooling raises formidable challenges to broader use of games in education (summarized by Rice, 2007), including the civic curriculum. Many teachers are unfamiliar with

games as an instructional medium or lack adequate access to software and hardware. Short class periods limit long-term engagement in complex games. Most games do not align well with prescriptive curricula defined by national or state learning standards, and most games are not easily modified to do so. Furthermore, as Squire (2005) notes, in school systems driven by mandated high-stakes testing of basic skills, such as in the United States, educators often see games as inefficient learning tools for teaching to the test and civic education is considered less important than reading and mathematics. Although we sympathize with Squire's conclusion that increased experimentation with game-based learning depends on changing the culture of schooling or incorporating games into the extra-curriculum, such changes are more likely if research can provide clearer insights into how games can foster different types of civic learning.

This suggests a second barrier: the current state of empirical evidence of the benefits of games for civic learning. The body of research on games for any type of education, much less civic learning, is in its infancy. Many of the studies contain methodological limits – such as small, unrepresentative samples and a lack of control groups that would allow comparative research on the benefits of games versus other learning methods – that temper the optimistic conclusions reached (Egenfeldt-Nielsen, 2007; Kirriemuir & McFarlane, 2003; Ma, Williams, Prejean, & Richard, 2007). For example, the most substantive studies of the use classroom uses of games for civic learning – Squire (2005) and Squire & Barab's (2004) studies of Civilization III (Firaxis Games, 2001) and Egenfeldt-Nielsen's (2007) research on Europa Universalis II (Paradox Interactive, 2001) – suggest that historical simulations can increase secondary school students' motivation to learn and enjoyment of learning history, but that teacher intervention is crucial for focusing players' widely divergent experiences of playing these games on common learning outcomes by correcting misimpressions, filling in knowledge gaps, and fostering

discussion of key themes. In addition, ethnographic and survey research has not offered strong

evidence that players can transfer the knowledge and skills learned in games to other contexts

(Buckingham & Sefton-Green, 2003; Egenfeldt-Nielsen, Smith, & Tosca, 2008). It is not clear

that what is learned in one domain (such as military history) can transfer easily to others (such as

politics) and that skills mastered in the game world (such as collaborating to complete military

missions) can be applied with ease to the world outside it (for example, to organize public

meetings or jointly develop public policies). Conceptualizing and testing how games may foster

specifically *civic* learning that transfers outside the game world is a necessary first step toward

building a more robust body of research on what players gain from their encounters with games

and how to design them. Without this kind of evidence, educators are unlikely to adopt civic

games more widely and designers are therefore unlikely to provide more and better civic games.

Lack of consensus about the ends of civic education poses a third impediment. What

constitutes valid civic engagement is a matter for debate in a politically charged field that

scholars of game-based learning have not yet fully explored. Civic educators have long held

clashing views of the type of citizenship youth should be prepared to exercise – from

conservative visions centered on personal responsibility, patriotism, and individual virtue, to

mainstream attempts to foster participatory citizenship within existing institutions, to more

radical visions of a critical citizenship aimed at questioning and transforming the basic structures

of society in pursuit of social justice (Westheimer & Kahne, 2004). In the fields of political

communication and digital media studies, there is a growing debate (summarized below)

between those who express concern about young people abandoning traditional forms of

citizenship focused on the mass media and government and a more optimistic group who see

youth using digital media such as games to participate in new forms of civic action directed at a

broader range of institutions. Rather than imposing a narrow vision of good civic engagement and citizenship, we will argue that research needs to help clarify and assess which game design elements most effectively spark specific kinds of civic learning and action so that players and educators can choose games that best serve their desired learning outcomes.

In response to these barriers, we develop a conceptual framework and research agenda for game-based civic learning that could inform the adoption, assessment, and design of games. First, we propose a definition of civic learning through games that can encompass different views of civic engagement. Then we offer a framework for thinking about diverse kinds of civic education that is built on three fundamental tensions that shape game-based civic learning. One tension is between the demands of entertaining game play and substantive civic content. Another tension is between the constraints imposed by the structure inherent in the game world and the scope of agency it allows players within the game, which sets parameters for the kinds of power and freedom players can learn to exercise. A third tension concerns the extent that games focus players more on practicing ethical or expedient reasoning. We use this framework to develop a research agenda built upon a series of hypotheses about how game design might best foster civic training and education, as well as different kinds of citizenship, including leadership. Although we value a broad ecology of civic games, we suggest that the most effective games for civic learning will be those that better integrate game play and subject matter, that link the logics of ethics and expediency, and that help players make connections between individual action and social structure.

Game-Based Civic Learning

How might we define game-based civic learning in a way that respects an inclusive vision of civic life and media? We believe that *games foster civic learning when they help*

players to develop knowledge, skills, and dispositions that players then apply to public matters in the world outside the game. To unpack this definition, we should note first that we do not suggest that this kind of learning is restricted only to a particular *genre* of "civic games" that share common textual properties, such as historical simulations, geopolitics games, or electoral games. Like all texts, games are open to multiple interpretations and uses. Whether or not civic learning occurs at any given moment likely depends not only on the design of a game, but on the historical and institutional context of play, players' social positions and experience with games, and players' purposes for playing. Therefore, it makes most sense to follow contemporary approaches to educational assessment, which focus attention not on what texts or instructors aim to teach, but on what students actually learn from them (Allen, 2006).

In democratic societies, civic education's desired learning outcomes are often identified as a set of knowledge, skills, and dispositions that support effective and responsible participation in civic life (e.g., Colby, Beaumont, Ehrlich, & Corngold, 2007). Clearly, citizens cannot act effectively and responsibly without some current knowledge of public institutions, laws, processes, and issues. This kind of participation also presupposes some familiarity with at least some of a broad range of skills, such as issue analysis, deliberation, petitioning, advocacy, organizing, protesting, campaigning, or voting. Less appreciated, but no less important for sustained public involvement, are dispositions – "long-term habits, interests, and inclinations" that become rooted in our personal identities (Colby et al., 2007, p. 279) – such as following current affairs, taking an interest in community life, and believing in one's ability to influence social change.[2]

Our definition states that civic learning happens when players apply what they find in a game to the world outside it. Earlier, we noted that there is not yet enough evidence to conclude

confidently that knowledge or skills learned in the game world are regularly transferred to the world beyond. Providing such evidence through rigorous and generalizable research, it seems to us, is the holy grail of any scholarly agenda on game-based civic learning. For example, research can document transference when it shows that game play helps students demonstrate increased knowledge of how "real world" institutions work, builds skills at organizing a campaign to influence policy in one's community, or increases students' willingness to participate in public life outside the game. From the standpoint of civic education, games are vehicles for learning, not ends in themselves. Although game play can give rise to a host of public issues, most public issues cannot be resolved through game play at present.[3] Thoughtful advocates of games for education sense that "real world" application is the barometer for substantive civic learning. For example, Jenkins argues that:

> [T]he new participatory culture offers many opportunities for youth to engage in civic debates, to participate in community life, to become political leaders, even if sometimes only through the "second lives" offered by massively multiplayer games or online fan communities. Empowerment comes from making meaningful decisions within a real civic context: we learn the skills of citizenship by becoming political actors and gradually coming to understand the choices we make in political terms. Today's children learn through play the skills they will apply to more serious tasks later (2006, p. 10).

What of the last part of our definition of game-based civic learning – that it involves learning that can be applied to public matters?   The distinction between public and private is a tortured one in contemporary political theory, yet we find it both inescapable and integral to any definition of civic life. Public matters are broader than politics oriented toward influencing government but more specific than the affairs of any social grouping. Couldry, Livingstone, and

Markham distinguish public matters as "more than just 'social belonging' or expressions of identity" or "orientation to *any* collectively available space whatsoever" or any activity that confers "group identity, let alone individual consumption" (2007, pp. 6-7). Following Levine (2007), we see public matters as including three areas: the distribution of goods, laws and norms that prohibit behavior, and management of the commons. The distribution of goods by the state (through establishing property rights, taxation, and spending) has long been recognized as a central concern of politics (Lasswell, 1958) and the volunteering of time and money by individuals and organizations is widely seen as forming the basis for civil society – the web of voluntary associations and social movements in which people engage in collective action to provide services and influence public policy or standards of social life (Cohen & Arato, 1992). The establishment of laws and social norms is also clearly constitutive of the public life of any society (Easton, 1953). Equally important is the regulation of the commons, which "consists of all goods and resources that are not privately owned" (Levine, 2007, p. 4), including natural resources (such as the atmosphere or oceans), national defense, cultural heritages, and the store of scientific knowledge, among others (Ostrom, 1990).

These three areas of public life suggest a wide range of potential subjects for game-based civic learning, including traditional topics such as electoral participation (voting, running for office, or managing a political campaign), government service (e.g., as an official, in the military, or as a foreign aid worker), the organization and workings of government, and political activism (individual or collective efforts to change policies of states or other major institutions, such as corporations). Many of these topics are addressed in the subjects that schools have historically associated with civic education, such as history, geography, government, social studies, and civics. Yet the broad view of civic life suggested by Levine also encompasses a

number of additional issues to the extent that they form elements of the commons or involve the negotiation of laws and social norms, such as community service and volunteering, philanthropy, efforts to build cultural and political understanding or harmony across social groups and national borders, and media literacy and media production oriented toward public affairs.

This expanded view of civic life aims to bridge recent debates among scholars of youth, civic engagement, and digital media over the quality of contemporary civic participation. Lance Bennett (2007) has crystallized this dispute as between two views of citizenship (see also Dahlgren, 2007; Loader, 2007). The traditionalist view prizes the "dutiful citizen," who learns through school and family life to participate in activities oriented toward influencing government (especially voting), stays informed about politics through mainstream media, and takes part in face-to-face voluntary associations and political parties. However, youth today are more likely to embody what Bennett calls the "actualizing citizen," who learns to practice a more personal politics that is less oriented toward influencing government, instead preferring community service and informal participation in social movement activism that targets a broad range of institutions, especially through consumer and lifestyle politics, such as agitating for one's rights in online communities, including those that form around games. These citizens' civic learning and collective action is more likely to be influenced by social networks sustained through digital media than by traditional parties, community organizations, news media, and schooling.

As Bennett observes, neither view should be dismissed, but neither sufficiently defines the possibilities for engaged citizenship, so there are good reasons to try to connect them. The traditionalist view misses new opportunities for engagement through digital media and unconventional political associations. Yet those who see a vibrant new form of citizenship arising through digital media and new civic networks need to acknowledge that much of what

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young people do with new media "tends to be largely social and entertainment oriented, with only tangential pathways leading to the conventional civic and political worlds" (p. 10). Game-based civic learning might help to make both traditional and emerging forms of civic action more relevant and engaging for youth if players can apply what they learn to public life beyond the game.[4]

Elements of Game Design for Civic Learning

We see three basic tensions in game design – between game play and content, ethics and expediency, and structure and agency – as shaping the opportunities for game-based civic learning. Therefore, our framework for understanding the varieties of civic learning that can spring from games begins with an analysis of these tensions. It is important to note at the outset that we consider each of them not as a dichotomy but as a continuum or spectrum. Clearly, no game is entirely focused on game play without content, or affords players complete agency by removing all structure from the game world. But, as we will argue, it is how games emphasize one end of the spectrum more than another, and how games integrate them, that influence the possibilities for civic learning.

Game Play and Content

Many game scholars and designers distinguish game play (what players do in the game) from content (character, narrative, setting, knowledge, and the like). Even James Gee, who has praised games' ability to situate meaning and learning within specific domains, argues that "in video games – unlike in novels and films – content has to be separated from game play. The two are connected, but, to gamers, game play is the primary feature of video games; it is what makes them good or bad games" (2007, p. 19).[5] However, much edutainment software has been criticized for tacking educational subject matter on to unrelated game play in a misguided and

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distracting attempt to make math or language acquisition seem more enjoyable (de Castell,

Jenson, & Taylor, 2007; Squire & Jenkins, 2003). These games are driven by a behaviorist

approach to education, in which the game play is offered as a reward for learning, but not

integrated into it. Critics argue that by relying on arbitrary rewards for learning, such as

amassing points, these games do little to boost players' intrinsic motivation to learn (Malone &

Lepper, 1987). As a result, "the player will often concentrate on playing the game rather than

learning from the game" (Egenfeldt-Nielsen et al., 2008, p. 212).

Our first hypothesis is that *games that integrate civic content and game play will be more*

effective at fostering civic learning than games that do not (see appendix A for a summary of our

hypotheses). As we noted above, it has yet to be demonstrated that game play involving skills

such as problem-solving or collaborating about non-civic matters (e.g., hunting ogres in World of

Warcraft [Blizzard Entertainment, 2004]) sparks players to apply these skills outside the game

world to civic tasks (such as organizing one's neighborhood to reduce crime or support a

political candidate). The mere presence of social interaction is not a guarantee of civic learning.

The national survey of American teens' digital game use found that civic engagement was only

modestly related to playing games with others in the same room and was not related to social

play online or as a member of a guild (Kahne, et al, 2008). It seems plausible to expect that

transferrable civic learning is more likely to arise from games that meld game play and content in

ways that develop knowledge, skills, or dispositions applied to public matters. Research on civic

engagement in other contexts finds that activities that both develop civic skills *and* focus on civic

topics are more effective at cultivating participation in public life than activities that only

develop social skills. For example, youth organizations that focus members on civic topics (such

as student councils or debate clubs) are more effective at fostering long-term public engagement

than those focused on other subjects (such as school sports teams) (McFarland & Thomas, 2006).

Schools that involve students in working on explicitly civic or political issues develop youths'

civic commitments more effectively than schools that simply provide a supportive and

collaborative community (Kahne & Sporte, 2008). In games, more than in other media (such as

textbooks or videos), reasoning about civic life is inextricably tied to acting upon it through play.

But one can act even on a public matter and learn little of a civic nature in the process if the

game does not present it as a public matter. "Researchers increasingly suggest that a student

should clearly see that a particular game is about learning a specific topic and appreciate the

expected result. Without explicitly framing the experience as educational, the goals and rules in

play take over, [especially] when the game goals work against the learning goals" (Egenfeldt-

Nielsen et al., 2008, p. 217).

For example, when a young player first tackles a complex simulation such as SimCity 4

(Maxis Software, 2004), which casts her in the role of mayor of a big city, she may start by

acting through trial and error, but does not begin to learn how urban politics work in the game

until she reflects on the consequences of her choices. It may take quite some time for her to

discover that when she cuts taxes too dramatically she runs out of money to improve roads and

her approval rating sinks, and that when she raises taxes precipitously she will also provoke

public disapproval. Taking action and provoking consequences within the world of the game is

necessary to arrive at an understanding of how the game works, but it is the player's role (as

mayor), the game's rules (that require her to make decisions about taxation rather than drive a

car or hunt ogres), the characters (political advisors and citizens) with whom she interacts, and

other elements of content that are more likely to convey that this is a game for learning about

how urban politics works.

Unfortunately, many civic games do not couple game play and content as closely as SimCity. To take an admittedly extreme example of disjunction, the online game FreeRice (United Nations World Food Program, 2007) tests players on their vocabulary, donating 20 grains of rice to hungry people in developing countries for each word that a player defines correctly. The rice is paid for by sponsors, so players' charitable contribution come in large part from providing an audience for advertising. FreeRice is a clever way to tap private donations of time and money to feed the poor but unless players choose to go beyond the game by following a small link on the home page to learn about how the rice is distributed, they will learn little about the challenges of ending global hunger. A simple way to integrate FreeRice's game play and content would be to test players on words, concepts, or geography related to global hunger and poverty, or the current price of rice on the world market, but the site does not do this.

What elements of games are most important for coupling game play and content for civic learning? We suggest that if all other factors that influence learning (such as the player's context and purpose for playing) are held constant, *games that set rules, goals, and roles that require players to act and reflect on public matters will be more effective for civic learning than games that do not*. Of the many formal elements of games, we prioritize rules, goals, and roles because the combination of these integral elements of play seems most promising for fostering the characteristic forms of knowledge, skills, and dispositions of civic education.

Rules comprise "the core formal system that constitutes how a game functions" and therefore are distinguishable from diverse strategies that individual players may use to play the game (Salen & Zimmerman, 2004, p. 121). "Rules are what differentiate games from other kinds of play," writes Marc Prensky. "Probably the most basic definition of a game is that it is organized play, that is to say rule-based. If you don't have rules you have free play, not a game"

(cited in Salen & Zimmerman, 2004, p. 122). Rules limit players' actions, are explicit and unambiguous, are shared by all players, and are fixed, binding, and repeatable over time and by multiple players (Salen & Zimmerman, 2004).[6]

Like rules, the importance of goals for shaping game texts and distinguishing games from other kinds of media is widely recognized by theorists of digital and non-digital games (Konzack, 2002; O'Neil, Wainess, & Baker, 2005; Salen & Zimmerman, 2004). Goals are what a player must achieve to succeed in or win a game. Several scholars have asserted the value of games that require players to use the civic knowledge or skills the game purports to teach to win or progress through the game world (Squire & Barab, 2004; Egenfeldt-Nielsen et al., 2008). Some games have single pre-defined goals, such as amassing the highest point total or moving one's character or society to an endpoint in time or space. Other games offer a menu of goals, allowing players to choose among a closed-ended number of options. Geopolitical strategy games, for example, often permit players to choose between achieving economic, diplomatic, or military success. Multiplayer games that favor social interaction, including role-playing games, may expand the range of goals further. Yet even these games encourage players to pursue increasing levels of power, resources, or honors, or to try to explore advanced narrative elements that can only be experienced by playing longer and more skillfully. For example, in the online game Jennifer Government: NationStates (Barry, 2002) (hereafter, NationStates), players may create many types of societies, but once a player has created a society it is categorized and ranked on its economy, political rights, and civil liberties. A mark of success is to be listed in the daily United Nations reports of top-ranked nations in categories ranging from strongest economy to most permissive public nudity regulations. The most effective way to attain this goal is to make consistent choices on daily issue questions presented by the game.

Roles are also definitive elements of civic games. A role is a place in the social network of the game, which often confers a motive for play (Salen & Zimmerman, 2004) and may include an avatar (or onscreen representation of one's role or character in the game). For example, turn-based strategy games such as Civilization III or Black & White 2 (Lionhead Studios, 2005) cast the player as a leader of a civilization and confer a motive to expand its influence over other lands and peoples. Political simulations such as Democracy (Positech Games, 2005) place the player as the leader of a contemporary country endowed with an incentive to win re-election. Roles may be more significant in a game where they are fluid and players may switch easily between identities. In the online game Cantr II (Elkind, 2003), one may create multiple characters whose only motives are survival and the development of an open-ended form of society through interaction with other characters. Role development and social interaction constitute much of the game play.

To be sure, other elements of games contribute to the vision of civic life they portray and we will refer to them in our discussion below, but our hypothesis suggests that they are of secondary importance to civic learning from most games. Admittedly, in some games, one or more of these elements may be especially significant because they influence game play in a profound or innovative manner. For example, as discussed below, the setting of Black and White 2 changes so dramatically depending on whether a player chooses a "good" or "evil" mode of play that it also becomes an important form of feedback on the player's choices and may even constitute a key rule of the game – if you act in an evil manner to control the world, the world you control will become less attractive to you. Nonetheless, in most civic games we find the following elements to be less constitutive of the game-playing experience than the bedrock of rules, goals, and roles:

- Point of view: the vantage points from which one sees and hears the world of the game.

- Information and feedback: text, indicators of levels achieved and point totals, and so on, that offer knowledge about the game world and feedback on one's decisions or success (often in the form of penalties or rewards)

- Sound: music, sound effects

- Setting: visual representations of the physical world of the game

- Entities: objects within the game that the player manages, modifies or with which the player interacts[7]

Ethics and Expediency

We continue laying out a conceptual framework for civic games by categorizing them along two additional continua (see Figure 1). One continuum stretches from games that focus more on consideration of the *ethics* or the *expediency* of players' actions in the game world. Ethics encompasses consideration not only of the moral systems or principles that should guide individuals, but also institutional justice, including that of political and economic systems.[8] In contrast, expediency refers to the means for achieving goals. Although all games involve players in some degree of expedient thinking, games high in expediency aim to focus play on finding the most effective or efficient means to an end without requiring players to weigh whether the means or ends are just in order to succeed at the game. Because civic education aims to prepare people for responsible and effective citizenship, it aims to teach both moral-political and expedient reasoning.

[Figure 1 around here]

Ethics-focused games make questions of how individuals or society *ought* to act or be organized central to game play and content. The rules encourage players to participate in a logic

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of ethics to play their roles and achieve the game's goal. In these games, ethical reasoning is not simply an option, but a resource that helps players advance toward the game goal, for example by resolving dilemmas presented by the game. In addition, these games often give players extensive information and feedback in explicitly ethical terms about the consequences of decisions for themselves and others in the game. Moral considerations may inform the penalties and rewards of the game and how they are communicated to players. Players' choices may even transform avatars and entities (characters and objects), sound, and settings in a morally-charged manner.

In contrast, games that emphasize a logic of expediency turn players' attention away from moral-political assessments of individuals or society in the game world and toward questions of what is conducive to one's purposes. To be sure, ethically charged issues may be treated – violence, democracy, and so on – but players are not required to reflect on these issues' ethical content to follow the rules, pursue the game's goals, or play their roles. The reward structure, sound and visual elements, and the attributes and abilities of entities do not change based on ethical decision-making. Information or feedback on the moral dimensions of players' decisions is minimal or easily bypassed because it does not affect players' ability to achieve their ends or hinder them from freely playing out their identities.

Of course, games that favor expediency are not inherently unethical nor without value for civic learning. A game in which goals, roles, and rules do not require players to pass moral judgments may be *amoral* without being *immoral.* Many puzzle games, such as *Tetris*, are good examples of how ethics may be irrelevant to a game. In making this distinction, we are not concerned with judging whether games represent controversial subjects, such as violence or sexuality, in an ethical manner, but the extent that games set expectations for players to

incorporate some ethical logic in play. And there are good reasons to value games for civic

learning that incorporate expedient as well as ethical reasoning. Expediency stems from the

same Latin root as "expedite" and shares its meaning of forwarding matters swiftly, being

helpful, or serviceable. Good citizens participate in democracy effectively as well as ethically.

Consider two games that illustrate this continuum between ethics and expediency –

Decisions, Decisions: Immigration (Tom Snyder Productions, 1997) and Food Force (United

Nations World Food Program, 2005). The Decisions, Decisions series is aimed at students in 5th

through 10th grades and is designed to promote critical thinking skills and deliberation in making

decisions about socially controversial topics. In Decisions, Decisions: Immigration players

assume the role of the President of the United States, who is weighing immigration policy amidst

an influx of refugees into an area vital to the President's reelection. Throughout the game,

players receive differing opinions and provocative questions about each policy proposal from

lobbyists and advisers, information on how the public reacts to the President's decision, and

feedback on how the refugees are affected by different policy options. The game explicitly

challenges each player to prioritize her or his goals, which may include not only winning the

primary election in the state affected by immigration, but also improving the lives of immigrants,

keeping the government budget down, and improving one's national reputation. Although the

game can be played individually, it is intended for classroom use and the teaching materials

encourage playing in small groups that deliberate about policy options and make a collective

decision about the President's policy. At the end of the game, players learn whether their

President won the primary but there is also a self-evaluation in which players grade themselves

on how well they believe they pursued each of their four goals during the game. Therefore, a

player who put immigrant rights first and whose President lost the primary could evaluate

himself or herself as successful in the game if her group chose a policy that favored immigrant rights.

Decisions, Decisions: Immigration makes moral-political reflection central to the game from the outset as players listen to and assess arguments about the fairness of immigration policy options for citizens and newcomers, then prioritize their own goals by weighing self-interest and the demands of multiple constituencies. The rules of the game require players to practice a process of ethical reasoning that involves analysis of the situation (including deliberation with others if played in a group), prioritization of values, assessing policy options, making a difficult decision, and examining the consequences of that decision.

Food Force was designed to simulate the challenges faced by aid workers for the United Nations World Food Program (WFP) for a target audience of 8-13 year olds. In the game, the WFP's mission is to help meet the immediate and long-term food needs of the residents of a fictitious island experiencing a hunger crisis because of drought and civil war. The player is assigned the role of a rookie within a team of five workers who carry out several technical missions. The player controls a helicopter, locates refugees, works the cargo area of a plane that drops food to camps, assembles food sources to create properly balanced food rations within a fixed budget, maneuvers the truck that delivers them, moves sacks of food to the correct area, and, finally, manages food distribution to lead residents to self-sufficiency. The goal is to better one's score and make the list of high scorers posted on the game's website. Obstacles include the time constraints associated with each mission, as well as land mines, attacks, and infrastructure damage by rebel forces. Immersion in the mission, the pressure of the clock, and the immediacy of many of the tasks focus game play on perfecting strategy for delivering food aid. There is little encouragement to reflect on political issues that might have been

foregrounded in the game's design, such as the causes of the civil war (which are not explained), the status of food aid as a source of political power in famine-stricken countries, balancing the interests of food donor countries and recipients, whether enough is being spent on food aid, and so on. Outside of game play, there are materials that describe current global hunger problems and suggest actions individuals can take, but this material is easily bypassed. It is not necessary to know in order to pursue the game's goal, adhere to its rules, or play one's role. Food Force is primarily a game of expediency, not ethics.

Structure and Agency

Civic games may also be located on a continuum according to the extent that their rules and roles allow players to manage or alter the political, social, economic or cultural structures of the game world in pursuit of the game's goals.[9] Games that offer maximum latitude of this kind are high in agency, while games that restrict players' ability to do so are high in structure. In games of agency, for example, one can form a civilization, change the political system from democracy to monarchy, recast the economic system from agrarian to industrial, or run a civil society organization that changes government or corporate policy through an advocacy campaign. The key question is not simply one's identity in the game – one may literally be a god or a lowly citizen – but whether the player can significantly alter the structures of society within the game in pursuit of one's goals. Agency is reinforced by information and feedback that solicit actions aimed at shaping some aspect of the social structure within the game. Penalties and rewards are pegged to the impact of one's decisions on society, not simply on one's own character. The entities whose behavior one may alter in the game are not only individuals but social groupings (such as nations, farmers, or labor unions), and institutions (government

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agencies, corporations, and so on). Thus, agency and structure arise both from elements of game play (what one can do) and content (to the society in the game world).

Two more games help explicate the difference between games high in agency or structure: Black & White 2 and America's Army (US Army, 2002). In Black & White 2 players take on the role of a Greek god whose help has been solicited by Grecians after their capital is seized by Aztecs, and who now want to form a new world for the survivors. The goal is to increase one's influence over surrounding areas and gain the allegiance of more and more people. The players can choose to embody a god who pursues a path of evil or a path of good or something in between. The "evil" god expands his influence by using violence and terror as a way to control, fails to satisfy the basic needs of the residents, and promotes wars among different groups inhabiting the fantasy world in a quest for expansion. The "good" god helps the residents thrive by meeting their needs for food, sleep, protection, shelter, and infrastructure, and builds a wider base by creating cities to which others move.

The game allows the exercise of a good deal of agency. The actions of the player determine critical aspects of the society as players make a continuous stream of decisions about the kind of supreme authority she or he wants to be. Two consciences—one good and one evil – each lobby to win the player over to his side. The game provides feedback that lets the player know how the residents have responded to an act and "tributes" (points with monetary value) are credited or deducted from the player as well. The most innovative aspect of the game is its use of setting, objects, and characters to reflect players' ethical choices. These game elements are transformed by the moral valence of one's decisions. If one acts in a malevolent manner, there is a visual display of fire indicating evil, and if one acts benevolently water appears indicating goodness. The landscape, buildings, the creature who assists the god, and even the "god hand"

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that controls all the action (the only representation of the god on the screen) take on physical characteristics suggestive of good or evil through darker or lighter tones, sinister or happy expressions, decaying or robust facades, and so on. The game endows the player with extensive command over the arrangement and moral character of the game world.

In contrast, America's Army is a more structure-driven game in which the player assumes the role of a soldier in the US Army whose goal is to complete basic training and boot camp, then to participate successfully in a series of missions that take place online. To move up in the game, players must master skills (such as throwing hand grenades), prevent opposing forces from advancing, and complete the assigned missions. At each stage, players are instructed in the objective of their mission, available weapons, maps of the terrain, details about their enemies and friends, and the Rules of Engagement (spelling out when, where, how, and against whom force can be used to attain the objective). Little or no information is given to explain the causes of each conflict. Failure to master skills prevents one from advancing to the next level and violation of the Rules of Engagement leads to loss of points and even ejection from the game. The role of soldier presupposes an emphasis on respecting hierarchy and obeying the laws or rules of conduct laid down by the military. Although the Rules of Engagement proscribe some unethical behavior, such as shooting one's own soldiers, the player may not alter the Rules, the mission objectives, or the structure of the military.

Continua, Not Dichotomies

We recognize that few games are pure agency or structure, ethics or expediency. That is why we have proposed two continua, not binary oppositions. Despite claims that games offer open-ended play or agency, the rules, roles, and goals they make available always exert some structural constraints on action in the game world. Conversely, even games that offer players

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little control over the social worlds they inhabit possess some quality of emergence – a simple set of rules applied to a multiplicity of objects and situations can yield an enormous variety of results (Salen & Zimmerman, 2004). There is always some room for play in the system. Similarly, major theories of ethics often draw on expedient thinking.[10] Decisions about whether a goal is ethically desirable are often partially informed by estimates of whether it can be met efficiently and effectively. Such cost-benefit analyses are especially frequent in the field of applied ethics, such as medical or legal ethics.

We can still make meaningful distinctions between games higher in agency or structure, and ethics or expediency, if we recognize that there are internal gradations within each quadrant of the framework we have presented (see Figure 2). For example, consider two games that differ in their relative emphases upon agency and expediency. Democracy is a sophisticated turn-taking political simulation in which a player assumes the role of president or prime minister of a democratic country with a goal of winning re-election. The player can manage numerous policies that shape social institutions and the lives of the citizens within that system. Doing so requires the player to respond to myriad concerns of different voter groups (motorists, conservatives, socialists, parents, trade unionists, and so on) by either presenting new policies or devoting more resources to issues ranging from bus subsidies to health care. As the game unfolds, players must make and keep two promises before the next election, while confronting emerging situations (political protests, diplomatic incidents) and policy dilemmas. Issue positions are connected onscreen to voter groups through green or red lines, visually reinforcing whether one's policy has met with acceptance or rejection by important constituencies. Quarterly reports inform the player of which groups have increased or decreased their support. In the course of reading the arguments presented by the game for or against the many policies

one must consider, the player may reflect on the ethical desirability of their policy choices. However, the constant feedback about one's approval ratings and the single goal of winning re-election (unlike Decisions, Decisions) may favor a strategic politics of governance by polling data. Democracy, then, may be considered high in agency and moderately high in expediency.

[Figure 2 around here]

A Force More Powerful (International Center on Nonviolent Conflict & BreakAway Ltd., 2006) trains players in the techniques of non-violent campaigning. The ten scenarios included in the game are based on real-world historical struggles on behalf of human rights in conditions of dictatorship, occupation, colonization, and corruption. The player's role is as the strategist for a human rights campaign whose goal is to win changes in the political and legal system of their country, although one may set one's own specific victory conditions for each campaign. Thus, the game allows players to alter the basic structures of society, although in a much more targeted way than Democracy. However, if the scenarios embody profound ethical issues, the game itself assigns players to a role that focuses mainly on finding the strategies that will prove successful in bringing about reform. At the outset, a player works alone to choose her or his movement's values and express them in a manifesto on religious freedom, curbing ethnic discrimination, or fair elections (unlike Decisions, Decisions, which calls for testing one's views in deliberation with others). Thereafter, the substance of the game is largely expedient. As a strategic planner, most of one's work consists of amassing funds to support the campaign, organizing meetings and events, recruiting staff, and deciding how best to use one's talents. The game play challenges the player to wrestle with the question of what tactics will be most effective, not with ethical questions about what means of struggle are most just. A Force More Powerful has an enormous

amount to teach about how to wage an effective human rights campaign, but it has less to teach about how to reason ethically about why human rights are important.

Other games in the same quadrant of the model may differ from one another as well. Although Black & White 2 is a game of agency and ethics, despite its pioneering use of setting to reflect players' moral choices, it still sets subtle limits to player's ability to exercise free agency in pursuit of expanded influence. There are occasions when the rules require that aggression be used to achieve the goal of expanding into new territory. For example, the game requires the player to kill many of the Aztec military in order to move into the next land, even while acknowledging that this is an evil act (the word 'evil' flies graphically onto the screen). The rewards associated with some evil acts – such as destruction – significantly outweigh the penalties. In contrast, a game like Decisions, Decisions, which allows players to set their own goals, may offer greater freedom of action. Another contrast is offered within the category of games of expediency and structure. While Food Force is almost purely focused on expediency, America's Army incorporates Rules of Engagement, which require the player to exercise some ethical logic to succeed in the game. Information about these rules is a resource that is integrated into every mission and observing them is required to progress toward the game's goal. There is no comparable ethical content that must be mastered to succeed in Food Force.

Games high in structure or ethics may differ internally as well. In Real Lives (Educational Simulations, 2004), a simulation game designed for middle- and high-school students, the player is born into a life from any country in the world that is either assigned by the game or chosen by the player. The player must make many different decisions that involve work opportunities, financial standing, health, marriage and family life, and participation in civil society. The game offers many opportunities for ethical reflection, borne of challenges or

opportunities endemic to one's country (based on real world statistics for the country's poverty rate, infant mortality rate, and so on). Fact boxes provide information about the nature of the political system, helping to set the stage for some of the obstacles players may face. When asked to make a decision about whether to engage in political activity, players are presented with the possible consequences associated with a menu of actions before they choose what to do. For example, taking actions to resist a repressive regime may cause players to lose their jobs, be expelled from school, go to jail, or even die. Or the player may receive positive feedback by seeing her conscience or wisdom level rise after having spoken out against government abuses. Yet one's decisions have only individual consequences. One cannot change the political-economic structures or policies of one's country. Corruption and threats to civil liberties continue unabated. Thus, the game is both very high in ethics and structure.

In contrast, as Ian Bogost (2007) describes it, a game such as The McDonald's Videogame offers players a bit more agency to affect the policies of the multinational fast food conglomerate. Created by Molleindustria, an Italian advocacy group that is a sharp critic of McDonald's, the game ingeniously places players in control of the company in order to reveal its negative impact on the environment, labor, and honest government. Players oversee a cattle ranch in a developing country, a slaughterhouse, a restaurant, and corporate headquarters. To succeed in the game, players must maximize the company's profits. The most effective means of doing so clearly involve razing rainforests, mistreating animals, skimping on food safety, bribing and lobbying officials and regulators for special favors, and engaging in "greenwashing" public relations campaigns. However, there is some room for more and less ethical play that shapes corporate policy, as one may distinguish between tolerating "necessary evils" of the fast food business and full-throttle pursuit of greed, which can be self-defeating. To be sure, the

constraints overwhelm any player who tries to convert McDonald's into an organic, socially-conscious company, but one can steer a course between absolute and relative exploitation of land, animals, and labor, if one is willing to sacrifice some profits.

Types of Civic Learning

This conceptual framework can offer several insights into the design and use of games for civic learning. First, it helps us to generate hypotheses about what kinds of games are better suited for a more focused and less reflective type of learning, which we will call civic training, versus a broader and more reflective learning, which we call civic education. Second, it helps us imagine how game design might best prepare players for a broad range of civic identities, including leadership roles. As we noted earlier the literature on games in education has tended to assume that if games confer knowledge and skills in one domain, then players can apply this learning to all domains. However, we think it is more plausible that a game is better at achieving more specific learning outcomes that are directly connected with the content and game play. In civic learning, these outcomes often imply a vision of "good leaders" and "good citizens." Clarifying our vision of what civic identities we aim to develop is the first step in designing or adopting games for effective civic learning.

Civic Training and Education

As Figure 3 indicates, we suggest that some games will be better able to contribute to civic education, while some will be limited to civic training. Education comes from the Latin *educere,* which means not only to rear or bring up (by supplying sustenance and attention) but also to lead forth, bring out, elicit, or develop. Training derives from the Old French *trahiner,* to manipulate so as to bring to the proper or desired form (as in training a plant to grow straight), and a derivative of the Latin *trahĕre*, to pull or drag behind one.[11] In a civic context, training is

unreflexive learning that does not ask students to question the assumptions that underpin social systems and practices, while education includes sustained reflection upon the bases of social structures, including their ethical dimensions. Training need not always be indoctrination. It may be valuable for learning how social systems work and how to participate effectively within them by applying concepts, solving problems, and the like. Training may lead to *empowerment* (becoming an effective person within the rules of the social system) but education can lead to *emancipation* (authentic reflection on whether aspects of that system are the best for self and society or ought to be transformed) (Inglis, 1997).

[Figure 3 around here]

We also distinguish games that are best equipped for teaching players about basic citizenship roles (voting, participating in organizations, and the like) and about civic leadership (running for office, starting or running organizations, and so on). Agency-oriented games, which probably comprise the majority of civic games, tend to assign leadership roles to players – the mayor of a city (SimCity 4), the president or prime minister of a country (Democracy and Decisions, Decisions*)*, even the god of a civilization (Black & White 2). Although players receive information and feedback on their decisions from advisors, interest groups, and citizen groups, these games allow players to practice top-down change as they shape the policies and social structures of the game world. Structure-oriented games may cast players as citizens (Real Lives) or as government personnel carrying out missions assigned to them (Food Force, America's Army). In these games, players are more embedded within social structures than managing them. A Force More Powerful provides an interesting exception. It casts the player as a leader within a social movement instructing the player in the techniques of bottom-up change that depends on organizing and mobilizing citizens.

By combining these categories, we can differentiate the games that fall into each quadrant of the model a bit more and devise several hypotheses. Once again, these hypotheses assume that other factors that shape learning besides game design are held constant. Focusing first on games best suited for civic training, we suggest that *games high in expediency and agency will be most effective at training players for leadership roles*. This is because these games offer players greater ability to influence the game world but do not necessarily ask them to question the game's criteria for defining effective leadership (e.g., Democracy and A Force More Powerful). *Games oriented toward expediency and structure will be most effective at training players for non-leadership civic roles* because they offer less room for influencing the game world than agency-oriented games and do not solicit as much critical thinking about the parameters of citizenship roles as ethics-oriented games (e.g., Food Force, America's Army).

In regard to games aimed at broader civic education, we believe that *games oriented toward agency and ethics will be most effective at educating for leadership roles*. These games are more likely to give players more opportunity to influence the game world society, while sparking reflection on just and unjust uses of power (Decisions, Decisions or Black & White 2). *Games high in structure and ethics will be most effective at educating for non-leadership civic roles* because they introduce players to the dynamics of large-scale structures that shape their lives, giving them little power to alter those structures but demanding ethical evaluation of them (the state in Real Lives, multinational corporations in The McDonald's Game).

Types of Citizenship

As we noted earlier, there are multiple and conflicting visions of the "good citizen" that inform civic education. Our framework helps clarify how games lend themselves to developing a range of civic identities based on the internal balance of agency and structure, ethics and

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expediency (see Figure 4). Most games do not foster identities that map cleanly on to full-blown

theories of democracy – participatory, deliberative, elite pluralist, and the like. But civic games

do provide a general orientation toward different kinds of citizenship. As a result, they

inevitably raise questions not only about whether and how games might develop civic identities,

but for what vision of citizenship and for what type of democracy. Not only youth, but also

game designers, educators, and researchers, need to be able to discern the civic affordances of

digital games.

[Figure 4 around here]

We hypothesize that *games high in structure and expediency will most effectively*

promote a citizenship of discipline because they emphasize learning how the social structures of

the game work in order to operate according to their rules. We mean discipline in the double

sense suggested by Foucault (1977) – as an institutionalized discourse (such as an academic or

professional discipline) and a means of molding thought and behavior (power or control). For

Foucault, the exercise of disciplinary power depended upon the ability to define and monitor

individual bodies closely to ensure that they internalized disciplinary norms. Games with strong

structures that channel players' efforts toward learning and performing appropriately within

those structures are disciplinary in this sense, whether discipline is understood in the totalizing

and dystopian light that Foucault presented it in his analysis of the growth of the modern prison

or as a more innocuous form of training. Many of these games of discipline are "twitch games"

that hone players' reflexes to act swiftly in consonance with game rules. America's Army does

this when it trains players to distinguish friends and foes on a battlefield quickly and treat each

according to military rules of engagement, disciplining the mind and body to function in

sanctioned ways within the game. As such, games of discipline can be valuable for training

players in many aspects of civic life. The dangers of exclusively adopting these kinds of games for civic learning are that they tend to teach unquestioning obedience through stimulus-response training that does not value reflexive critique of the structure of the game world. However, it is important to recognize that these games are not inherently conservative because the dominant structures of the game world may or may not conform to those outside the game. One could imagine a version of A Force More Powerful that trained players in the physical techniques of civil disobedience – how to behave at a demonstration, how to get arrested without provoking police violence, and so on – without asking players to consider the ethics of each tactic. This game would be disciplinary in design even as it trained players in real-world methods of resistance.

We believe that *games high in agency and expediency will most effectively teach a citizenship of influence* because they confer power to manage or alter major institutions without requiring reflection on the ethical uses of power. These games tend to train players for realism rather than idealism, as these terms are used in political theory. Realists, such as Machiavelli (1532/1984), are primarily concerned with how to get and preserve power, while idealists, in the tradition of Plato (360 B.C./1985) or Aristotle (323 B.C./1962), are more interested in how power should be distributed and used to achieve the good society.   In games of influence, the focus is on managing internal coalitions of interests and external alliances, and with the effective use of resources to persuade or coerce others. For example, geopolitical strategy games, such as Superpower II (GolemLabs, 2004) tend to present international relations as the pursuit of power politics or *realpolitik* – players are not encouraged to pursue war or peace with other countries for ideological reasons but for pragmatic national economic or security interests. Many election games that place the player as the candidate or manager of a campaign follow a similar logic. A

wide range of approaches to domestic politics could be favored by such games, including authoritarianism, technocracy, interest-group pluralism, or even (as in A Force More Powerful) social movements. Games of influence can contribute to civic training in the workings and historical development of societies and their major institutions. Many of the games that are widely used in educational settings, such as SimCity and Civilization, are games of influence. However, because these games do not require that players consider the ethical aspects of power and social structures, it is left to educators to prompt students to question how these games model historical and political processes.

We suspect that *games of structure and ethics will most effectively teach a citizenship of responsibility* because they demand moral decisions about how to participate in public life but within a limited scope of action allowed by tight game structures. We have noted how Real Lives regularly confronts players with ethical dilemmas about whether to participate in political action that affect avatars' identities and success in life, but have little or no ability to change their society. Games such as this are well suited to developing personal responsibility or character. They lend themselves to exploring individual ethics rather than the ethics of institutions or society. As such, these games favor approaches drawn from virtue ethics – the branch of moral philosophy and religious thought that aims to identify and cultivate individual traits (wisdom, courage, patience, and the like) that allow individuals to live good lives. As in Real Lives, games of responsibility can also force players to grapple with the question of how to live a good life in a society that may be imperfect and unjust. These games test players' integrity as they decide whether to act in accordance with their values when doing so involves sacrificing their happiness or security within the game world. Clearly, such games can be valuable for civic education because they allow players to explore and forge their own civic identities. Yet

education for personal responsibility cannot fully prepare youth to develop their vision of a just *society*.

We hypothesize that this vision of the good society is best explored through *games high in agency and ethics, which will most effectively foster a citizenship of justice*. These games encourage moral thinking not only about how individuals should operate in the public sphere but mainly about the legitimacy of laws, leadership, traditions, the state and other institutions. Because these games confer greater power within the game world to alter policies and perhaps even the contours of society for idealistic reasons, they offer the possibility of deep questioning of social structures. Despite its comparatively simple design, the Decisions, Decisions series encourages players to prioritize their values and to form their views on policy domains such as immigration through deliberation with others. NationStates requires players to make decisions on multiple policy issues to design the institutions of an ideal society. These kinds of games can contribute to civic education by spurring young people's thinking about what a just society might look like and how it could differ from their own. However, these games do not necessarily offer the broad or deep knowledge of social institutions that may be gained from some games of discipline and influence. For example, NationStates does not provide as complex information or feedback on the import of one's policy decisions for multiple sectors of society as Democracy does. If justice-oriented games offer overly simplified models of social systems, such games may limit players' ability to develop *well-informed* ethical views. Effective justice-oriented games may be the most challenging to design because they require the complex modeling of social processes found in the best simulations, while integrating systems of moral thinking into the game goals, rules, and roles. Designers need to be conversant not only with reproducing how

real-world institutions work within the game, but with how ethical theories may be applied to these institutions.

Methods and Measures

How could researchers test these hypotheses about game design for civic training and education, leadership and non-leadership roles, and kinds of citizenship? Game-based learning outcomes can be assessed by adopting or adapting existing measures that are relevant both to the game studied and to intended learning outcomes. Researchers could avail themselves of widely used scales of civic knowledge, skills, and dispositions (e.g., Flanagan, Syvertsen, & Stout, 2007; Kahne, Middaugh, & Schotjer-Mance, 2005; Levine, 2007), measures of civic leadership (e.g., Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001; Dugan, 2006), as well as indicators of critical thinking (e.g, Watson & Glaser, 1991; see Ruminski, 2006 a comparison of other scales) and moral reasoning (e.g., Rest & Narvaez, 1998; see Grandy, 1989 for a comparison of other scales).

These scales lend themselves to pre- and post-test research designs with control groups, which could reach larger sample sizes, afford comparative research on the potential value of games versus other learning methods, and thereby increase the validity and reliability of research in the field. Small-scale qualitative research continues to be useful for theory testing and development as well as assessing more complex learning outcomes than standardized measures can capture (for example, by examining players' interpretations, portfolios of work based on game play, or design or modifications of games). Controlling for factors other than game design (such as the context of play, players' demographics and experience with games, and players' purposes for playing) is as challenging as isolating the impact of curriculum in any educational research. However, researchers who strive to employ controls, use larger samples, and measure

learning more systematically will be in a better position to identify the influence of any remaining contextual factors than researchers who do not. Such research is also more likely to influence educators, policy makers, and game designers.

Improving the Ecology of Civic Games

What kinds of civic games are most valuable? Rather than identifying a single design as optimal, we see both merits and shortcomings in a number of approaches. Civic training games can help youth to understand the historical development and inner workings of social life, empowering them to pursue their goals knowledgably and effectively in the public realm. But civic education games are needed to inspire thoroughgoing assessment of the ethical dimensions of the social self and the public world it inhabits. Games of discipline, influence, responsibility, and justice can develop these different civic capacities but no game is likely to develop every type of citizenship.

Although we value a range of civic games, we argue that designers and researchers could help advance experimentation with and assessment of game-based civic learning by focusing more on games that incorporate ethics to educate for civic responsibility and justice. First, there are fewer of these kinds of games and we know least about whether and how players might learn from them. Second, it is difficult to see how the aims of democratic civic education – the exercise of responsible as well as effective citizenship – can be met without teaching people how to inquire into the moral-political implications of their personal actions and their institutions.

Unfortunately, most "educational" games have been designed to train players in knowledge and skills rather than to engage them in normative reflection on their individual choices or society. The ability of games to provide interactive models of social life that reveal the consequences of players' decisions for multiple actors and for society could allow this

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medium to explore ethical principles in more complex and systematic ways than other media have in the past. To date, the few games that have attempted to model moral decision-making have done so fairly simplistically, through what Bogost calls "an arithmetic logic." In these games, "gestures are inherently good or bad ("black or white," "light or dark") and morality always resides at a fixed point along the linear progression between the two" (2007, p. 285). Morality is typically allegorical: "good and evil are embodied in a material form," and presented as "an attribute, a property lifted from allegory and ascribed wholesale" (p. 286). Black & White 2 exemplifies this approach. Less commonly, games explore characters with morally ambiguous motives and highlight the conflicting ethical consequences of one's decisions. An example is Deus Ex (Ion Storm, Inc., 2000), in which the player is cast as a counterterrorist in a dark future society, evoking "the deep uncertainty of justice and honor in an ambiguous global war" (p. 286). But Bogost finds that ethical and even religious games have yet to go beyond merely affirming the presence of morality as a feature of the game world to model through simulation the experience of how ethical reasoning works.

Digital games could do so if they overcome the legacy of educational and commercial game design. Compared to traditional games, digital games can better automate the multiple variables that operate in complex social systems. For example, Democracy models the impacts of one's decisions about a multitude of issues on approval ratings from numerous constituencies. Yet digital games often reveal little about how they determine the consequences of players' actions within social systems – a problem that Dunnigan calls the "black box syndrome" of computer games (cited in Salen & Zimmerman, 2004, p. 88). The danger, as Turkle notes, is that games may "get people accustomed to manipulating a system whose core assumptions they may not understand and that may or may not be 'true.' Simulations enable us to abdicate

authority to the simulation; they give us permission to accept the opacity of the model that plays itself out on our screens." (1997, p. 81) In civic games that model complex social systems this can be a barrier to learning about how the world of the game works. Similarly, Jenkins (2006) describes the "transparency problem" of new media, by which he means that youth do not always question the structures of the media they use. He quotes games researcher Eric Klopfer, who warns that simulations will educate for civic life, rather than merely training us for it, only if we can grasp their underlying premises:

> If we understand the assumptions that go into simulations we can better evaluate that evidence and act accordingly. Of course this applies to decision makers who must act upon that information (police, government, insurance, etc.); it also is important that each citizen should be able to make appropriate decisions themselves based on that information. As it is now, such data is either interpreted by the general public as 'fact' or on the contrary 'contrived data with an agenda.' Neither of these perspectives is useful and instead some ability to analyze and weigh such evidence is critical. Simulations are only as good as their underlying models" (quoted in Jenkins, 2006, p. 26).

As Bogost (2007) has argued, the black box or transparency problem is not resolved simply by revealing the underlying computer code to game players – a response called for by the constructivist vision of demystifying technical systems.   The kinds of assumptions that shape civic games are as much political and social ones about how the world works or ought to work as they are matters of technical design. For example, ideological analyses of some of the games that are most widely used in classrooms – such as Civilization III and Oregon Trail (Learning Company, 1997) – have argued that they tend to present history, politics, and society in

stereotypically masculine, Western, and imperialist terms (Bigelow & Larsen, 1999; Chen, 2003; Schut, 2007). The challenge is to foster what Bogost calls "procedural literacy," which involves:

the ability to read and write procedural rhetorics – to craft and understand arguments mounted through unit operations represented in code. The type of 'reading' and 'writing' that form procedural rhetorics asks the following questions:

What are the rules of the system?

What is the significance of these rules (over other rules)?

What claims about the world do these rules make?

How do I respond to these claims? (p. 258)

Similarly, Jenkins (2006) has called for a renewed media literacy that aims to prepare youth to be readers and producers of digital media by examining the underlying structures of new media spaces and encouraging ethical reflection on how to participate in or reshape them. Many thoughtful teachers who are introducing games into the curriculum are doing just this. Rather than presenting games as transparent representations of historical and political processes, these educators are challenging students to analyze and question how games model notions of progress and power (e.g., McMichael, 2007). Games could do so too.

We suspect that games will be most effective at fostering players' reflection on the ethics of game worlds, and the world beyond, if they employ several design principles. *Games that encourage players to choose between multiple goals, or to create their own goals (including by modifying the game easily), are more likely to inspire ethical reasoning than games with single, pre-defined goals*. The examples we offered of games high in ethics tended to offer a broad palette of goals. Exercising some choice between goals can open up opportunities for considering one's own values in relation to the game and make the assumptions of the game

world manifest for players. *Games are also more likely to inspire a logic of ethics if their rules require players to consider robust information framed in ethical terms before making decisions and offer complex feedback in ethical terms on the consequences of players' decisions for other entities and the social structure of the game.* These conditions suggest the need *for little or no time pressure* on players as they mull decisions and their impacts on the game world. In contrast, the "twitch game" approach does not seem compatible with ethical thinking about the game world because it focuses players' attention on strategy and frustrates reflection. *Games may also be more likely to encourage moral reasoning if they include meta-gaming framed in ethical terms.* Game designers can explore new ways to introduce ethical considerations into the discourse that surrounds the game in conversations between players within the game world, on websites devoted to the game, or face-to-face, as well as modifications to the game that users may create and share. If moderated well, these discussions may be focused on questions of the ethical and structural assumptions of games. Games that permit modifications allow technically confident players to experiment with and comment on the game's social structures and moral rules. We have noted that many teachers are turning civic games themselves into objects of study, asking students to assess how games' structures and moral assumptions model history or social life in particular ways. Games could be designed to encourage this reflexivity by exposing their own assumptions about how social processes work or offering multiple visions of how they do so for players to compare.

We also hypothesize that *games of responsibility and justice will increase young people's motivation to learn more than games of discipline and responsibility.* Many youth participate more in community volunteering and philanthropy than in traditional forms of politics (Zukin et al., 2006). Anne Colby and her colleagues (2007) summarize the reasons why. Many young

people prefer volunteering because they can see the immediate effects of their actions on others and the rewards of service are more tangible and unambiguous. Politicians and the political process appear unworthy of trust or respect, or simply seem irrelevant to many young people's lives. And more youth are asked or required to take part in community service than in politics by their schools, churches, and families. Given this skepticism about organized politics, games of discipline and influence may be the least effective at motivating youth to participate because they teach players *how* to act within the political realm but not *why* such action is necessary or beneficial. As such, these games may be effective at preaching to the choir of already-engaged youth, but not to the many young people who see politics as dull and irrelevant. Well-designed games of responsibility and justice may be most likely to increase appreciation of the important opportunities that politics can offer youth to form and express their civic views. There is a normative reason for producing more of these games as well: all youth, including those who are already likely to take part in politics, need to consider the ethical dimensions of political practice, not simply how to get and wield power.

One possibility is to design games that form bridges between service and political action. For example, a game that appeals initially to young people's interest in addressing poverty by teaching them how to provide social services effectively within an existing agency might gradually confront them with how their ability to do so is limited by social welfare and health care policy and spending. Such a game could ask them to help formulate structural solutions to these problems. It need not involve indoctrination in a single political viewpoint – it could model the strengths and weaknesses of various approaches to problems of inequality, from increased government spending to boosting private charity. But it would move players to see how their individual actions relate to larger political structures and how their strategies for

service provision can be informed by moral-political questions of poverty policy. A game such as this might develop more than one kind of citizenship as the player proceeds from practicing the citizenship of influence to one of justice. If the same game allowed one to inhabit the figure of a homeless person trying to feed and clothe oneself and a policy maker devising responses to homelessness, it could allow players to explore a citizenship of discipline and a citizenship of influence or justice.

As this last example suggests, we believe that *games are also likely to fulfill their promise to spark ethical reflection if they require players to play from multiple positions within society*. Many role-playing games allow for this kind of play and may therefore be especially helpful models (Simkins & Steinkuhler, 2008). Games that require players to inhabit more than one side in a conflict, or to play as both a leader and as a citizen within the society one is managing, may offer greater ethical insights into the bases and effects of one's decisions. Above all, we need more games that embed players in the society of the game world rather than always placing them above it as a leader of a civilization or state. Most of us will not be President or (depending on one's theology) a god. Changing a country's economic system is more difficult than clicking a button marked "industrial" or "post-industrial." If citizens want to learn to influence change, they need to be able to do so from a place deep within social structures, not on top of them. Simulations in which players act as the managers or puppet-masters of major institutions cannot teach what is needed to effect bottom-up change, such as the kinds of organizing, communicating, and mobilizing strategies that are honed in a game such as A Force More Powerful.

Balancing the ecology of games for civic education by focusing more on opportunities for developing moral-political reasoning through game play and content might help young

people discover their own connections between what is effective and what is just. It might help

them to discover how their individual actions can influence larger social structures. It could help

them to appreciate the full range of opportunities for citizenship. If that kind of learning can

happen in game worlds, it is more likely to influence, and renew, civic life in the surrounding

world. If civic life is a game, to many youth it often feels "fixed." Rethinking our notion of

civic games might just help us imagine how to unfix it.

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Appendix A. Game-Based Civic Learning – Definition and Hypotheses

Definition

Games foster civic learning when they help players to develop knowledge, skills, and dispositions that players then apply to public matters in the world outside the game.

Hypotheses

1. Games that integrate civic content and game play will be more effective at fostering civic learning than games that do not.

2. Games that set rules, goals, and roles that require players to act and reflect on public matters will be more effective for civic learning than games that do not.

3. Games high in expediency and agency will be most effective at training players for leadership roles.

4. Games oriented more toward expediency and structure will be most effective at training players for non-leadership civic roles.

5. Games oriented toward agency and ethics will be most effective at educating for leadership roles.

6. Games high in structure and ethics will be most effective at educating for non-leadership civic roles.

7. Games high in structure and expediency will most effectively promote a citizenship of discipline.

8. Games high in agency and expediency will most effectively teach a citizenship of influence.

9. Games of structure and ethics will most effectively teach a citizenship of responsibility.

10. Games high in agency and ethics will most effectively foster a citizenship of justice.

11. Games are more likely to inspire ethical reasoning if they encourage players to choose between multiple goals or to create their own goals; have rules that require players to consider information framed in ethical terms before making decisions; offer complex feedback in ethical terms on the consequences of players' decisions for other entities and the social structure of the game; exert little or no time pressure on players; include meta-gaming framed in ethical terms; or require players to play from multiple positions within society.

12. Games of responsibility and justice will increase young people's motivation to learn more than games of discipline and responsibility.

Agency

Expediency ──────────────── Ethics

Structure
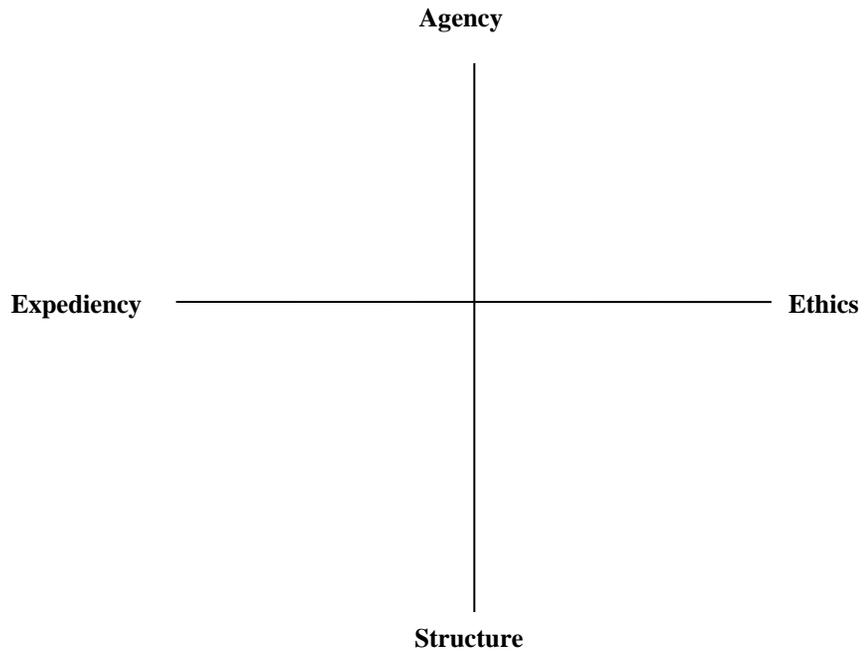
Figure 1. Conceptual Framework

Agency

Democracy

Decisions,
Decisions

A Force
More
Powerful

Black &
White 2

Expediency ——————————————————————— Ethics

The
McDonald's
Videogame

Food   America's
Force   Army

Real
Lives

Structure

Figure 2. Example Games

Agency

Training for
Leadership

Education for
Leadership

Expediency ———————————————+——————————————— Ethics

Training for
Citizenship

Education for
Citizenship

Structure
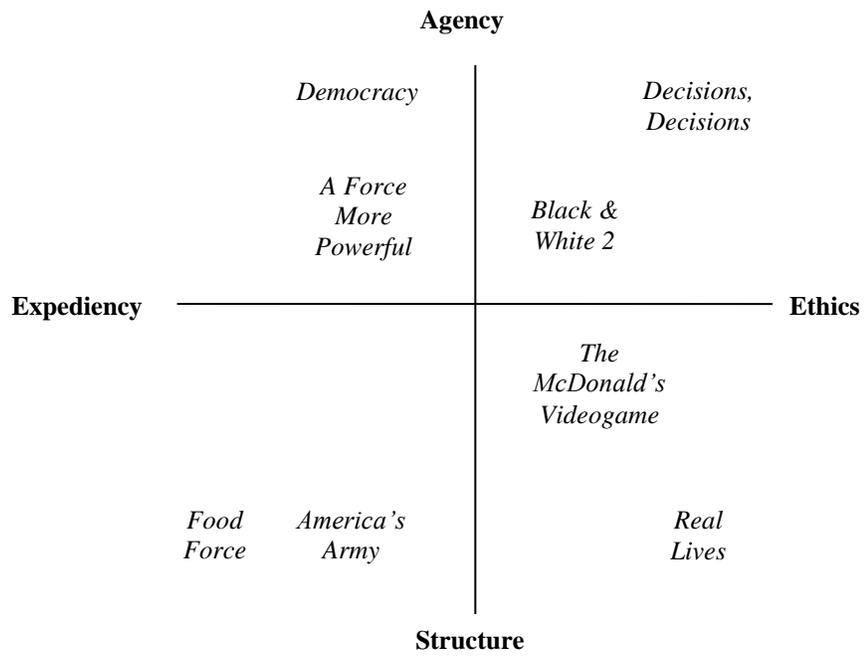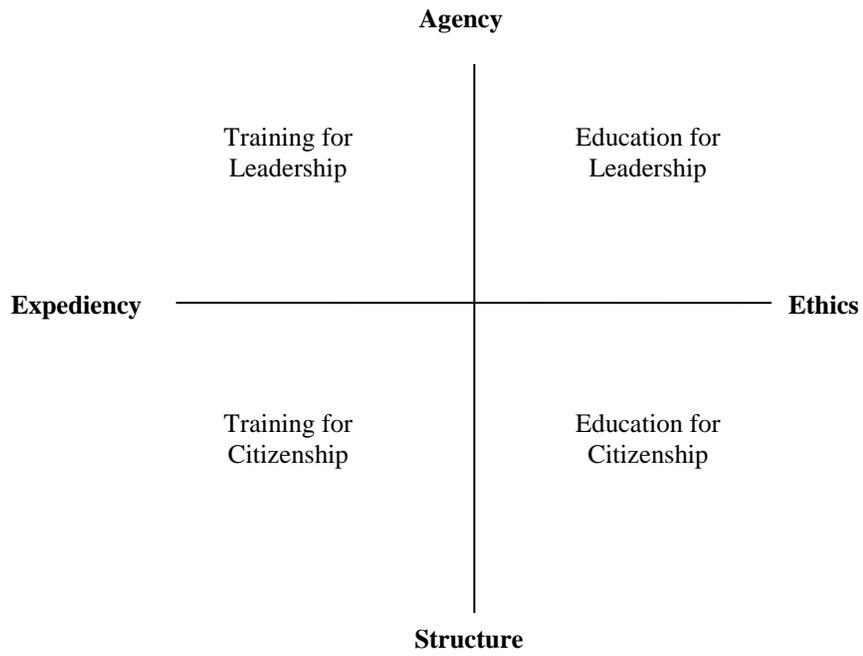
Figure 3. Types of Civic Learning
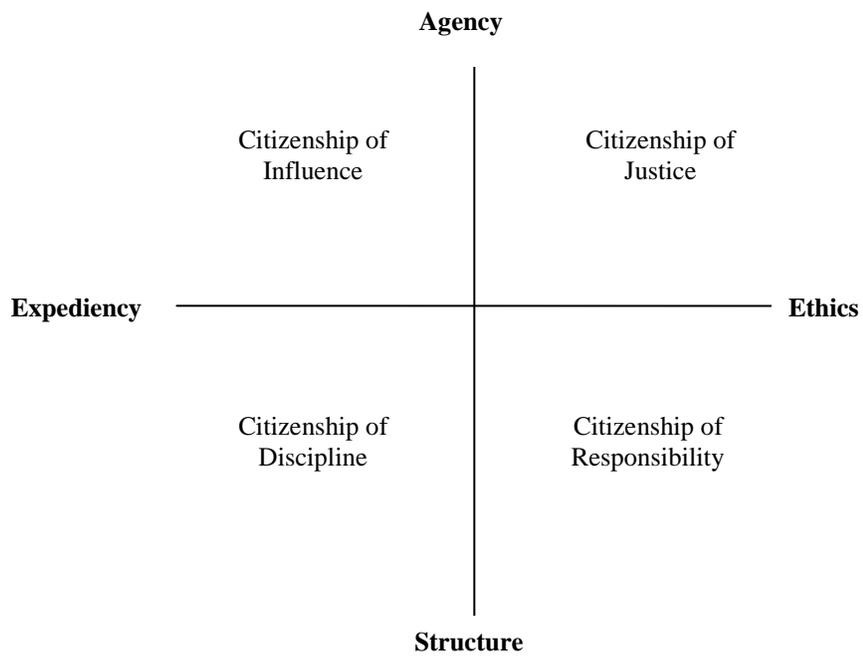
Figure 4. Types of Citizenship

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[2] Our broad definition of game-based civic learning recognizes that different normative theories of democracy will emphasize divergent sets of knowledge, skills, and dispositions. For example, participatory democrats, who value direct involvement of citizens in policy formation and decision-making, will likely see a wider range of necessary civic abilities than elite democrats, who value a circumscribed role for the public as periodically selecting their representatives. At this point, our aim is not to advance an exclusive theory of democracy or set of capacities required of its citizens, but a clear definition of civic learning that can accommodate divergent views of democratic citizenship.

[3] We are not arguing that games create a "magic circle" of play that has no bearing on the world outside them (Huizinga, 1938/2000), only that we do not resolve civic issues through game play in contemporary society.

[4] Use of digital media to boost youth participation in U.S. national elections starting offers a good example of this kind of bridging of youth culture and traditional politics. In 2004, Internet-based efforts to revive youth voter registration and mobilization, often linked to popular culture celebrities and events, helped increase voter turnout among 18-29 year olds of all ethnicities (Marcelo, Lopez, Kennedy, & Barr, 2008). In the 2008 Presidential primaries, campaigns have used online games, YouTube, social networking sites (such as Facebook, MySpace, and BlackPlanet), and text messaging to publicize the candidates' views, circulate celebrity endorsements, organize face-to-face meetings, and mobilize voters. In particular, Senator Barack Obama's campaign has broken new ground in using digital media to encourage viral communication about candidates among youth and address youth more specifically as a constituency (Dickinson, 2008).

[5] Thus, Gee contends that we should be less concerned about violent games such as Grand Theft Auto: San Andreas (Rockstar Games, 2004) because players are more focused on the game play of strategic problem-solving, such as navigating city streets safely, than on the content, which involves stereotypical representations of ethnicity and gender.

[6] We confine our discussion to what Salen & Zimmerman (2004) call the "operational rules" of games (p. 130). They also discuss "constitutive" rules of logic and mathematics that underlie digital games and implicit rules of game etiquette shared by players. For our purposes, reference to operational rules is sufficient.

[7] As Zagal, Mateas, Fernández-Vara, Hochhalter, & Lichti (2005), from whom we derive this definition, further explain, "Game world objects (entities) possess a set of attributes (e.g. velocity, damage, owner, etc.) and a set of abilities (e.g. jump, fly, etc.). Entity manipulation consists of altering the attributes or abilities of game world entities" (p. 8).

[8] "Ethics is the branch of philosophy that tries to understand a familiar type of evaluation: the moral evaluation of people's character traits, their conduct, and their institutions. We speak of good and bad people, the morally right or wrong thing to do, just or unjust regimes or laws, how things ought and ought not to be, and how we should live" (Nagel, 2006, p. 379). The separation of ethics and politics into separate branches of Western philosophy is a fairly recent development. The major ethical theorists – e.g., Aristotle, Hume, Kant, and Mill – have provided many of the dominant rationales for political systems as well. Although there is much debate over whether personal morality and political justice should derive from identical standards, it is clear that politics has been and continues to be an important subject for ethical theory.

[9] Note that this definition is quite different from those that reduce agency to the ability to customize the user interface (e.g., Sundar, 2007).

[10] Consequentialist theories – such as utilitarianism, which aims to maximize utility of outcomes for the greatest number of people – often involve quasi-economic analyses of the utility of an action to self or society. Contractualist theories of ethics, in which right and wrong are seen as established by societal agreement, derive ethical theories from the strategic thinking of individuals. For example, Hobbes (1651) grounded moral conduct in individuals' pursuit of self-interest in curbing the violence and instability of humanity in the state of nature. To do so, he posited the need for a system of law enforced by an absolute sovereign possessing a monopoly of force. However, Hobbes did not justify monarchy according to the divine right of kings, but because he saw it as the only *effective* means to ensure that all individuals follow moral codes of conduct to which they have agreed rather than trying to gain advantage by breaking them. He saw absolutism as the best strategic protection against those who might game the system. To take a very different example of contractualist ethics, John Rawls' (1971) theory of justice relies in part on arguing that were we to step behind a veil of ignorance, where we were shorn of our identities in the world and unaware of whom we would be when we stepped back into it, we would make a calculated agreement to form institutions that diminish social and economic inequality by improving the lot of the worst-off. We would do this, argues Rawls, to set the rules of the game to favor equality of opportunity in order to minimize our risk of re-emerging from behind the veil on the bottom of the social heap. It is not surprising that economic game theorists quickly fastened on Rawls' theory (Laden, 1991).

[11] We are indebted to Bogost (2007) for drawing our attention to this distinction.