

FROM CIVIC LESSONS TO EVERYDAY DEMOCRACY:
DEMOCRATIC HABITS, VIDEO GAMES, AND COLLABORATIVE GAME MAKING

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DEDICATION

To my mom, who thought I would be a lawyer because I argued with her so often. Seems to me like you lost another argument, too bad you didn't stick around so I could gloat. I know this can't replace the end-of-year kindergarten report card, but it's the best I got.

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ABSTRACT

FROM CIVIC LESSONS TO EVERYDAY DEMOCRACY: DEMOCRATIC HABITS, VIDEO GAMES, AND COLLABORATIVE GAME MAKING

Gideon Dishon

Sigal Ben-Porath

The civic world is rapidly changing in response to the affordances of the digital age, which ushered the rise of participatory politics: interactive, loosely-structured and collaborative modes of civic action. Though still a nascent field, civic video games have been presented as a ripe setting to respond to these changes, offering students engaging and situated learning contexts. My dissertation reconceptualizes citizenship education broadly conceived, and video games' contribution to this endeavor, by developing Dewey's framework of citizenship education as the cultivation of *habits of democracy*.

Schools' influence on students' civic behaviors goes beyond direct civic lessons: through the pedagogies, norms and routines practiced throughout the school, children develop habits of interactions with peers and adults. Dewey's use of the term 'habit' deviates from the everyday connotations of mindless, repetitive modes of action. Instead, habits are ingrained solutions to problems we encounter in the environment. Therefore, democratic habits are best developed by presenting students with situations that indirectly encourage behaviors such as collaboration, deliberation, and compromise. I identify and develop three attributes of habits that distinguish them from the prevailing emphasis on civic skills and dispositions, and that facilitate a more refined understanding of the democratic role of schools: habits are (i) social; (ii) a form of practice; and (iii)

interconnected. I then apply this framework to civic video games, arguing for extending citizenship education beyond game-playing and into the realm of connected gaming.

Striving to challenge and enrich my theoretical arguments, I present vignettes from a series of collaborative game-making workshops conducted with high-school freshmen. These vignettes highlight two aspects of game-making conducive to practicing democratic habits: first, the loosely-structured, collaborative and iterative nature of constructionist learning environments is reflective of today's civic sphere. Second, game design can support a unique form of iterative perspective taking, stemming from designers' attempts to assess and predict the conduct of players. Whereas most educational projects are evaluated by a teacher, games are created for the use of diverse others, and are hence civically-minded. These analyses unpack the complexities of game-making, and democratic habits more broadly, and establish a conceptual roadmap for further investigation.

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INTRODUCTION

So we are entering this computer future, but what will it be like? What sort of a world will it be? There's no shortage of experts, futurists, and prophets who are ready to tell us—only they don't agree. The Utopians promise us a new millenium, a wonderful world in which the computer will solve all our problems. The computer critics warn us of the dehumanizing effect of too much exposure to machinery, and of disruption of employment in the workplace and the economy.

Who is right? Well, both are wrong—because they are asking the wrong question. The question is not “What will the computer do to us?” The question is “What will we make of the computer?” The point is not to predict the computer future. The point is to make it. Our computer future could be made in very many different forms. It will be determined not by the nature of the technology, but by a host of decisions of individual human beings.

In the end, it is a political matter, a matter of social philosophy and of social decision how we will remake and rethink our world in the presence of technology. When we talk about computers in education, we should not think about a machine having an effect. We should be talking about the opportunity offered us, by this computer presence, to rethink what learning is all about, to rethink education.

Papert, S. (1990). A critique of technocentrism, pp. 2-3.

Papert's call to rethink education in light of the possibilities offered by technology is already more than twenty-five years old, yet it rings particularly true to the challenges facing citizenship education today.¹ The ascendance of new modes of communication enabled by digital media has ushered the rise of participatory civics: interactive, loosely structured and collaborative modes of civic action (Bennett & Segerberg, 2016; Kahne, Middaugh, & Allen, 2015). Many aspects of citizenship are challenged or remade in light of the increasing importance of digitally-mediated communication: from individuals' having an outsize impact (at least in the short term) even if they are not traditionally

¹ The term “civic education” is often associated with the traditional textbook and classroom-centered curriculum. For this reason, I use the term “citizenship education”, which alludes to interest in a more holistic approach that goes beyond knowledge (Ben-Porath, 2012).

leading change agents (Benkler, Roberts, Faris, Solow-Niederman, & Etling, 2015; Jenkins, 2016), through the blurring of the public and private spheres, and hence of civic, social, and cultural modes of participation (Ito et al., 2015; Papacharissi, 2010), to the new forms of diversity that cross traditional geographical and social boundaries, and the simultaneous emergence of echo chambers (Levine, 2016; Tufekci, 2015).²

Once again, technological innovations are accompanied by utopian and dystopian visions concerning their effect on society (Zuckerman, 2014). On the one hand, promises of the foundation of new modes of communication, interaction and participation, that could serve as the basis for a reinvigorated civic sphere. On the other, warnings against the indulgence of technology and its detrimental influence on existing social values and structures. Similar oscillation has characterized the responses to these developments by civic educators, moving between a belief that digital media, and its enthusiastic adaptation by youth, can pull citizenship education by its bootstraps and awaken it from a long slumber, and worries that schools are becoming obsolete and lack the structural capacities to prepare youth to the novel circumstances and challenges introduced by technological developments (Hobbs, 2016; Jenkins, 2016; Stoddard, 2014).

These inquiries are both timely and essential. Nevertheless, they too often focus solely on questions concerning how citizenship education should respond to technological developments. Thus, they assume a unidirectional relationship in which technology is positioned as the cause for changes in educational practice. This dissertation strives to broaden the scope of inquiry, by arguing that the relationship

² This work focuses on the historical circumstances, as well as theoretical debate, taking place in the US context. However, many of the arguments are broadly applicable to other contemporary Western liberal democracies.

between education and technology is reciprocal. Hence, it is vital to concurrently examine the inverse relationship: *not just how technology shapes democratic citizenship, but also what visions of democracy and education will shape our use of technology*. This question can be broken down into two interrelated inquiries. First, what vision of citizenship education should inform educating youth to become democratic citizens, who can make competent and critical use of novel technologies in the civic sphere? Second, how does this vision, in turn, inform the use of technology within citizenship education? To consider the latter, I rethink the application of one technological platform which has been garnering much popular and academic interest, namely – video games. As I develop answers to these two interrelated questions, my dissertation opens an uncommon methodological path, based on a dialectical relationship between a theoretical argument (the conceptualization of citizenship education and civic video games), with insights from an implementation of this vision in a concrete educational context – collaborative game making workshops.

In the remainder of this introduction, I discuss these three components: my proposed vision for citizenship education, its application to the field of video games, and insights from collaborative game making workshops I conducted. But first I shall offer preliminary background concerning the changes taking place in the civic sphere in light of the new modes of interaction and communication afforded by digital media.

Civic Participation in the Digital Age

No investigation into citizenship education can be complete without accounting for the ways in which digital media has reshaped the civic landscape in liberal democracies (Gordon, & Mihailidis, 2016). Though researchers broadly agree that the utopian visions

that heralded the democratizing effect of digital media have been vastly overstated (Fung, Russon & Shkabatur, 2013), it is clear that the modes and forms of civic action are in flux (Allen & Light, 2015). Civic participation is less focused on electoral politics, or interactions with governmental agencies, and encompasses a wider variety of activities which have been termed *participatory politics* and include "activism (protest, boycotting, and petitions), civic activities (charity or community service), and lifestyle politics (vegetarianism, awareness raising, and boycotting)" (Kahne et al., 2015, p. 37). While offering youth new pathways for civic participation, these developments concurrently introduce novel challenges for educators who aim to support youth's participation in a rapidly evolving civic sphere (Barron & Martin, 2016; Ratto & Boler, 2014).

This dissertation is based on the assumption that researchers should dedicate more effort to thinking about how democracy can lead to better use of technology, and not the other way around (Farrell & Shalizi, 2015). Nevertheless, for my theoretical arguments to remain attentive to the everyday realities of the civic sphere, and to situate my inquiry within a concrete, rather than ideal, context, I outline three broad trends characterizing civic participation. These descriptions do not form a definitive summary of the immense and ever-fluctuating changes in the civic sphere as it constantly evolves. Yet, they are instructive to identifying the central challenges facing citizenship education.

First, technological developments have accentuated the historical shift towards understanding citizenship in terms of *choice rather than responsibility* (Levine, 2016). Digital platforms offer an increase in individual control over forms, modes, and contexts of communication as the barriers for expression and audience-making are lowered (Papacharissi, 2010). In these relatively new contexts, individuals *can* play a more

substantial role – identifying causes they believe are important, seeking out relevant information, and engaging in self-directed civic action (Soep, 2016). While such a view of citizenship both predates digital media, and is independent of it, digital platforms have rendered active civic participation more accessible and more conspicuous.

Second, digital media reshaped the ways in which individuals relate to the civic sphere. The decentralized structure of social media allows recruiting citizens, especially the young generation, who were frustrated by the lack of opportunities for meaningful participation in traditional party politics (Bennett & Segerberg, 2016; Levine, 2008). Moreover, public action could now be carried out in a variety of contexts (via electronic devices) including those who were previously perceived as one's private space. This shift *blurred the distinction between the public and the private sphere*, and facilitated the rise of a model of liquid citizenship in which social, cultural and political blend (Papacharissi, 2010). User-led participatory cultures such as interest-based communities and fan sites have come to play an overt civic role, thus offering a variety of pathways for civic participation.

Lastly, digital platforms have facilitated the development *of new forms of diversity and homogeneity*. While presenting hitherto-unfathomable opportunities for connecting people across social and geographical boundaries, digital media has concurrently heightened intra-group tensions by accentuating the tendency to communicate with like-minded individuals. The low barriers for online engagement and the widespread access to digital spaces do not mean that individuals' networks represent an ideal open forum of diversity and difference. For many, their online life mirrors the homogenous realities in which they live (Stevens, Gilliard-Matthews, Dunaev, Woods, &

Brawner, 2016). This is the case because digital communication simultaneously supports controlled interaction with known contacts (through social networks), and facilitates communication with strangers around shared interests. In both avenues, when unchecked, increased control can lead to a preference for interacting with homogenous groups, thus creating echo chambers in which views are amplified to their extreme form (Mercea, Lekakis, & Nixon, 2013; Quattrociocchi, Scala, & Sunstein, 2016).

I later develop in more detail how these shifts inform the demands of citizenship education. For now, I note that though the digital age brings with it many exciting opportunities for civic participation, there is no guarantee that such opportunities will be utilized towards democratic ends, and hence, they do not relieve educators of the need to intentionally support youth in becoming democratic citizens through schooling and other educational efforts. Moreover, as I now turn to argue, the broad and deep seated modes of interaction needed for democratic participation cannot be cultivated if citizenship education remains limited to lessons on civics, or tailored (and rare) civic initiatives. Hence, the shifts taking place in the civic sphere highlight the need to reorient our perception of citizenship education, and the role of schools in this endeavor.

Citizenship Education – From Civic Skills to Democratic Habits

Worries concerning democracy's decline are almost as old as democracy itself (Levine, 2007). More than any other form of government, democracy depends on the actions of its citizens for its own stability. As the current climate in Western democracies illustrates, the preservation of democracy cannot be taken for granted. Hence, the education of the upcoming generation towards democratic participation is one of the foundational tasks of

any democracy. As Aristotle noted, it is not merely the quality of education, but its compatibility to the demands of democratic governance:

[T]he legislator should direct his attention above all to the education of youth... The citizen should be molded to suit the form of government under which he lives. For each government has a peculiar character which originally formed and which continues to preserve it. (Pol.VIII.1.1337a10-13)

At the same time, Dewey (1916/2001) reminds us that this relationship is reciprocal. It is not only that the perception of the government's role determines the aims of citizenship education; the tangible ways in which educational contexts are structured shape the modes of democratic participation open to citizens. It is the second part of this relationship, concerning how concrete educational realities support and constrain the aims of citizenship education, that this dissertation sets out to explore.

What model of citizenship ought to guide citizenship education? Westheimer and Kahne (2004) famously criticize the widespread model of the *personally responsible* citizen, which stresses responsible conduct in private life as well as in one's community, yet lacks any significant political dimension. They contrast this model with more active and critical alternatives: the *participatory* model highlights a proactive stance towards solving social issues, whereas the *justice-oriented* model seeks to challenge the structural roots of social injustice. This distinction signifies a broader shift in citizenship education research and practice towards a holistic view that aspires to provide more than civic knowledge (e.g., how a bill becomes a law), and aims to "help young people acquire and learn to use the skills, knowledge, and attitudes that will prepare them to be competent and responsible citizens throughout their lives" (Gibson & Levine, 2003, p. 4). While the personally responsible model of citizenship still plays a central role in the political sphere

and in educational practices (Lin, 2015), this dissertation joins current scholarship centered around espousing to nurture active and critical forms of civic participation.

Though the importance of cultivating active and critical citizens has become a staple of citizenship education research, there is a gap between this objective and the educational practices used to achieve it. A recent wave of studies substantiates the need for a comprehensive approach to citizenship education, one that goes beyond classroom- and textbook-based lessons on civics (Gould et al., 2011; Hess & McAvoy, 2014; Niemi, 2012; Youniss, 2011). Though these developments are both essential and welcome, their central focus is still limited to explicit forms of citizenship education, which aim to increase students' knowledge and develop their civic skills and dispositions.

However, schools' influence on students' civic behaviors goes beyond explicit forms of teaching: through the pedagogies, curricula, rules, norms and routines practiced in classrooms and the everyday life of schools, children learn habits of interactions with peers and adults, which shape the "hidden civic curriculum" (Gutmann, 1999; Levinson, 2012). Attention to these structural features is crucial because though they can be a powerful means of positive influence, the way they are commonly put into practice today, undermines the democratic ends of education by highlighting a contradictory value system which prizes competition, inequality of rewards, and authoritarian relations (Ben-Porath, 2013; Foote & Stitzlein, 2016). Hence, citizenship education should not be perceived as a set of practices, or as yet another discipline within the school curriculum. Instead, it is an *organizing principle* that informs the design of educational environments.

Accordingly, I develop a Deweyan framework of citizenship education based on the goal of nurturing of *democratic habits* (Dewey, 1922, 1916/2001; cf. Hansen &

James, 2016; Stitzlein, 2014). In line with the pragmatist tradition, Dewey's use of the term habit deviates from the everyday connotations of habits as mindless and repetitive modes of action. Instead, habits are the necessary automatization of action, which serves as the basis for learning and creativity. To clarify this distinction, Dewey distinguishes between mechanical and dynamic habits. Mechanical habits are a form of repetition, usually unconscious, and can be achieved through training. Dynamic habits, in contrast, are accompanied by critical reflection and are reconstructed according to accumulated experience; their development is the essence of education (Hansen & James, 2016).

The fundamental rationale underlying a habits-based approach is that meaningful citizenship education relies on structuring learning contexts in which students have increased opportunities to practice democratic modes of conduct. Habits are not merely "things we do," they are "ways we react," solutions to problems we encounter in the environment. Therefore, democratic habits are best developed by presenting students with situations that do not impose civic obligations, but rather indirectly encourage behaviors such as collaboration and deliberation. I identify and develop three central attributes of habits, which distinguish them from the prevailing emphasis on civic skills and dispositions, and which facilitate a more refined understanding of the democratic role of schools: (i) habits are social; (ii) they are a form of practice; (iii) and are interconnected.

Does this emphasis on the experiential dimension of citizenship education do away with explicit civic lessons and initiatives? Hardly so. Yet, a habit framework realigns the relative importance of, as well as the relationship between, direct and indirect components of citizenship education. The three central roles schools (and other educational contexts) can play are (i) facilitating the *practice* of democratic habits, (ii)

creating consequential *connections* between in-school practices and civic contexts, and (iii) encouraging *reflection* and explication of democratic habits as well as their connection to civic issues. Thus, while structuring opportunities to practice democratic habits is the backbone of citizenship education, it must be complemented by creating connections, and facilitating reflection. This shift in perspective does not apply only to schools and other structured educational contexts; it should also underlie our thinking about the role of technological tools in citizenship education. I examine this issue by exploring the implications of a habits framework on one field of technological innovation – the educational use of video games.

Rethinking Games and Habits

In the past thirty years, video games have grown into one of the most popular leisure activities among today's youth (Lenhart, Smith, Anderson, Duggan, & Perrin, 2015). The passionate engagement characteristic of gameplay, together with the ever-widening field of possibilities enabled by technological developments, have drawn scholars to explore the educational potential of video games (Gee, 2003; Kafai, 2006b; Squire, 2011; Steinkuehler, 2006). This educational whirlwind hasn't skipped the field of citizenship education, and the interest in researching and designing civic games is on the rise, though it remains a niche within video game research (Stoddard, Banks, Nemacheck, & Wenska, 2016; Waddington, Thomas, Venkatesh, Davidson & Alexander, 2014).

How can video games contribute to citizenship education? The combination “civic” and “video games” might bring to mind games that focus on introducing youth to the civic sphere, such as the *iCivics* website that offers players over 20 simulations: running for president, fighting for individual rights, working as an immigration officer

and so on (Blevins, LeCompte, & Wells, 2014). However, the field of civic games includes a much wider variety of games, from intricate simulations of the political sphere such as *Democracy* (Positech Games, 2005), through games like *Darfur is Dying* (mtvU, 2006) that promote social causes across the globe, to virtual worlds that offer players first hand civic experiences in shaping their own virtual communities (e.g., *Zora*). Hence, defining what actually counts as a civic game has been a matter of debate. In their in-depth (and as of yet unmatched) analysis of civic video games, Raphael and colleagues offer the following definition.

[G]ames 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. (Raphael, Bachen, Lynn, Baldwin-Philippi, & McKee, 2010, p. 203)

As can be seen, this definition is rooted in the knowledge-skills-dispositions approach. Therefore, while I adapt this broad lens for examining the civic role of games, I offer a slightly modified definition informed by the democratic habits framework:

Games foster civic learning when they help players to develop knowledge relevant to the civic sphere or facilitate *practicing habits of behavior* that can serve players in public matters in the world outside the game.

The most common educational role of civic video games is still that of tools intended to support students' knowledge acquisition (Boyle et al., 2016; Stoddard et al., 2016). Even though such games are highly valuable, a habits framework expands the possible roles of video games, emphasizing how games could facilitate the practice of democratic habits. Video games are a central part of youth's lives in the 21st century. As such, they are a vital context in which youth's habits of interaction are shaped. This calls for a consideration of the various ways in which video games shape youth habits (in

desirable and undesirable ways), and an exploration of how games can contribute to the cultivation of democratic habits. As in the case of schools, a habit framework both broadens the possible ways in which games can contribute to citizenship education, while at the same time curbing the expectations attributed to these games. Chapter 3 offers a detailed classification of civic games, for now, an example might illustrate this shift.

The most apparent modification stemming from a habits framework is that games need not be dedicated to civic content in order support democratic modes of interaction. One of the most debated issues in this respect is the contribution of massively multi-player online role playing games (MMORPGs) such as World of Warcraft (Blizzard Entertainment, 2004) to citizenship education. In MMORPGs, thousands of players play simultaneously in a real-time persistent environment, in which they are often demanded to work together to fulfill the game's complex quests (Yee, 2014). This has led researchers to argue that such games offer experiences simulative of the cooperation and coordination demanded in civic environments, especially digitally mediated ones (Sourmelis, Ioannou, & Zaphiris, 2017). Yet, evidence concerning the correlation between MMORPG participation and civic engagement has been mixed (Lenhart et al., 2008). However, within a habit framework, the role of MMORPGs is to offer intrinsically motivated opportunities to practice peer-based and self-directed action. It should not come as a surprise that in themselves, such games do not correlate with increased engagement. As argued above, this relationship should be strengthened by cultivating other vital democratic habits, such as productive communication across differences, and by creating consequential connections between in-game and civic contexts, as well as offering reflection on in-game experiences and their relevance to the civic sphere. Video

games can introduce experiences, ignite reflection, and stir emotions vital to citizenship education. Yet, they should not be perceived as standalone products; games' contribution depends on their integration within more comprehensive citizenship education programs.

Beyond reevaluating the civic contributions of existing games, a habit-based approach calls for offering students different roles within games. As in the case of schools, if games are to function as a form of citizenship education, they need to offer players experiences analogous to those they will encounter in the civic sphere. Research has repeatedly shown that a central predictor of civic engagement is whether students feel they have a voice in their classrooms (Gould et al., 2011). A similar logic should be applied to video games – supporting the positioning of players as meaningful participants within such contexts. Specifically, I argue for extending the civic potential beyond game playing and into the realm of connected gaming – the myriad ways in which “making and playing are no longer distinct activities but rather interrelated, mutually informing processes.” (Kafai & Burke, 2016, p. 8). Commercial games have been increasingly trending towards offering players more substantial roles as designers, both within- and out-of-game. From minimal responsibility, such as designing avatars, through the emergence of sandbox games such as Minecraft (Mojang, 2011) in which gameplay itself is consisted of construction, to games that endorse player “modding” – modifications and additions to games created by players (Gee & Tran, 2015; Kafai & Burke, 2016).

Regrettably, this trend has not been reflected in research on civic games despite the similarities between the open-ended nature of these games and civic environments. One of the main advantages of games is that they can be designed as optimal learning experiences (Gee, 2003). This should not come at the expense of harnessing video

games' potential to offer players meaningful roles in shaping such environments. In this respect, while my main focus is on how Dewey's vision shapes our utilization of technology, new technological developments, such as video games, render the implementation of Dewey's vision more feasible than in the past (Waddington, 2015).

Thus far, I have presented the notion of citizenship education as an organizing principle of educational contexts in general, and of civic video games in particular. This shift demands offering youth concrete and intrinsically motivated opportunities to fulfill civic roles in a variety of contexts, which serve as the *necessary, though not sufficient condition*, for the cultivation of democratic habits. In order to refine and expand this theoretical argument, I ask: what are the implications of situating these arguments within a concrete educational context? Can these arguments be translated to practice, and more importantly, how will concrete practice, in turn, shape these theoretical assertions?

From Theory to Practice, and Back

In light of the emerging call by philosophers of education to expand philosophical inquiry through empirical research (Levinson & Newman, 2015; Wilson & Santoro, 2015), and given the dearth of empirical research on the civic potential of game making, I designed and conducted a series of collaborative game making workshops with high school freshmen. These workshops strive to facilitate a dialectical relationship between my theoretical arguments and the intricacies of their practical implementation. Rather than providing empirical validation, these workshops are an instantiation that serves to contextualize and enrich my research. Accordingly, I describe vignettes from the workshops, which unpack the complexities of game making as a site for practicing democratic habits, in an attempt to offer a road map for further inquiry and practice.

While the relevance of making games with civic content to citizenship education is relatively straightforward, I set out to examine a broader argument – that game making, as a form of instructional design, could be structured as a useful context for practicing democratic habits regardless of the games’ content. Game making has been shown to promote several academic ends such as learning how to code, engaging with academic subject matter and introducing students to design and system thinking (Earp, 2015; Kafai & Burke, 2015). Here I focus on the civic contributions of this activity. Coming full circle to the quote that opened this introduction, I contend that constructionism, the educational theory laid out by Papert (1980), is an interesting case study for examining the civic dimensions of academic learning. Constructionism asserts that learning “happens especially felicitously in a context where the learner is consciously engaged in constructing a public entity... that can be shared with others” (p. 1). Thus, the theory of learning argued for in constructionism is in essence civic – based on participation in public projects.

Accordingly, I illustrate how participation in game making, and constructionist learning environments more broadly, can function as a site for developing habits of democracy. First, the loosely structured, non-linear, collaborative and iterative nature of game making is reflective of the challenges of the evolving civic sphere, and hence conducive to practicing the *habit of peer-based and self-directed participation* (which I discuss in chapter 1). Second, due to the complex and intrinsically motivated reflection game making requires concerning the perspective of future players (Flanagan & Nissenbaum, 2014), it can serve as fertile ground for developing the *habit of pursuing shared endeavors*. Although civic projects can be pursued solely in light of individual or

group interests, one of the main aims of citizenship education is to cultivate students' aptness to pursue shared endeavors – public projects guided by the understanding and appreciation of the diverse perceptions of various social groups beyond their own (Ben-Porath, 2012; Mutz, 2013; Ward, 2016). Whereas most educational projects are evaluated by a teacher, games are created for the use of others, and hence – civically-minded.

I then reverse the direction of inquiry – examining whether the application of citizenship education as an organizing principle in one given academic context can offer theoretical contributions to the democratic habits framework. Put simply, how can game making enrich our understanding of the cultivation of democratic habits? Exploring vignettes from the workshops, I contend that the iterative process of game-design, which entails creating a game, playtesting it, and analyzing the results (Fullerton, 2014; Zimmerman, 2003), can support complex and multi-faceted forms of perspective taking. This process, which I term *iterative perspective taking*, is particularly attuned to the challenges of participation in today's loosely structured civic sphere: planning projects that are sensitive to the perceptions of others, attempting to make these plans a reality, and learning how to modify these plans in light of their practical results (Stokes, 2012).

In summary, these vignettes concurrently fulfill two objectives. First, identifying how the habit framework could be applied to existing educational contexts relying on existing learning theories – in this case, the constructionist approach to teaching programming through game making. Second, exposing how attention to the civic dimension of academic settings can support a better understanding of the unique civic contributions of such activities, and hence enrich our thinking on the cultivation of democratic habits in general. In this respect, conducting these workshops and writing

about them is guided by constructionist logic – an attempt to situate an abstract idea within a concrete and shareable project, namely, this dissertation.

Structure of the Dissertation

In chapter 1, as background to my theoretical arguments, I survey the central changes to the civic sphere in the digital age, and delineate three democratic habits educators should aspire to cultivate: (i) *critical reflection* on individual interests and their relation to public projects and societal values; (ii) participating effectively in peer-based and self-directed *shared endeavors*; and (iii) *productive communication* across differences while maintaining a sense of shared fate in relation to the larger community.

In chapter 2, I introduce the central thrust of my theoretical argument, asserting that promoting an active, critical and collaborative model of citizenship demands going beyond civic lessons, and conceptualizing schools as sites for the development of democratic habits. The democratic habits framework is developed by comparing it to the prevailing skills and dispositions approach, which either sets the bar too low (neutral skills), or too high (ingrained dispositions). This analysis is carried out by focusing on three dimensions of habits: (i) habits are social; (ii) they are a form of practice, and (iii) they are interconnected. In the second part of this chapter, I outline the three central roles of schools and other educational contexts in a habit framework – practicing, connecting, and reflecting – and elaborate how these aspects support a better integration of current effective practices of citizenship education identified in the literature.

In chapter 3, I turn to offer a more in-depth exploration of how a habits framework informs the educational application of technology in one specific field – video

games. In the first part of this chapter, I offer a new classification of existing civic video games according to the framework I developed in chapter 2: (i) games that focus on civic *knowledge* vs. those which facilitate practicing democratic *habits*, and (ii) games that open up a space for *reflection* vs. games that center on facilitating concrete *connections* to civic settings. The classification is rooted in an effort to better understand the possible contributions of video games, as well as their integration within a broader approach to citizenship education. The second part of this chapter is dedicated to a classification of the diverse contributions of connected gaming to citizenship education along the same axes described above.

Finally, in chapter 4, I introduce vignettes from a series of collaborative game-making workshops I designed and conducted. The first workshop I describe, the Collaborative Controllers workshop, illustrates how game making supports the habit of peer-based and self-directed work on shared endeavors. In the second workshop, the Digital Carnival, I focus on identifying the unique form of perspective taking practiced in iterative game design, which I term *iterative perspective taking*. These vignettes are not viewed as empirical validation of my theoretical arguments. Rather, they illustrate the challenges of concretizing my theoretical arguments concerning the cultivation of democratic habits in non-civic contexts, as well as the importance of connected gaming.

Chapter 1

BACKGROUND – CIVIC PARTICIPATION IN THE DIGITAL AGE

Debates concerning the effects of digital media on social interaction and civic participation have tended to swing between euphoria and despair, both in popular culture and in academia (Papacharissi, 2010; Zuckerman, 2016). The rise of digital media was accompanied by a sense of revolution – the foundation of new modes of communication, interaction and participation that could serve as the basis for a new and better society. This can be witnessed by the number of books published on this subject, and the neologisms invented to describe these changes: peer production, produsage, the wisdom of crowds, prosumers, network society, recursive publics, creation capitalism, convergence culture, wkinomics, networked publics and more (Kelty, 2012). This utopian undertone was countered by a dystopian reaction warning against the indulgence of technology, and its detrimental effects on existing social values and structures (Coleman, 2008; Kreiss, Finn, & Turner, 2011; Morozov, 2009).

Therefore, one of the main challenges of discussing digitally mediated civic participation is the tendency to glorify or demonize it. While the grand aspirations initially attributed to the virtual public sphere failed to materialize, it is clear that the dynamics of civic participation are changing, and accordingly, the role of citizens (Kahne et al., 2016; Zuckerman, 2014). Among researchers, there seems to be at least at this time, a stable consensus that the emergence of digital media has not led to radical changes in the civic sphere in mature democracies (Allen & Light, 2015; Fung, Russon & Shkabatur, 2013).³ While there has not been an overall process of democratization, it is

³ Such arguments obviously depend on how we understand the complex relationship between technology and democracy. Farrell and Shalizi (2015) for example, argue that democracy can

becoming clear that the modes and practices of civic participation themselves are going through significant changes (Brough, & Shresthova, 2012; Ito et al., 2015; Ratto & Boler, 2014). Hence, there is a need to address the evolving types of civic behaviors and practices for all youth who are growing up in the digital political age. Moreover, these new platforms and practices demand overcoming persistent and re-established gaps in civic participation along class and racial lines. Therefore, it is imperative to explore the changes currently taking place in civic participation, as well as the promises and perils they offer to democratic societies.

One of the most foundational shifts has been concerning what civic participation entails in the first place. As stated, researchers have long criticized the more traditional views of citizenship solely in terms of institutionalized forms of participation such as voting or membership in political parties (Ben-Porath, 2012; Haste, 2010; Levinson, 2012; Soep, 2016; Westheimer & Kahne, 2004). The importance of active and critical citizenship has been accentuated by developments in digital media that facilitated the rise of new modes of civic action characterized by interactive and peer-based participation (Gordon, & Mihailidis, 2016; Ratto & Boler, 2014). Civic action is no longer limited solely to electoral politics, or interactions with governmental agencies, and includes a wider variety of activities, which have been termed *participatory politics* and include "activism (protest, boycotting, and petitions), civic activities (charity or community service), and lifestyle politics (vegetarianism, awareness raising, and boycotting)" (Kahne et al., 2015, p. 37). These new avenues for civic participation do not render more

lead to better use of technology and not the other way around. A similar logic underlies this dissertation. Yet, beyond an attempt to establish a causal relationship, it is possible to identify the general trends characterizing the use of technology in the civic sphere.

traditional modes of civic participation obsolete. Instead, they diversify the ways in which citizens can act in the public sphere.

The expanded view of civic participation manifested in the above definition also implies that the distinction between civic and political action has become harder to trace. Traditionally, political participation is understood as action that aims to directly influence government action, while civic participation is more commonly associated with work towards betterment of one's local or national community outside of the political sphere (Ekman & Amnå, 2012; Zukin, Keeter, Andolina, Jenkins, & Carpini, 2006). However, as the means to both influence government action and to work within one's community have diversified, the distinction between the two, both in terms of intentions and outcomes, is not as clear and hence, less productive. Accordingly, and in line with current literature of citizenship education (e.g., Ito et al., 2015; Kahne et al., 2016), throughout this dissertation I use the two interchangeably when discussing actions directed at the public good, regardless of whether or not they appeal directly to governmental action.

The emergence of participatory politics has had a particularly significant on civic engagement among youth (Hobbs, 2016; Ito et al., 2015). Youth are far more likely to engage in participatory politics both when compared to their engagement in institutional politics and when compared to adults' engagement in such practices (Soep, 2014). There are several reasons for this gap. First, youth's sense of marginalization in institutional politics; not only are youth often legally prevented from central forms of political action (voting, running for office), they were also traditionally less likely to have the resources to engage in civic action which reached widespread crowds (Kahne et al., 2015). In addition, youth are early adaptors of new technologies (and trend setters with regards to

their patterns of use), and therefore digital media has had wider influence on youth's social and cultural participation, as well as their propensity to engage in participatory modes of interaction in the civic sphere (Jenkins, 2016). This seems to be a generational rather than an age-related phenomenon, and thus should affect modes of civic participation in years to come.

In what follows, I identify some of the major shifts that have been taking place in the civic sphere with the increasing role of digitally-mediated civic participation. I start by broadly describing how the new modes of communication and organizing afforded by digital media have influenced the civic sphere, and then elaborate concerning three more particular trends: (1) the conceptualization of citizenship in terms of choice rather than responsibility; (2) the blurring of the public and private spheres, and the overlapping of social, cultural and political modes of participation; (3) the new forms of diversity and homogeneity characteristic of civic action. I conclude this discussion by examining why despite these vital changes, we have not witnessed an overall process of democratization, focusing on the challenge of translating voice to influence.

These descriptions are in no way a definitive summary of the immense and ever-fluctuating changes in the civic sphere as it constantly evolves. As the 2016 presidential elections in the US have shown, the perception of digital media's potential and pitfalls can change very rapidly.⁴ Instead, this analysis sets out to identify the general trends characterizing civic participation in the service of better understanding the demands of citizenship education. Accordingly, the final part of this chapter is dedicated to outlining

⁴ This was most notable concerning the increased attention to the issues of fake news, and Facebook filtering of users' newsfeed. These issues were already discussed prior to the election, but received increased media attention after Trump's victory, and ensuing reports on the pervasiveness of fake news.

three democratic habits (aligned with the three shifts above) educators should keep in mind when discussing citizenship education in the digital age.

The Connective Civic Sphere

In light of developments in digital technologies, and the vital role the Internet has come to play in modern societies, a new networked model of participation and production has surfaced in the 21st century – “commons based peer production”:

[P]eer production as a form of open creation and sharing performed by groups online that: (1) sets and executes goals in a decentralized manner; (2) harnesses a diverse range of participant motivations, particularly non-monetary motivations; and (3) separates governance and management relations from exclusive forms of property and relational contracts (Benkler, Shaw, & Hill, 2013, p.1)

Citing well-known examples such as Wikipedia and Linux, Benkler (2006) claims that these new modes of communication empower audiences who have traditionally been positioned as passive consumers, facilitating and encouraging collaborative forms of collective action. These new forms of participation were assumed to amend (at least partially) some of the inefficiencies and injustices characteristic of the civic sphere in liberal democracies: the decline in traditional political participation, the fragmentation of civil society, and inequality in civic participation (Kreiss et al., 2011).

Bennett (2008) differentiates the novel modes of organization characteristic of civic action in the digital age, which he terms *connective action*, from more traditional modes of civic action, labelled *collective action*.⁵ These new forms of civic organization

⁵ Collective and connective action can be understood as ideal types. Actual civic participation is likely to be comprised of elements from these two models.

have been most notably exhibited in events such as the Arab Spring or the Occupy Movement, in which diverse groups of citizens organize quickly, usually relying on digital platforms, to fight for a shared cause. Although the emergence of connective action as a central form of civic action relied on new technological tools, what differentiates collective and connective action is not whether civic action is pursued through online presence, but rather the diverging modes of organization. Collective action is structured around mobilizing individuals towards a public good. Individuals are viewed as belonging to different collectives, and mobilization is advanced through a definable social group: class, gender, race, workplace, neighborhood and so on (Bennett & Segerberg, 2016). The main organizational dilemmas are then: how to develop common action frames that will appeal to distinct groups, how to organize large groups for effective action, and finally, the strategic work of brokering and bridging coalitions among organizations with different standpoints and constituencies. In short, collective action is mainly occupied with finding ways to overcome the “free rider dilemma”:

[G]etting individuals to overcome resistance to joining actions where personal participation costs may outweigh marginal gains, particularly when people can ride on the efforts of others for free ... The spread of collective identifications typically requires more education, pressure, or socialization, which in turn makes higher demands on formal organization (economic ones, but also in terms of identity, culture, emotion, social networks, political process, and opportunity structures) (Bennett & Segerberg, 2016, p. 86).

The fragmentation of modern societies weakened group and institutional affiliation and has made organizing groups and creating coalitions more difficult and costly (Levine, 2016). Connective action however, overcomes this taken-for-granted perception of individual participation as mediated through association in social groups.

Digital technologies enable the creation of non-geographical online communities founded on individual interest (Benkler, 2006; Gee, 2010). As a result of these new forms of interaction and collaboration engagement with politics is often an expression of personal hope, lifestyles, and grievances, and not group goals. Therefore, the rising importance of connective action enables substantial number of people to share their ideas and coordinate their actions on a more limited scope of interest, facilitating collaborative civic action without demanding collective identity (Bennett & Segerberg, 2016). Furthermore, this new sphere of digital participation is nonhierarchical and decentralized, allowing individuals to communicate outside existing structures and institutions (though not outside their sphere of influence, as discussed below).

In the next sections, I break down these broad changes to three aspects pertinent to this inquiry: the evolving role of individuals, the shifts in how individuals relate to the public sphere, and the new opportunities and challenges for individuals coming together as groups.

From Responsibility to Choice

These developments in the modes of communication have accentuated a long-term process taking place throughout the 20th century in which citizenship is understood more in terms of choice in place of the traditional emphasis on responsibility (Levine, 2016). Digital platforms offer an increase in individual control over forms, modes, and contexts of communication, which can be empowering in that it increases access and allows for greater diversity of participants, as the barriers for expression and audience-making are lowered (Papacharissi, 2010). The ability to overcome traditional geographical

boundaries and the availability of more varied forms of public communication generate a less formal context to express personal and shared interests. All those who have digital access – a growing majority in the Western world – have more ways to express their voice on a diversity of issues, and are exposed to a larger quantity and variety of other voices (Fung & Shkabatur, 2015; Mihailidis, & Gerodimos, 2016). In these relatively new contexts the individual is positioned as an active communicator, which creates new opportunities as well as new challenges to engagement (Jenkins, 2016; Soep, 2016). Going back to Westheimer and Kahne’s (2004) models of citizenship, the emergence of digital media has shifted the balance from the perception of citizenship as “acting responsibly” by reacting to cues from institutionalized actors, to taking a more proactive stance founded on citizens choosing the causes they deem worthy, and the means to achieve them.

In light of the surge in available information, and its ever-increasing accessibility, individuals are no longer limited to consuming news offered by mainstream media outlets. The emergence of digital tools allows individual actors and marginalized groups greater access to information, which diminishes the importance of traditional gate keepers in media and politics (Soep, 2014; Zuckerman, 2014). It is not just that individuals have an increased capacity to critically appraise the facts and agendas presented by political actors, as the time and effort costs for actively engaging in investigation and research have been greatly reduced, individuals have a greater say in defining the issues that are worth pursuing in the first place, by conducting “their own investigations in an effort to actively create knowledge and raise awareness” (Kahne et al., 2016). While such a view of citizenship both predates digital media, and is independent of it, digital media has

rendered active modes of civic participation more accessible and more conspicuous. Importantly, increased choice does not imply that actions would be geared towards democratic ends. The proliferation of fake news is a clear example of citizens taking an active stance towards news consumption. Yet, the changes in the structure of participation are important exactly because they can support addressing emerging phenomena in the civic sphere.

An illustrative example is the case of University of Oregon undergraduate Samantha Stendal protests against the media coverage of the Steubenville rape trial, in which two Ohio high school football players were convicted of raping a high school girl while she was drunk (Jenkins, 2016). Stendal felt that mainstream media focused too much on the rapists' perspective and the influences a conviction would have on their life trajectories. In response, she created and uploaded to *YouTube* a short video in which a male actor is taking care, rather than taking advantage, of a drunken girl who seems to have passed out (<https://www.youtube.com/watch?v=eZxv5WCWivM>). The video went viral and led to discussions in mainstream media on rape culture and the implicit assumptions concerning male and female behavior in courts and in the media.

The capacity to actively participate in production and circulation of political or civic matters is probably the most visible and celebrated civic affordance associated with digital technologies (Fung & Shkabatur, 2015). Prior to the widespread use of digital technologies, production and circulation of civic initiatives were almost exclusively in the hands of groups and associations; from political parties, through interest groups to local community groups. Digital media has made both the production and circulation of materials far more accessible to individuals, with an even more significant effect on

youth who tend to rely more on digital media and exhibit greater capacity in utilizing it (Ito et al., 2015). Using a variety of tools such as blogs, videos, memes, and wikis, youth can reach audiences within their immediate communities, and beyond (Jenkins, 2016).

As in previous eras characterized by substantial shifts in communication practices such as the rise of printed news or the emergence of radio and television, the ascendance of digital media is not expected to lead to the abolition of gate-keeping altogether. It is likely that existing elites usually find ways to utilize “democratizing technologies” to their favor (as can be seen by the commercial dominance of social media), or new upcoming social forces attempt to fortify their status over time (Light, 2015). However, the rise of digital media does usher in a period of time in which existing power structures are in a process of realignment, thus opening a window of opportunity for creating an incrementally more democratic status-quo.

Such eras offer previously marginalized groups or individuals and opportunity to civically participate in ways that were formerly impossible. A notable example of such shifts is the DREAMer movement, which relied on social media to allow undocumented immigrant youth, a group particularly marginalized in institutional politics, to organize, voice their concerns, garner support for their cause, and exert pressure on public officials in matters of immigration reform (Ito et al., 2015). Yet, increased access should not be conflated with democratization; the ascendance of white nationalist groups around the 2016 elections is another case in which previously marginalized groups took advantage of digital media to better organize and participate in the civic sphere.

Moreover, while digital media affords new modes of participation, these new forms of communication and engagement often generate or reflect existing patterns of

marginalization. The “digital participation gap” evolved along the racial and class lines as the gaps it was assumed it would obliterate (Gee, 2013; Mihailidis and Gerodimos, 2016). Minority and marginalized youth, as well as out-of-school youth and those living in poverty (all partially overlapping populations) are still less knowledgeable about civics and less engaged in formal ways than their peers (Rubin, El-Haj, Graham, & Clay, 2016). These gaps also characterize differences in access to civic knowledge and opportunities for preparation for and practice in engagement (Kahne & Middaugh, 2008). While around 2/3 of adults participate in some form of political activity online, the activity among youth is clearly impacted by income and school attainment, with higher levels of either tied to higher online political participation (Pew, 2013). Among youth, engagement with participatory politics is largely equal across ethnic and racial groups (Cohen, Kahne, Bowyer, Middaugh, & Rogowski, 2012). However, youth with the most education are roughly twice as likely to engage in participatory politics compared to youth with the least (Godsay, Kawashima-Ginsberg, Kiesa, & Levine, 2012). While the participation gap in participatory politics is not as large as is in institutionalized politics, there is still much work to be done towards amending these inequalities (Jenkins, 2016). The persistence of these gaps, as well as the emergence of new modes of gate keeping, should serve as a healthy reminder against overemphasizing the availability and breadth of choices open to individuals in the civic sphere.

Moreover, the new practices of investigation, production and circulation of civic content should not be understood solely in terms of the increased choice open to discrete individuals. The fact that digital media can support and reinforce individual efforts by making information more readily available, and more easily spreadable, would not have

led to such major shifts if it did not simultaneously reshape the ways in which individuals interact with others within civic contexts (McAfee, 2015). Hence, beyond the increased possibilities for civic participation open to individuals, digital media has also reshaped the ways in which individuals relate to the public sphere, an issue I now turn to explore.

Blurring of the Public and Private

Conceptualizations of digital media's effect on the civic sphere came about in two waves. The first stage, described above, was largely predicated upon the aspiration that the Internet could facilitate the creation of a Habermasian virtual public sphere where strangers deliberate on civic issues (Papacharissi, 2002). Through these new modes of interaction digital media offers citizens access to information that would bypass their dependency on traditional gate keepers, and simultaneously enable political discussion that extend beyond geographical and social communities. It is important to note that the focus here is still on *private* individuals who come together in *public* spaces. Yet, the perception of digital media's democratizing power shifted in light of the ascendance of social media and mobile devices. These developments underlie the ideal of the "networked citizen", which highlights the ways in which individuals' could move between private and public spaces, blurring the distinctions between social, cultural and civic action (Loader & Mercea, 2011; Mercea, Lekakis, & Nixon, 2013).

Once digital media had become a vital and widespread tool for civic participation, what was hitherto considered public action could now be carried out in one's private space through the use of electronic devices. In turn, this created a situation in which "civic obligations may be pursued alongside other social and pastime activities"

(Papacharissi, 2010, p. 138). Actions that could be considered social (sharing personal pictures), commercial (recommending a product), or civic (posting or sharing a post concerning social injustice), were now being conducted at the same time, on the same platforms, and with a similar network of individuals. Hence, the distinction between when one is acting on private vs. public concerns was rendered increasingly unattainable, and political action was more closely aligned with social or cultural activity (Soep, 2016).

These shifts characterize not only individual action, but have also resulted in a multiplicity of networks and groups that concurrently pursue social, cultural and civic aims. In this respect, the blurring of the public and private is tied to another central development facilitated through digital media – the ascendance of participatory cultures.

Participatory cultures are defined as:

[A] culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one's creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another. (Jenkins, Purushotma, Weigel, Clinton, & Robison, 2009)

Though initially focused on cultural production, over time, the prevalence of participatory cultures contributed to reshaping the patterns of civic participation. Individuals were now recruited to civic action not solely through institutionalized political actors, but also as part of belonging to groups centered on shared personal interests and cultural activities. Yarnbombing is an interesting example of these intersections. Yarnbombers take part in grassroots art projects in which they voice their positions by disrupting urban spaces through artistic use of knitting, in an attempt to:

[C]all attention to public eyesores, to offer alternative conceptions of how spaces might be used, and to call attention to local history and culture. As they pursue this work, yarnbombers also tap online networks, where they make plans, share results, and debate tactics with other participants.” (Shrestova, & Jenkins, 2016, p.1).

Recently, yarnbombers set out to knit pink pussy shaped hats for all participants in the Women’s March which took place on the Saturday after Trump’s inauguration, in protest of his chauvinistic attitudes towards women.

This kind of activity is not easily defined by traditional categories – the motivations and actions of participants are concurrently civic, social, expressive and artistic. Such actions are in no way original – the similarities to graffiti culture are apparent – yet, digital media facilitated an increase in the amount, variety and accessibility of these fluid forms of participation. Such interest-based groups can more easily communicate and mobilize, and individual members can more effectively communicate their actions to peers outside of these interest groups through social networks. Whereas yarnbombers are more of a fluid interest group, other communities have developed into full-blown and relatively structured organizations. The most notable example of this phenomenon is the Harry Potter Alliance. Currently boasting over 100,000 members, this fan community has taken an active role in a series of civic initiatives (often collaborating with civic organizations) such as raising \$123,000 after the earthquake in Haiti or calling more than 3,000 Maine voters in a day, urging them to vote against Proposition 9 that would ban same-sex marriage (Jenkins, 2015).

The fact that civic action online is peer-based and interactive does not mean that it promotes democratic ends or uses solely praiseworthy methods. One of the caveats of

research on digital media is the selection bias of researchers who tend to explore positive initiatives (Farrell, 2014). The #GamerGate controversy, which started in the summer of 2014, is an example how groups can use digitally mediated collaborative and interactive modes of action towards misogynistic ends (see Kafai, Richards, & Tynes, 2016). Relying on distributed and peer-based methods, GamerGate participants used their technological fluency to harass female members of the gaming industry, which they believed were emasculating the field (Cross, 2016). At its peak the GamerGate controversy led to cancelling a talk by Anita Sarkeesian, a central target for GamerGate harassment, in light of a threat of mass murder at the talk (Kafai et al., 2016). GamerGate participants used a collaborative, self-directed and horizontal mode of organization, so often heralded in the literature on digital civic participation, to promote morally troubling, illegal and anti-democratic ends.

GamerGate does only shed light on how digital media can be utilized towards illicit ends, it also exposes the challenges to productive communication in light of the quite simple and often overlooked shift in the modes of communication in the digital age. The rising importance of digital media results in a new state of affairs in which much of the communication in which citizens partake is written rather than oral, and for many more citizens there is an expectation to produce rather than merely consume political statements and expressions in writing. Whereas in the past citizens had very rare opportunities to publicly share written statements, digital media has facilitated the emergence of a new hybrid form of written, non-formal communication. In this manner, social networks destabilize the distinction between private and public communication. Where once, people could be rude and loud in oral, informal and private communication,

these patterns were largely excluded from public written media which was more tightly regulated, either through informal mechanisms such as the social norms characteristic their profession (journalists, politicians, etc.), or more formal mechanisms such as liability towards their employers.

This shift has important indirect results: while initially the capacity of non-traditional actors in the public sphere was presented as a valuable democratic opportunity (which it truly is), it is becoming clear that such actors, free of traditional forms of regulation, do not only enrich public discourse, they also simultaneously undermine it. This in turn shapes the modes of communication and interaction characteristic of the more traditional speakers in the public sphere as well. Donald Trump's use of Twitter is a clear example of this blurring of the informal from the formal, and the importing of "personal communication styles and routines" into public spaces (Papacharissi, 2010, p.140). Trump's style of communication is an extreme example of public, widely transmitted, and non-regulated communication, which presents new challenges to the democratic public sphere.

Moreover, in the virtual sphere individuals have far greater opportunities to interact with diverse others, and such interactions are not as strongly regulated through traditional social forces characteristic of a (relatively) tightly knit community on the one hand, or the more stringent norms of public communication on the other. Therefore, along with greater access, digital communication provides ample possibilities for miscommunication and offense, especially with the lack of shared assumptions and norms in ad-hoc groups, as well as the diffuse rather than formal or formalized

communication. In this sense, individuals have more personal responsibility both for their own communication and for monitoring others.

Importantly, digital platforms allow and encourage rapid, multiple-user statements. Such statements can be attributed or anonymous. With the cluttered ongoing exchange that many platforms generate, extreme and offensive statements are more visible and thus regularly prioritized (Jane, 2014; Lampe, Zube, Lee, Park, & Johnston, 2014). This might lead to shaming/flaming/trolling and other unproductive or uncivil modes of communication, which are more common in the anonymous or even attributed but impersonal forms of communication enabled by digital media. In the civic context of promoting shared goals and working to mobilize others, this problematic aspect of the digital public sphere can enable a loss of complexity and a limited or thin understanding of the shared vision.

Hence, while digital media has helped recruit previously marginalized or disinterested groups, it has concurrently challenged the interaction between different groups as misunderstandings and inadvertent offences are more likely to take place. In this respect, digital media facilitates new modes of interaction that do not only bring together individuals and groups who were previously separated, but also summon new challenges in maintaining the civic fabric that holds these different groups together.

New Forms of Diversity and Homogeneity

Liberal democracies are based on the assumption that citizens will not necessarily hold a shared conception of the good (Ben-Porath, 2012; Callan, 1997; Ward, 2016). Therefore, dialogue across differences is a fundamental practice in which citizens should engage.

The capacities to voice one's opinions, as well as the capacity to listen to others are some of the more foundational skills demanded of democratic citizens (Gould et al., 2011; Kahne et al., 2016; Mutz, 2013). Digital media has had two conflicting influences on dialogue in liberal democracies. First, it made it easier to voice one's opinion in public contexts and to interact with members of other groups. Paradoxically, the increased control of individuals' over their communication and the ability to communicate beyond traditional boundaries, has simultaneously reinforced the tendency and capacity to communicate mostly with like-minded others.

Scholars have argued that digital media allows individuals to collaborate or communicate with more diverse others than was previously possible. In addition, as the cost of organizing and sharing ideas is reduced, individuals can participate in mobilization efforts in which the shared goal is more limited than was readily possible in the past (Bennett & Segerberg, 2016). The collaboration and mobilization required in such contexts is tied only to certain aspects of personal identity, where various other dimensions can be bracketed or ignored. This is the case because digital "platforms perform at their best for cases of precise, goal-oriented, and time-constrained actions, such as political campaigns or protests." (Fung, Russon, & Shkabatur, 2013, p. 40). The more diffuse, ad-hoc and morphing nature of political organization and mobilization affects the relational expectations that citizens can have from each other in the digital context. If in the past most such relations had to be stable, ongoing and face to face, dependent on physical proximity and the coordination of meetings, today – while these remain – there are additional possibilities to organize in more limited and less personal ways (Loader & Mercea, 2011). The growing fluidity of civic participation, as well as the

increased control offered to individual over their communication and interaction patterns, creates opportunities for overcoming traditional group boundaries. Thus, for example, same sex marriage has garnered support from individuals from different social and religious groups, who might strongly disagree on other matters (Armenia & Troia, 2017).

Despite early optimism, with time researchers have realized that though digital communication can connect people across geographical and social boundaries, it often concurrently accentuates contentious group relations by limiting communication to like-minded individuals. The low barriers for online engagement and the widespread access to digital spaces do not mean that individuals' networks represent an ideal open forum of diversity and difference. For many, their online life mirrors the homogenous realities in which they live (Papacharissi, 2016; Stevens et al., 2016).

This is the case because digital communication currently operates on two distinct but related spheres: first, it strengthens and allows controlled interaction with known contacts (through social networks); second, it affords greater opportunities for communication with strangers who share a limited interest. In both of these contexts increased individual control has led to a growing tendency to communicate online with like-minded individuals, allowing many to operate within echo chambers in which their views are amplified and sometimes caricatured or evolve to their own extreme form (Mercea, Lekakis, & Nixon, 2013; Quattrociocchi, Scala, & Sunstein, 2016). Though the extent to which these bubbles shift news consumption is a matter of debate (Flaxman, Goel & Rao, 2016), it is evident that many people curate an online presence in which they are connected to people who share their key identity features, such as geographic

location, native language, ethnic/racial identity, and especially ideological leaning.⁶ This threat is further accentuated in light of algorithmic curation now characteristic of social networks; Facebook, for example curates users newsfeed according to analyses that show what they are most likely to be interested in. In such cases the convergence of technological capabilities and economic interests leads to an even narrower variety of views individuals are exposed to.⁷ Hence, paradoxically, the possibility of overcoming geographical limitations has led in many cases to focusing on interactions with physically remote yet ideologically similar individuals. This runs the risks of promoting a process of Balkanization in which various like-minded networks focus too narrowly on achieving self-interested aims in contentious politics (Levine, 2016).

Thus far, I have described three central developments in the civic sphere: the increasingly active role of individuals; the diverse ways in which individuals can now relate to civic issues; and how individuals and groups come to work together towards shared aims (or refuse to do so). A tension underlying these shifts is the gap between the possibilities for democratization enabled by digital platforms, and their actual manifestation.

⁶ It should be noted that such processes of homogenization are also taking place in physical communities – communities in the US have been going through a process of segregation according to class and race, and are significantly more segregated than they were thirty years ago (Owens, Reardon, & Jencks, 2016).

⁷ After the recent elections many critiques have conflated this problem with the ascendance of fake news on Facebook. While these two are interconnected, even if fake news items were edited out of Facebook, Twitter and other platforms, the economic motivation for catering to individual interests could still lead to providing individuals with a flow of information heavily biased towards their current views.

From Voice to Influence – The Challenge of Lasting Change

One of the main challenges facing digitally mediated civic action is translating mass participation into concrete and lasting political influence (Fung & Shkabatur, 2013; Allen & Light, 2015). Critics have argued that enthusiasts often conflate participation with actual influence (Jenkins & Carpentier, 2013). These critiques were strengthened in light of the long term failure of notable digitally mediated civic events such the Arab Spring and Occupy movement to affect concrete political realities (Zuckerman, 2014). The reasons for this state of affairs are diverse and complex. To begin with, it is a reflection of the affordances and limitations of digital media: civic initiatives are often scaled up rapidly at a stage when they are still lacking the infrastructure for long term political influence, and hence are not able to capitalize their initial achievements (Tufekci, 2013). Moreover, with time researchers have acknowledged that many effective civic movements mediated through digital media are concurrently a result of more traditional modes of organization that set the ground for mass participation (Wells, 2014). As these actions are less visible, they are often overlooked. In addition, many networked organizations, such as Wikis, develop hierarchical structures overtime, with a few central actors assuming de-facto leadership roles (Shaw & Hill, 2014).

While such arguments are not without their merits, they should not lead to a wholesale rejection of the possibilities introduced by digital media. A lack of staying power after a revolution is far from a novel or unique phenomenon to protests facilitated by digital media (Earl, 2014). Despite accusations of “slacktivism” (Morozov, 2009), online participation is more likely to replace lack of action than more demanding forms of participation, as Earl (2014) concisely notes: “two of the most fundamental things

social movement scholars know about movements: most people don't act, and more people act when costs are lower than act when costs are higher" (p. 173). Furthermore, there are cases in which demanding minimal effort from citizens can be useful – for example, if voting demanded more effort, voting rates would probably decrease (Zuckerman, 2014). Finally, researchers should be wary of simply equating traditional activism with effective civic action. Empirical research paints a much more complex picture, and although there is evidence of the impact of "street activism" (Gillon, 2012), as in the case of digital participation, it is often challenging to discern the actual political effects of protests and more traditional forms of activism (Bosi & Uba, 2009).

Instead of viewing this a question of whether digital participation is effective or not, it is worth distinguishing between engagement focused on civic *voice* versus *instrumental* change, regardless of whether it is pursued via digital platforms.

Instrumental participation aims to bring about a specific change: pass a law, challenge a social norm, or persuade an entity or person. Voice, in contrast, focuses on identifying with a group or a cause without offering a specific route for social change (Zuckerman, 2016). Thus, voice often precedes instrumental participation and enables certain ideas to gain visibility in the public sphere. It should be noted that the distinction between voice and influence is itself fragile and problematic at times. It is often hard to assess in practice the extent to which voice has led to influence. Moreover, in many cases the existence of new conversations among citizens can be seen as a worthy civic goal, regardless of the way in which they translate into concrete political influence (McAfee, 2015).

Nevertheless, this distinction is useful for thinking about the advantages and pitfalls of digitally mediated civic participation. While it is clear that digital media

increases the opportunities for diverse groups to voice their concerns, the instrumental ramifications of such initiatives vary. The DREAMers movement has given voice to undocumented immigrants, yet, the extent to which this group will achieve its goals remains to be seen.⁸ There are a few central reasons for the complexity of translating voice to influence. First, in some cases, the increased ability to voice a multiplicity of issues of public concern in the diverse and diffuse digital space can obfuscate the avenues for generating real and lasting influence, and thus might end up undermining the power and influence of unskilled political actors (Zuckerman, 2016). Second, as mentioned, the rapid pace of collective action facilitated by digital media can lead to instances in which successful civic action is not backed by infrastructure that would allow capitalizing on initial successes over time.

Finally, the ever-increasing amounts of content online create an audience problem in which the majority of content receives little to no public attention, with only few established or rising outlets reaching meaningful audiences (Levine, 2008). In this respect, data overload can serve as a new form of censorship. When individuals encounter mass amounts of unfiltered data that is difficult to interpret, they resort to relying on their predetermined views, rather on new information. For instance, unfiltered floods of materials offered by groups such as WikiLeaks might drown out significant bits of information by making them harder to find and identify. Finally, while the capacity for mobilization has increased in the digital age, such efforts can also encounter an audience problem in light of the increasingly large calls for action, challenges with mobilization

⁸ In light of Trump's recent victory, optimism concerning the DREAMers' cause is hard to come by. However, it is important not to pass judgment too swiftly, as such issues will be measured over longer periods of time.

leading to sustainable change, and the challenge of a deeper analysis of mobilization efforts that manage to go viral.

One of the most famous (or notorious) examples of viral online mobilization – Kony 2012 – exemplifies these challenges (Kligler-Vilenchik, & Thorson, 2016). Released on YouTube in March 2012 by a group called Invisible Children, Kony 2012 is a movie aimed to bring to light, and mobilize against, the atrocities of Ugandan war lord Joseph Kony and his army (<https://invisiblechildren.com/kony-2012/>). Beyond the movie’s dramatized narrative, its success in raising awareness among Western viewers was attributed to its reliance on networks of Christian youth. At the same time, Kony 2012 suffered from the above limitations: its success had to do not only with Christian youth, but also with an appeal to celebrities, a more traditional model of gatekeeping. In addition, it was criticized for simplifying the events taking place in Uganda and focus public attention on what was by then a relatively minor problem. And as in many other cases, it is hard to assess the actual impact the campaign had on US policy in Africa, for better or for worse (Fung & Shkabatur, 2015).

As can be seen, technology both shapes and constrains what forms of civic participation are available and sustainable. Still, though digital platforms increase opportunities for participation, and diversify the ways in which it is pursued, their influence on the civic sphere ultimately depends on how individuals make use of technology. Accordingly, the final part of this chapter connects the description of the changes to the civic sphere to the central issue of this dissertation – citizenship education. In this section, I broadly outline how the above shifts and challenges inform the democratic habits educators should aspire to cultivate.

Democratic Habits in Changing Times

After an initial period in which researchers aimed to highlight the importance of participatory politics and its relevance, there is a growing trend towards creating integrative frames which would describe the various skills needed for participatory politics as well as their interaction (see: Ito et al., 2015; Jenkins, 2016; Kahne et al., 2016; Soep, 2014). Some key issues relate to the need to teach youth critical engagement with sources and research skills, production and circulation of digital materials, and modes of generating dialogue.

Prior to asking how education can accommodate technological developments in the civic sphere, there is a need for a vision of what education for democratic citizenship is in the first place. This question is at the center of chapter 2 of this dissertation, which aims to unpack Dewey's vision of schools as sites for the development of democratic habits. At the same time, it is vital to contextualize such an inquiry by outlining the democratic habits relevant to today's civic sphere. My aim here is not to offer a definitive list of habits that could serve as an aim or a guideline for citizenship education (although this is an important venture in itself). Rather, I am interested in concretizing the broader trends in the civic sphere described above, and offering general categories of relevant democratic habits, in order to situate my theoretical arguments.

What habits of conduct did Dewey think educators should aspire to cultivate in a liberal democracy? Due to the flexible character of democracy, Dewey (1927/1988) avoided offering a clear outline of habits of democracy, arguing that these must be actively rediscovered by citizens in every historical context. Prior to outlining the habits

stemming from the centrality of digital media, it is worth introducing other contemporary Dewey-inspired articulations of democratic habits schools should develop. Višnovský and Zolcer (2016) delineate the habits of openness to others, willingness to help, selflessness, empathy, solidarity, a sense of social justice and responsibility. Stitzlein (2014) shares similar concerns and calls for cultivating the habits of shared fate, collaboration and compromise, deliberation, analysis and critique, and hope. Finally, Hansen and James (2016) offer a somewhat overlapping list: learning to speak up, learning to cooperate and collaborate, careful listening and thoughtful speaking, and reflection. The central themes emerging from these lists coalesce to the general categories of critical thought, collaborative work, and communication with diverse others. The similarities to the changes outlined above should not come as a surprise, as implied by Dewey's conceptualization of democracy as a form of associated living, these habits characterize the fundamental modes of interaction in democratic societies. In what follows, I concretize these broad categories in light of today's digitally mediated civic sphere.

First, the rising importance of active civic participation implies that youth need to practice the habit of *critical reflection on individual interests and their relation to public projects and societal values*. The importance of critical reflection has been repeatedly highlighted as a key aspect of civic participation (e.g., Dewey, 1927/1988; Gutmann, 1999; Westheimer & Kahne, 2004). Nevertheless, as noted by Levine (2016), the consistent trend of understanding citizenship in terms of choice accentuates the importance of critical habits. Note that this habit is different from the context-neutral skill of critical thinking, and already entails its application to social issues and public projects

(I elaborate on the relationship between skills and habits in chapter 2).⁹ Citizens in today's civic sphere are expected to define the problems they think are worth tackling, come up with possible solutions, and implement the required means towards achieving their aims. Consequently, schools have to actively support their capacities and habits to do so.

Second, the prominence of horizontal and collaborative modes of action emphasizes the need to develop students' *habit of participation in loosely structured work (peer-based and self-directed) on shared endeavors*. As outlined above, the increased opportunities for autonomous individual action should not be understood as conflicting with the need for individuals to connect and work with larger groups or networks. One of the main opportunities offered by digital media is for individuals to collaborate with other citizens in order to initiate civic action that is not mediated through institutional actors. Hence, more than ever before, the habit of collaborating with others under relative terms of equality has become a focus of the civic sphere. Developing such habits is a particularly challenging task for schools, who currently rely predominantly on authoritarian and individualistic models of student behavior.

Lastly, the emergence of new modes of diversity and homogeneity accentuates the vital role schools have in cultivating *habit of communicating productively across differences while maintaining a sense of shared fate in relation to the larger community*. This demands both concrete opportunities to interact with a variety of social groups (which students might not encounter in their curated online participation, or even in their increasingly segregated schools and neighborhoods), and an increased emphasis on

⁹ In this sense, it resonates the emphasis of critical theory on the importance of citizenship as based on a critical stance towards existing social structures.

sensitivity to the needs of others. If students simply learn how to engage in self-directed, collaborative civic action, they might do so in ways that are self-serving, and hence exacerbate existing inequalities and problems in communication. Hence, in similar fashion to the worries that occupied Dewey a century ago, today's schools are once again challenged to engage students in projects towards public goods that are beyond their own group interest, both within the school, and in in their communities.

Taken together, these three habits describe the broad contours of interaction demanded of democratic citizens in the rapidly evolving and digitally mediated civic sphere: (i) *critical reflection*; (ii) *shared endeavors*; and (iii) *productive communication*. In the next chapter, I turn to explore how a reconceptualization of citizenship education as an *organizing principle* of public education, depicting schools as sites for practicing democratic habits of interaction rather than sites for teaching civic skills and dispositions, can better support today's youth in becoming involved and effective democratic citizens.

Chapter 2

FROM CIVIC LESSONS TO DEMOCRATIC HABITS

In this chapter, I develop John Dewey's conceptualization of the civic role of schools as sites for children to develop *democratic habits*. Though Dewey's approach is now a century old, the renewed attention it has recently received (e.g., Hansen & James, 2016; Stitzlein, 2014) is not coincidental. Dewey's experiential and holistic conception of citizenship is particularly relevant in light of the changes currently taking place in the civic sphere, and the growing importance of active, collaborative and critical citizenship. Moreover, as I later illustrate in my analysis of video games' civic potential, technological developments do not only accentuate the importance of Dewey's approach, but also render its implementation more feasible (Waddington, 2015).

My aim here is not to delineate the specific democratic habits schools should aspire to develop, or to offer a full-fledged educational program. Instead I put forward a theoretical conceptualization of schools as charged with developing democratic habits, which will later be concretized and contextualized in my inquiry of the civic potential of playing and making video games. Nevertheless, in the examples I provide throughout this chapter, I rely on the broad democratic habits outlined in the previous chapter: (i) critical reflection; (ii) shared endeavors; (iii) productive communication.

Despite the growing disparity between the highly structured and slowly adapting school system and the rapidly shifting civic sphere, schools can and must play a vital role in citizenship education (Ben-Porath, 2013; Kahne et al., 2016). The first public institution most children encounter is a public school. Close to 90% of American children attend public schools, which provide them with the first and most sustained engagement

with care and ideas outside of their family. It is clearly within schools' role to provide an opportunity to all children to learn how to act in public, as citizens, in ways that are distinct from those expected and provided by their families.

A recent wave of studies in the field of citizenship education substantiates the need for a comprehensive approach (Hess & McAvoy, 2014; Kahne & Westheimer, 2014; Torney-Purta, 2002; Youniss, 2011). Some researchers have argued that while classroom- and textbook-based lessons for citizenship are conducive to civic knowledge and sometimes even to engagement, they have only a limited effect on students' future civic participation (Galston, 2001; Niemi, 2012). I expand these perspectives on citizenship education beyond explicitly civic lessons, arguing for a broader approach to the introduction of students to their civic roles, one that includes behavior codes, pedagogical approaches and curricular interventions beyond the civics classroom.

Current research on citizenship education usually identifies the aims of civic education as cultivating the *knowledge, skills and dispositions* needed for effective civic participation (e.g., Gould et al., 2011). In contrast, I develop a Deweyan framework of citizenship education based on the goal of developing *democratic habits* (Dewey, 1922, 1916/2001; cf. Hansen & James, 2016; Stitzlein, 2014). I contend that citizenship education is best understood and more properly advanced through a democratic habits framework. This framework tackles some of the central limitations of the current focus on the knowledge-skills-disposition trifecta. To be clear, I acknowledge the vital importance of civic knowledge and therefore assume its centrality to the process of citizenship education without further elaboration, as this is not the focus of this work. Understanding the key structures and processes of government, as well as basic

knowledge about core values of democracy, is central to any framework of citizenship education. Here, I am interested in the observed behavior aspects of citizenship education, and therefore on the comparison of the habits framework to the skills and dispositions approach.

I argue that the appeal to skills and dispositions (i) leads to overstressing direct components of citizenship education, at the expense of more indirect and implicit ones (e.g., school culture, disciplinary practices) which often have greater impact. This is the case because this approach (ii) focuses on offering *individuals* concrete and detached skills/dispositions for *future* civic participation, rather than exploring how habits of democracy are shaped by *present environments*. This in turn (iii) leads to overlooking the question of transference, which is one of the main challenges of citizenship education – the issue of how to cultivate patterns of behavior that will go beyond the educational context in which they are nurtured and manifest in civic contexts. Taken together, this results in (iv) setting educational aims which are either too shallow (skills), or too ambitious (dispositions). It should be noted that my objective is not to offer an entirely novel approach to citizenship education; rather, I wish to illustrate how a Deweyan theoretical framework makes better sense of existing successful efforts and points at a path for expanding on them.

While there has been a welcome resurgence of interest in the notion of democratic habits (e.g., Foote & Stitzlein, 2016; James, 2016), there is a need to further develop habits as a theoretical construct, and to distinguish them from existing approaches, in order to lay out their potential as a concept framing schools' civic role. The first part of this chapter lays out the argument for thinking of citizenship education in terms of the

cultivation of democratic habits. I start by describing Dewey's conceptualization of habits and their role in human conduct, followed by an examination of the central ways in which a democratic habits framework tackles some of the shortcomings characteristic of the currently prevalent skills and dispositions approach. This inquiry revolves around three central characteristics of habits: (a) habits are social, (b) habits are a form of practice, and (c) habits are interconnected. In the second part of the chapter, I connect the habits framework to existing efforts towards citizenship education. I do so by arguing that schools have three central roles in the process of habit cultivation: (i) facilitating opportunities for *practicing* democratic habits, (ii) creating consequential *connections* between these habits and civic experiences, and (iii) supporting *reflection on-* and explication of democratic habits. Relying on these three categories, I illustrate how the habit framework can integrate the disparate practices of citizenship education identified as effective in the literature.

Democratic Habits – An Introduction

Dewey's (1916/2001) approach to civic education is rooted in his famously thick perception of democracy. In his formulation, "A democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience." (p. 91). Citizenship education is therefore understood as the development of habits of interaction that allow individuals to become participants in democratic associated living. The word "habit" brings to mind an image of a mindless and repetitive action – driving on the same route to work or mechanically repeating the same distinct set of actions while solving a long multiplication problem. However, Dewey's main use of

the term habit deviates from these everyday connotations. Rather than perceiving them as undesirable mental residue, Dewey adopts William James' conceptualization of habits as necessary automatization of action that serves as the basis of learning and creativity (Dooley, 1991). By automating certain aspects of our conduct, habits open up the capacity to react to new and unexpected circumstances. James (1908) perceives habits as the source of stability, but also plasticity and change: "Plasticity, then, in the wide sense of the word, means the possession of a structure weak enough to yield to an influence, but strong enough not to yield all at once." (p. 110) In other words, without the background of minimal stability afforded by habits, the very notion of change becomes meaningless.

Therefore, although habits are a source of stability in human conduct, determining the interpretation of environmental stimuli and creating inclinations toward ensuing actions, they are not the opposite of thought. To clarify this important quality, Dewey distinguishes between *mechanical* and *dynamic* habits: the former are closer to the common use of the terms, namely, a form of repetition, usually unconscious, and one which can be achieved through *training*.¹⁰ By contrast, dynamic habits are accompanied by critical reflection, which means they are reconstructed according to accumulated experience (Hansen & James, 2016). In other words, the distinction between mechanical and dynamic habits can be understood by observing their diverging goals: dynamic habits are open to reconstruction and are cultivated to allow better reactions to fluctuating circumstances, whereas mechanical habits have the more limited goal of cultivating the ability to repeat a predetermined set of actions (in spite of shifts in environmental

¹⁰ Mechanical habits are also closer to the depiction of habits in psychological literature, which focuses on shaping local habits (e.g., flossing or smoking) according to cycles of stimulus and reward. For a recent summary of the literature, see: Wood & Runger, 2016.

features). In terms of their cultivation, the two differ in that mechanical habits are cultivated by mere repetition, while the practice of dynamic habits includes constant and incremental increase in difficulty as well as reflection and adjustment (Glăveanu, 2012). This distinction is not a simple dichotomy – habits can be more or less dynamic along a spectrum, and this also depends on the context and manner of their application.

This vision of plasticity within given conditions, or stability that still enables susceptibility for change, is central to Dewey's view on the relations between the individual and her social environment. Stability along with change provide the basis of Dewey's response to what he perceived as a false dichotomy between individual agency and social influence. While habits are shaped by social contexts, the individual acting habitually concurrently has the power to play a role in shaping her circumstances because habits are never a form of precise repetition of past actions. As environments continuously change (at minimum the actor himself is aging over time), individuals constantly make incremental adjustments to their habits in order to keep them stable (Dewey, 1922, pp. 39, 42). Dewey emphasizes that habits are both the ways in which individuals adjust to the environment, but that this adjustment also inevitably implies an active shaping of the environment:

Plasticity or the power to learn from experience means the formation of habits. Habits give control over the environment, power to utilize it for human purposes. Habits take the form both of habituation, or a general and persistent balance of organic activities with the surroundings, and of active capacities to readjust activity to meet new conditions. The former furnishes the background of growth; the latter constitute growing. Active habits involve thought, invention, and initiative in applying capacities to new aims. They are opposed to routine which marks an arrest of growth. (Dewey, 1916/2001, p. 57)

Our habits are constantly changing, exhibiting and forming the ways in which we are shaped by the environment, but also participate in shaping it. This depiction of habits as a mutual interaction between the individual and the environment reflects Dewey's broader conception of education as a reconstruction of experience (Dewey, 1938).

In what follows, I begin to unpack habits as an organizing concept for citizenship education by contrasting them with the common focus on skills and dispositions. This comparison is carried out by identifying three characteristics that distinguish habits from skills and dispositions, and that position them as a more productive alternative for thinking about the aims, modes, and challenges of citizenship education respectively: (i) habits are social, (ii) they are a form of practice; and (iii) they are interconnected.

Habits are Social

How does the social nature of habits inform the aims of citizenship education? The most fundamental aspect of Dewey's conceptualization of habits is that they are context dependent, meaning, they *constitute forms of interaction with the environment* (including other actors) rather than personal traits or capacities (Crossley, 2013; Pedwell, 2016).

Dewey (1922) challenges the common perception of behavior as rooted in a set of individual traits, and argues instead that human conduct is mainly a result of habituated interactions with environmental stimuli:

Honesty, chastity, malice, peevishness, courage, triviality, industry, irresponsibility are not private possessions of a person. They are working adaptations of personal capacities with environing forces. All virtues and vices are habits which incorporate objective forces. (p. 16)

What we come to see as internally motivated regularity of human conduct is in fact a result of repeated interactions with environmental stimuli which are habituated over time. Virtuous conduct is therefore an unending process, rather than a stable possession – we are constantly challenged to adapt our habits in relation to the stream of changing circumstances we encounter and create. The regularity of environmental stimuli in individuals’ lives obfuscates the interactive nature of habits in everyday life, but this distinction is key for thinking about the cultivation of conduct through education.

It is beyond the scope of this dissertation to address the more general debate concerning the role of character traits and environmental forces in determining individual conduct (see: Ben-Porath & Dishon, 2015). Instead, I wish to focus on conceptualizing the role of the environment in the narrower domains of educational institutions. In this context, I contend that the separation between skills and dispositions is based on an attempt to sidestep the complexity associated with the context dependent nature of human conduct. The skills and dispositions structure of teaching citizenship is parallel to the perception of learning as an acquisition of knowledge and skills. To learn how to read, for instance, or to learn the multiplication tables, one need not relate to a child’s context or to the local culture.¹¹ Rather, the teacher can teach those as rote skills, and practice them until they are ingrained. The only supplement needed according to common

¹¹ It is debatable whether teaching literacy or math can be done outside of children’s cultural context. Some scholars suggest that teaching must be adapted to students’ particular backgrounds, whereas others insist that schools can avoid context and focus on “basics” (see Anderson, Reder, & Simon, 1996; and Greeno, 1997, for a classical debate on this question). Although Dewey emphasized the importance of contextual factors in learning, I do not enter this fray, but rather elaborate why citizenship education needs to be responsive to context if it is to develop sustainable democratic habits.

contemporary views are dispositions such as motivation, or character traits such as grit to ensure that the child is inclined to practice the learned skill until they master it.

Citizenship education is conveniently described in a similar fashion. The designation of a behavior as a skill is meant to detach it from the *context of its use*.¹² If someone has the civic skill of “speaking” (Gould et al., 2011, p. 16), she is (generally) expected to be able to perform or use this skill across various contexts. It is convenient and straightforward to depict citizenship education as the cultivation of skills because it aligns with other aspects of skills-based teaching, such as reading or math. Those are often taught as skills that are directly transferable and which do not require particular understanding or adjustment of context. Dispositions (e.g., “concern for others”) are intended to complement context-free skills by instilling in children the desire to utilize their civic skills in the appropriate contexts. Thus, the skills and dispositions framework works well with the common distinction between people’s general capacity to perform concrete, discernible actions, and their motivation or tendency to do so across varying contexts.

While I do not wish to engage with the more fundamental critique of the skill metaphor of learning (Engeström, 2016; Sfard, 1998), I focus here on a key limitation of the skills and dispositions framework which is relevant to citizenship education. Even if we assume this approach works well for skills like reading and math, civic skills – “the abilities necessary to participate as active and responsible citizens in democracy” (Gould

¹² In addition, the designation of a behavior as a skill is meant to depict it as a value-neutral activity. In most cases, it is only within their context of application that skills gain moral value. Thus, the cultivation of skills allows avoiding the many moral disagreements characteristic of debates concerning the desirable forms of citizenship education (as well as moral and character education).

et al., 2011, p. 16) – for the most part cannot be easily separated from the context of their application. For instance, does the skill of “listening” not assume the disposition to try to understand the other’s perspective? What can be said of someone who has the skill to “collaborate” but will consistently choose not to do so when possible? Civic skills are skills that have to do with forms of shared living with others. Therefore, they are almost inherently complex and context-dependent.

Even if researchers, educators and policy makers were to find (and agree) on a list of imperative yet simple civic skills, the skills and dispositions framework is still problematic as context-free civic skills need to be complemented by civic dispositions. Dispositions, often used interchangeably with attitudes, are understood as “long-term habits, interests, and inclinations” that are central to individuals’ identity, and guide their conduct (Colby, Beaumont, Ehrlich, & Corngold, 2007). This is how Gould and colleagues (2011) describe the role of dispositions:

Civic learning also fosters dispositions supportive of responsible political engagement and encourages active civic participation. The personal dispositions important in a democracy include concern for others’ rights and welfare, fairness, reasonable levels of trust, and a sense of public duty. (p. 17)

Dispositions are intended to represent the motivations and behavioral tendencies to utilize civic skills in desirable ways. However, dispositions have the opposite problem than skills: it is not clear that schools have the capacity or the mandate to nurture entrenched individual dispositions, as those more personal and value-laden dimensions might be seen as belonging in the personal or familial realm. Moreover, when it comes to civic skills, the cultivation of relevant dispositions often necessitates their application in concrete political contexts, something that many teachers prefer or are encouraged not to

take on in class. In this respect, Dewey's critique against viewing dispositions as individual possessions detached from environmental cues is accentuated for schooling in liberal democracies.

Schools are more likely to contribute to the cultivation of dispositions when they promote a similar set of values and behaviors (or habits) to those promoted in the family; or when they function as cohesive community unified by a shared conception of the good (e.g., parochial schools) (Strike, 2003). However, public schools are inherently discouraged from promoting a specific comprehensive conception of the good, as they must cater to diverse social groups (Callan, 1997; Levinson, 1999). Demanding that schools promote ingrained individual characteristics, including dispositions, sets the bar too high (Gutmann, 1999). Therefore, skills in themselves are insufficient and while dispositions are a laudable cause they are too ambitious and too vague. Substituting the aim of cultivating civic skills and dispositions with a the more modest aim of developing democratic habits could offer a more fruitful and consistent approach to citizenship.

The habit framework replaces the qualitative distinction between skills and dispositions with a difference of degree. Instead of skills and dispositions, we might think of Dewey's aforementioned distinction between mechanical and dynamic habits. Skills can be perceived as relatively mechanical habits: long multiplication, high jumping, touch typing. As such, they do not demand conscious decision making and relatively depend very little on the environment. In a way, they are similar to what behavioral scientists call "system I" which is an automatic and intuitive type of response to stimuli (Kahneman & Tversky, 1979).

Referring to a habit as mechanical does not imply that it is easy to learn or master, nor is it less valuable or important. Instead, mechanical habits denote forms of behavior that rely less on conscious reflection. Such habits can be nurtured through training and their application aims to overcome fluctuating environmental characteristics rather than to react to them. The characterization of habits as mechanical is not only a reflection of the activity itself; it must also consider the context of application. For instance, reading might often be a mechanical habit (as when reading a familiar street sign) but might also be dynamic when one encounters a complex text that requires an active process of deciphering. Accordingly, dynamic habits are more sensitive to environmental cues, less stable, demand more conscious thought, and are harder to specify and cultivate.

A somewhat simplified example of a professional basketball player might illustrate this distinction. From early in his childhood, the player has been practicing a limited set of habits: not only how to pass, dribble and shoot, but also how to position her feet and body in a variety of situations on the court. While the repeated practice was meant to render these actions *habitual*, the ultimate goal was to prepare for unexpected contexts. Having routinized dribbling and passing, the player can better improvise and react to the changing circumstances stemming from her opponents' and her teammates' actions. Dewey describes this difference by asserting that in the case of dynamic habits the actor "acquires greater skill because practice *of* skill is more important to him than practice *for* skill." (Dewey, 1922, pp. 71-72, emphasis in the original). While basketball is a relatively routinized example due to the similarity of circumstances enforced by the game's rules, the same logic can be applied to more complex habits. Thus, for example, research on fire fighters has shown how their routinized habits allows them to better react

to the complex and rapidly changing circumstances they encounter in their work (Klein, Calderwood, & Clinton-Cirocco, 2010).

How is this description of the basketball player's mechanical and dynamic habits, related to citizenship education? Like the athlete, citizens need to develop a repertoire of actions that can be deployed in varying circumstances. Some of her acts need to be automatic, or mechanistic – using respectful language, taking turns, for instance, do not regularly require reflection. But like most civic actions these too need to be reflective and dynamic even as they are expressed in the form of habitual action.

Whereas schools are at least fairly successful at cultivating skills – mechanical habits that rely mainly on repetition, the cultivation of complex skills or dynamic habits has proved far more challenging (Pellegrino & Hilton, 2013; Perkins & Salomon, 2012). This is the case exactly because dynamic habits are context-dependent, and as such cannot be cultivated simply through repetition. The majority of civic skills and dispositions identified in the literature falls under the definition of dynamic habits (this also applies to 21st century skills more broadly). Civic skills such as those mentioned above – collaboration, listening – rely on interaction with others, and are therefore dynamic and context-dependent. While the context dependence of habits entails more humility concerning the aims of citizenship education, it also points the way to thinking how school can offer a (limited) contribution to this effort.

Habits are a Form of Practice

While the habits framework posits more modest aims, it concurrently better conceptualizes the *modes* of citizenship education. The depiction of habits as complex

patterns of interaction with environmental stimuli rather than individual traits exposes the dynamic character of their cultivation. Given that habits develop as a result of repeated reactions to environmental forces, their cultivation can only be pursued by structuring environments which enable “immersing individuals in practices of shared living where those habits serve their needs well” (Stitzlein, 2014, p. 68). Therefore, schools’ influence on students’ civic behaviors goes beyond explicit forms of teaching: through the pedagogies, curricula, rules, norms and routines practiced in the everyday life of schools, children learn habits of interactions with peers and adults, which shape the “hidden civic curriculum” (Gutmann, 1999; Levinson, 2012). Attention to the hidden curriculum is critical because although it can be a powerful means of positive influence, in practice, it often undermines explicit forms of civic education by highlighting a contradictory value system which prizes competition, inequality of rewards and authoritarian relations (Ben-Porath, 2013; Jackson, Boostrom & Hansen, 1993).

Schools’ civic role is thus not captured well by the skills and dispositions framework and would benefit from being focused on their function as public spaces and on their role in developing civic-democratic habits. Schools are usually the first and most central public space which children encounter. It follows that children practice their habits of public conduct in schools, regardless of educators’ intentions (Ben-Porath, 2012; Levinson, 2012). Thus, although families remain by far the most influential determinants of conduct (Lareau, 2011), schools play a pivotal role in shaping a more limited set of habits having to do with conduct in public (and therefore civic) contexts.

Consequently, the habits framework does not focus solely on explicit civic knowledge or action, but rather considers how civic behaviors such as collaboration and

deliberation can be cultivated in the everyday life of classrooms and schools (Dewey, 1909). If such civic behaviors are to become enduring, their cultivation ought to be diffused through multiple settings and cannot be divorced from academic learning, which occupies the majority of students' time (Ben-Porath & Dishon, 2015). By putting to intentional use the overlooked civic contributions of additional academic activities, the habits framework is intended to enhance the cultivation of democratic habits, especially for underrepresented groups who have less opportunities to practice such behaviors outside of schools (Kahne & Middaugh, 2008), without demanding an upsurge in instructional time or monetary resources.

The habits of interaction inherent within the hidden civic curriculum do not imply that habit cultivation is merely a process of repeating externally defined behaviors. Habits are not simply “things we do,” they are also “ways we react.” Put another way, habits are solutions to problems we encounter in the environment (Nelsen, 2015). Consequently, education that is meant to be habit-forming, especially if dynamic habits are involved, is not a matter of *offering new solutions*, rather, it is *posing different problems*. If today's civic sphere demands developing the habit of critical reflection, preaching about the importance of critical reflection, as well as offering concrete techniques to practice it, are likely to have a limited effect if they are not accompanied by situations in which critical reflection is a viable solution to the challenges at hand. Hence, while direct instruction on the importance of critical thinking and ways to better pursue it is vital (an issue which I elaborate on in the second part of this chapter), without a long-term set of contexts in which students can meaningfully practice it, it is not likely to become a regular pattern of behavior (Abrami et al., 2015). If the classroom context is one which prizes rule

following and discourages a critical approach both to content matter and to school norms, students will have little opportunity to practice the dynamics of critical thinking and to develop the more complex set of tendencies and capacities that make up the democratic habit of critical reflection.

Hence, democratic habits can be cultivated by presenting students with situations that do not directly introduce civic knowledge or demand specific obligations, but rather indirectly call for certain modes of behaviors such as collaboration, thoughtfulness, and compromise. The way in which these interactions are designed is likely to have a pivotal influence on students' democratic habits. Are children encouraged to work together on class assignments? Are they allowed to challenge class norms? What characterizes classroom discussions? What level of control do students have over their recess time? How do students sit in the cafeteria? What kind of consequences do disciplinary infractions incur? Who gets to decide about these? There is no one correct answer to these questions. Yet, the choices educators make are central ways in which they can influence the cultivation of students' democratic habits.

I have suggested that the minimal condition for the cultivation of meaningful democratic habits within schools is the construction of environments (academic and other) which facilitate the practice democratic habits. This assertion relies on the assumption that the structure of the school must correlate with, though certainly not mirror, the structure of the democratic environment within which children act outside the schools. This does not imply that schools need to be structured as direct or representative democracies to promote democratic habits (Laden, 2013). Dewey identifies the minimal attributes that designate a learning environment as democratic: "it consists in having a

responsible share according to capacity in forming and directing the activities of the groups to which one belongs and in participating according to need in the values which the groups sustain” (Dewey, 1927/1988, p. 327). In other words, every child should have at least some opportunity to shape the environment in which she spends her days, for example by contributing content through minimally-structured discussion, or through being responsible for chores, or by being consulted when a fight or another infraction occurs. In this respect, cultivating the habit of *work on shared endeavors*, which is often lacking in our age of contentious politics, is mainly rooted in offering students opportunities to pursue such endeavors within their school community (in an age appropriate manner). This experience cannot be achieved through direct instruction.

Because a habits framework recognizes the role of implicit factors, the impact of values and the centrality of interaction to the democratic education of youth, it facilitates a better understanding of schools’ civic role. These insights are also acknowledged in the skills and dispositions approach to citizenship education. For instance, it is generally agreed that participating in contexts in which certain dispositions are valued facilitates their developments. Students are more likely to stand up for a peer in classroom characterized by fair and equal treatment (Flanagan, Stoppa, Syvertsen, & Stout, 2010). Similarly, active civic learning increased students’ propensity to participate in their communities (Kahne & Middaugh, 2008). However, a habits framework emphasizes the centrality of such environments, and clarifies the connection between school characteristics and civic behaviors. In addition, it facilitates a more nuanced understanding of how such efforts connect to the more direct forms of citizenship education, an issue I develop in the second part of this chapter.

Thus far, the malleability of habits has been presented mainly as an advantage – a way to understand how democratic habits can be developed. However, this malleability also implies that due to their inherent dependence on environmental factors, the application of habits cultivated in schools is necessarily limited by the situational features of future environments. Thus, if the school environment is structured in a way that nurtures collaboration, students can be expected and guided to develop collaborative habits when offered the opportunity. Yet, if they later encounter an environment which shuns or discourages collaboration, over time they may adjust their habits in a manner appropriate for this environment. This is particularly problematic as we assume that the habits acquired in schools are commonly not as deep seated as the ones children develop at home. Educators should take into account the potential tension between habits practiced in schools and habits practiced in external settings – especially the family – and future settings (Pamental, 2010). Thus, the fact that habits are a context-dependent form of practice exposes a pivotal challenge of citizenship education – the relationship between what is learned in educational contexts to what is applied in civic contexts.

Habits are Interconnected

Why does a habit framework better address the *challenge* of applying behaviors acquired at school to civic contexts? The importance of active learning is one of the insights most associated with Dewey’s work to this day. However, a foundational assumption underlying this approach concerning human conduct and its relation to education is often overlooked. Dewey applies a Newtonian framework to human conduct – activity, and not inertness is the basic human condition. When applied to structuring learning contexts, this

implies that children are naturally active learners, and hence education should build on their curiosity and need for activity rather than stifle it. In the context of habits, it implies that children come to school with habits already formed in other environments, especially their homes. These habits, although generally stable, are also inclined to continually shift and change as a result of the changes in children's internal capacities and external environments. Therefore, the goal of education is not to force a change process on generally fixed individuals, but rather to consider how inevitable change processes might be shaped in a more fruitful way.

Accordingly, one of the often-overlooked aspects of citizenship education is an examination of the interaction between the habits educators aspire to cultivate with students' prior habits, as well as those cultivated in the family or other out of school settings (Hansen, 2002). As habits are dependent on environmental stimuli, they are likely to vary between different contexts. However, this does not lead to Dewey to perceive conduct as simply context dependent, as has been argued by the situationist critique in recent years (e.g., Doris, 2002). Instead, Dewey presents a transactional understanding of the interaction between habits, fluctuating environments, and what is often referred to as character:

If each habit existed in an insulated compartment and operated without affecting or being affected by others, character would not exist... But since environments overlap, since situations are continuous and those remote from one another contain like elements, a continuous modification of habits by one another is constantly going on. (Dewey, 1922, p. 38).

The two functions schools fulfill in this process of continuous modification are of *balancing* and *steading* students' habits (Dewey, 1916/2001). First, schools can

facilitate a *balance* between three elements: the respect they provide to students' prior habits, the effort to expose them to the possibly-diverging habits of members of other social groups, and the establishment of a shared base of democratic habits. Moreover, in a pluralistic liberal democracy, schools cannot take for granted congruence between habits cultivated at school and those characteristic of students' families and communities.

Instead of attempting to collapse the two or to situate one set of habits as preferable, schools are charged with *steadying* these various habits:

The school has the function also of coordinating within the disposition of each individual the diverse influences of the various social environments into which he enters. One code prevails in the family; another, on the street; a third, in the workshop or store; a fourth, in the religious association. As a person passes from one of the environments to another, he is subjected to antagonistic pulls, and is in danger of being split into a being having different standards of judgment and emotion for different occasions. This danger imposes upon the school a steadying and integrating office. (Dewey, 1916/2001, pp. 26-27)

Schools are thus called upon to coordinate the habits students develop in different environments so as to will allow them to see the connections between the contexts and organize them in an integrated framework. Absent such framing and integration, habits developed in school – which tend to come later and possibly be less central to a student's identity – are in danger of being perceived as relevant solely within the school. This might be fine for ones related to the learning styles or behaviors expected in the classroom, but could undermine the possibility of democratic habits cultivated in school influencing behavior in other social contexts.

The key to understanding schools' role in this process of balance and integration is that habits are never isolated, they are always *interconnected* and can even conflict with each other (Dewey, 1922). Habit cultivation is not a matter of creating a desirable

habit from thin air or eliminating an undesirable one. Instead, it entails attempting to influence the constellation of existing habits in a way that helps more desirable ones have a stronger influence on conduct. The question is not just whether individuals have a certain habit, but rather which other habits are competing with it and how they relate to environmental characteristics (Noble, 2013). Hence, it is the interactions between different habits and their expression across environments that are shaped through education (rather than direct cultivation of the habits themselves).

The exact relationship between habits and dispositions remains vague in Dewey's work. I suggest that recognizing the plural and interconnected nature of habits helps clarify this relationship. When a certain constellation of habits tends to appear together over time we interpret these as a disposition. What we perceive as dispositions (or character more broadly) is a result of various habits bundled together in a certain constellation (Nelsen, 2015; Pedwell, 2016). In this respect, habits and their connections are the building blocks of dispositions. While it is beyond the scope of this paper to develop the exact structure of habit interaction,¹³ I point out that the attempt to shape dispositions, including widely debated ones like grit or zest, can be broadly understood as attempting to cultivate certain habits and stabilize their interactions with existing habits. Dispositions are descriptions of individual conduct which are too broad to be useful in educational contexts. By focusing on habits and their clustering we can conceptualize more meaningfully how to bring about change at the appropriate level through educational efforts. Hence, while the desirable end result of habit cultivation would

¹³ I believe such an attempt can help clarify schools' role in the cultivation of democratic habits. For this reason, I suggest that a network model might be particularly fruitful as it allows laying out and organizing the relationship between individual's habits in a nuanced yet systematic manner. In future research, I plan to develop the network model of habit interaction.

include shaping relatively stable dispositions for democratic behaviors (to the extent this is possible), the educational process would not appeal to these dispositions directly, but would rather focus on more local habits and their interaction. Moreover, such a process would have to rely on awareness to how these habits interconnect with students' habits outside of the school, in order for these habits not to become solely school-relevant.

For example, to cultivate the democratic habit of peer-based and self-directed work, it would not suffice to structure collaborative activities in which students have shared goals, although these too are very important. It is imperative to concurrently explore which related habits might undermine or promote collaboration. A dynamic and complex habit such as collaboration depends on a variety of other habits, from relatively closely related habits such turn taking, speaking, and listening, to more distant ones such as the habit of personal responsibility, or the habit of prizing product over process. Thus, while the habit of personal responsibility might be highly valuable in many contexts, it could concurrently lead students to view collaboration as detrimental if it implies working with less capable group members. Similarly, if students have the habit of interpreting learning in terms of a quantifiable body of knowledge they have acquired, helping a group member might seem like a waste of time, or a moral duty, rather than an action that contributes to their own learning. Similarly, it is important to consider what existing habits are likely to be strengthened by the environmental characteristics at hand. Therefore, structuring an appropriate environment is informed by students' existing habits, at the individual and at the group level. Although educators cannot account for the multiplicity of individual and group habits, the principle of considering existing habits – both competing and supportive – should guide their thinking.

Furthermore, for democratic habits cultivated in schools to have a lasting effect on conduct, students must be provided with opportunities for practicing these habits across a variety of environments in which they are relevant. This is the case for two reasons: first, if habits are practiced in only one context they are in danger of becoming too closely tied to the environmental characteristics of that situation (Ben-Porath & Dishon, 2015). Thus, the habit of collaboration might become dependent on other habits which are characteristic in the classroom (e.g., turn taking) but are less salient in other contexts. Therefore, it is the aim of educators to create a continuation of environments that will allow students to practice democratic habits in a variety of related, yet distinct, environments (classrooms, afterschool clubs, hallways, playgrounds, and so on).

Second, for democratic habits to be viable in the long term and to help guide action, students need to develop them as dynamic rather than as mechanical habits. For Dewey, the cultivation of dynamic habits is the essence of education and aligns with his broader conceptualization of education as the “reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience.” (Dewey, 1916/2001, pp. 81-82). Schools that focus on drilling practices for what are taken to be essential or basic skills often create an environment in which specific, well-defined skills are memorized and practiced until they become mechanistic habits. The stable environment in which most aspects can be anticipated generate a neutral context for taking on the new skill (or habit). This is both effective and efficient, but it should be noted that it creates limited opportunities for developing more complex and dynamic habits that require reflection, adaptation and adjustment. If a basketball player always practices alone she may become an expert at

dribbling and shooting, which are mechanistic, but she will need significant additional exposure and other forms of practice before she can actually play the game with a team. Similarly, democratic habits practiced in schools such as collaboration or respectful discussion will remain exceedingly limited if not practiced in a more open and varied environment in which one can try out forms of reflection, adjustment and adaptation to others' responses and to changing circumstances. Democratic habits are only worth their name if they are based on autonomous judgment and decision making and do not rely on mere repetition of externally enforced behaviors (Kraftl, 2016).

The first part of this chapter was dedicated to introducing habits as a theoretical conceptualization of the civic role of schools. In the second part, I examine how the habit framework facilitates a better understanding of current effective practices identified in the citizenship education literature. I do so by distinguishing the three central roles schools have in cultivating democratic habits – practicing, connecting, reflecting.

Democratic Habits, Educational Environments, and Civic Lessons

A considerable body of research has been amassed in recent years concerning the various ways in which schools could contribute to civic education. In a review of the empirical literature on civic education, Gould et al. (2011) list “six proven practices constitute a well-rounded and high-quality civic learning experience” (p. 6). These practices include: classroom instruction, discussion of current events and controversial issues, service-learning, extracurricular activities, school governance and simulations of democratic processes. Earlier reports such as Kahne and Middaugh (2008) and Gibson and Levine (2003) arrive at similar conclusions. To these practices, I add the importance of action

civics (Blevins, LeCompte & Wells, 2016; Levinson, 2012) or youth participatory action research (Kirshner, 2008; Kornbluh, Ozer, Allen, & Kirshner, 2015), which position students as active civic contributors in their own communities.

Though the identification and characterization of effective educational practices is both welcome and essential, it would benefit from a comprehensive conceptualization of the civic role of schools. When examined from the perspective of skills and dispositions, these efforts remain theoretically disconnected. However, within a democratic habits framework the respective of role of each of these practices, as well as their interaction, becomes clearer. These contributions can be broadly divided into three categories: *practicing democratic habits, creating consequential connections* and *reflecting and explicating*. In the next sections I discuss how the different practices fulfill these three roles. As will become evident, the separation into different sections according to each of these categories is pursued for sake of the argument's clarity, as most of these practices concurrently fulfill several roles.

Practicing Democratic Habits

As argued throughout this chapter, the most foundational role of schools is facilitating opportunities for students to *practice democratic habits* across the academic curriculum and in the everyday life of schools. Hence, the backbone of citizenship education is establishing a democratic ethos that characterizes the interactions between students and teachers, and among the students' themselves. In other words, from a democratic habits perspective, the primary and most vital challenge facing schools, is how to realign academic contexts in ways that facilitate meaningful and ongoing practice of democratic

modes of behavior. Existing research has identified the importance of such democratic interactions within the school to civic engagement, even when they are implemented on a much smaller scale. Yet, I contend that current efforts err by limiting democratic interactions to relatively negligible and well-defined parts of school life.

The two practices most closely aligned with this aim are *school governance* and *discussion of current events and controversial issues*. These practices highlight the importance of students having firsthand experiences in democratic environments. Participation in school governance activities is seemingly the most overt way of offering youth democratic experiences in schools (below, I detail the challenges characterizing the implementation of school governance in schools, which commonly does not live up to its democratic promise). School government is a structured occasion for students to *practice democratic habits*, which not only offer democratic experiences, but also facilitates *reflection* on these experiences. This is the case because the explicit nature of activities invites students to reflect on the challenges of democratic governance, both at the structural and the individual level.

In contrast to the experiential character of school governance, discussions of current events and controversial issues are more common practices that can be carried out within a relatively traditional school structure. These discussions bring together the need to expand students' civic knowledge and awareness by engaging them directly in discussion on civic issues, with opportunities to practice important democratic habits in a classroom context: public speaking, perspective taking, open-mindedness and so on (McAvoy & Hess, 2014; Tourney-Purta, 2002). Therefore, these discussions simultaneously achieve the aims of *practicing democratic habits* and *explication and*

reflection. When carried out properly, such discussions open a safe space within the school context to argue with those who hold different positions, while explicating and reflecting on the challenges of such disagreements in a liberal democracy.¹⁴ Importantly, this can be achieved as part of the academic curriculum, either in dedicated courses to civics or government, but also more broadly across the social studies and humanities in such classes such as History and English.¹⁵

The importance of these two practices stresses the shortcomings of the skills and dispositions approach to citizenship education. First, while school governance opportunities are invaluable, they comprise only a very small part of school time. Moreover, in most cases they are unfortunately compromised; only a small part of the student body participates in these activities, and they are commonly not offered meaningful decision making authority (McFarland & Starmanns, 2009; Youniss, 2011). Furthermore, as school governance is usually only a marginal aspect of school life, it is vital that it does not divert attention from the less direct but more broad structuring of school environments in general. As for discussions of current events and controversial issues, their validated indirect contribution to citizenship education highlights the fact that such opportunities should be far more prevalent within the school system. While schools are increasingly under extreme pressures to achieve academic thresholds in this age of standardized testing (Ravitch, 2010), this chapter suggests that schools could do much more in way of giving students opportunities for democratic interaction without

¹⁴ As Hess and McAvoy (2014) show, although there is generally a worrisome process of homogenization of schools, even within schools that are considered “red” or “blue” students can fundamentally disagree on political issues.

¹⁵ See for example the Facing History and ourselves Curriculum (Schultz, Barr, & Selman, 2001).

compromising the academic aims of schools.¹⁶ Such opportunities should not be a peripheral characteristic of schools, but rather an organizing principle of the academic curriculum.

Creating Consequential Connections

The next two practices – *action civics* (which I characterize in this context as a more civically oriented iteration of service-learning), and *extra-curricular activities* – illustrate the broad spectrum through which schools can create consequential connections, defined as opportunities for youth to see the connections between their actions in educational and civic contexts (Ito et al., 2015).

The vital importance of engaging students in action civics or youth participatory action research is that it allows practicing democratic habits beyond the school context, thus strengthening their cultivation in general, and particularly so because they offer students immediate experiences and wherewithal in the civic sphere (Kornbluh et al., 2015; Levinson, 2012). Facilitating opportunities for civic action within a school context is vital to *creating consequential connections* – integrating the democratic habits cultivated in schools and students’ habits outside of schools. Moreover, action civics serves as a setting that can *explicate* the connections between the democratic habits practiced and the motivations underlying them (by situating students as initiators of civic action within their immediate contexts), thus opening up a space for meaningful *reflection* on civic issues (Blevins et al., 2016).

It is easy to see why action civics has become the gold standard of citizenship education – fulfilling each of the three roles delineated above. Yet, not only do a very

¹⁶ While schools might improve by dedicating more to civic ends, the crux of my argument is that even within existing priorities, more can be done to concurrently achieve both aims.

small portion of schools engage in actions civics, the amount of time and effort which schools can dedicate to such activities is likely to remain limited. As argued, the cultivation of democratic habits cannot be confined to such a small part of students' lives in schools, and should be understood as an organizing principle of school life. If citizenship education is pursued solely via dedicated civic initiatives, it is not likely to achieve its aims as students will not have sufficient opportunities to practice their democratic habits for these to become relatively stable characteristics of their conduct. This is particularly imperative for students from marginalized population which are often deprived of democratic interactions in academic settings (Ben-Porath, 2013). Hence, the high esteem in which action civics is regarded should not come at the expense of recognizing the more pervasive opportunities for practicing democratic habits.

At the other side of the spectrum are extra-curricular activities, which are often not directly related to democratic experiences. Citizenship education research has stressed the importance of loosely structured, youth-directed activities – one of the main indicators for youth civic engagement is participation in extra-curricular activities (Kahne & Westheimer, 2014; McFarland & Thomas, 2006). Interestingly, though participation in explicitly civic activities has the most significant correlation to civic engagement, extra-curricular activities in general have been found to be conducive as well (Sherrod, Flanagan & Youniss, 2002). Whereas within the skills-dispositions framework non-civic extracurricular activities seem disjointed from other practices, within a habit framework, their vital importance becomes clear. Not only do they offer opportunities for practicing important democratic habits often lacking in current schools (Biesta, Lawy & Kelly, 2009), they do so in a context more similar to civic contexts in its self-directed and

loosely structured nature. As Kahne et al. (2015) detail: “interest-driven activities provide youth with opportunities to develop civic skills – how to speak in front of a group, how to plan collective undertakings, how to mobilize others – and productive norms of behavior within organizations and social networks.” (p. 48).

The contribution of extra-curricular activities to civic engagement stresses the vitality of *creating consequential transitions*. While the foundation of citizenship education is a classroom environment characterized by mutual respect, collaboration, critical inquiry, and reflective action, schools need to search for avenues to expand the cultivation of democratic habits to other contexts. Extra-curricular activities can create such connection because they are commonly loosely-regulated – in them youth can practice leadership roles still under the supervision of adults. Hence, they serve as a gateway between adult-governed activities and youth led initiatives. Finally, extra-curricular activities expand the variety of contexts in which democratic habits are practiced, thus strengthening their cultivation.

Reflection and Explication

Finally, direct civic lessons – *classroom instruction* and *simulations of democratic processes* – are still a vital and needed component of citizenship education, even within a habits framework. While currently viewed as vital civic tools, without a background of habit cultivation their influence is likely to be negligible (Neimi, 2012). However, if utilized within an approach that facilitates meaningful indirect civic experiences (that is, opportunities to practice democratic habits), classroom instruction and simulation of democratic processes can offer not only civic knowledge, but *explicate* connection

between the school setting and civic contexts and facilitate *reflection* on the various components of citizenship education discussed above. In other words, within a habit framework the role of direct instruction can be re-conceptualized not as a simple transmission of knowledge or cultivation of skills but rather as a necessary step in reflecting on the habits practiced in other contexts, and explicating the connections between habits practiced in schools and the broader civic sphere. While practicing democratic habits in classrooms and across a variety of contexts in schools should be the foundational component of citizenship education, it is insufficient if not accompanied by opportunities for reflection intended to facilitate the intentional reshaping of habits.

Dynamic habits are only dynamic if individuals have at least minimal awareness of their action. Although habits are not simply and consciously controlled, the existence of dynamic habits entails an intentional involvement on part of the actor in the process of their recalibration (James, 2016). This implies that direct instruction can serve as more focused occasions for reflecting on the democratic habits practiced throughout school life, and examining their applicability to civic contexts. Importantly, direct instruction on civic issues should not be limited to lessons that focus solely on civics. For example, Esmonde (2014) explores how students can learn mathematical concepts and skills while applying them to social issues; e.g., exploring and analyzing inequalities in the distribution of resources across communities.

This is doubly true for simulations of democratic processes, which can serve as opportunities to examine the more complex and challenging aspects of citizenship in a liberal democracy in a situated and engaging manner. Again, the shift here is in how role of such simulations is conceptualized. A model UN, one of the most common civic

simulations in schools, is likely to have a much stronger effect if the attempt to manage global politics connects to simpler everyday challenges students experience in schools (Dewey, 1916/2001). The importance of this connection between explication and reflection on the one hand, and democratic experiences on the other hand, will become more evident in chapter 3 where I discuss in depth the civic potential of video games, the most common form of civic simulations (Kahne & Westheimer, 2014).

Connecting Different Practices

In lieu of a summary, let us consider how these three components interact in the cultivation of one democratic habit – peer-based and self-directed participation. To support the development of collaborative habits, direct instruction can include discussion and exploration of the importance of collaboration, learning about it by studying from examples (historical, literary or made up), or by engaging in experiential simulations of collaborative practices (Nokes-Malach, Richey, & Gadgil, 2015; Rummel & Spada, 2005). However, collaboration cannot be cultivated by merely demanding it. Even if students would have an interest in developing their capacity for collaboration, deciding to do so is not likely to be sufficient (Pedwell, 2016). Therefore, educators need to concurrently pursue environment design that would focus on engaging students in tasks in which collaboration is useful or necessary. Merely offering students group activities is not likely to lead to collaboration even if teachers repeat over and over again the importance of teamwork. It would be more effective to design an environment in which collaboration is a useful way to tackle the task at hand (e.g., a task that is too complex or extensive for one student) (Foote & Stitzlein, 2016). In turn, reflection on the role of this

active collaboration in the learning process would then supplement collaborative experiences and also would assist in relying on students' view to redesign the collaborative environment to fit their needs. However, this process is gradual. If students who find collaboration challenging are unceremoniously pushed into collaborative settings, this might result in failure. Failure in the short term is far from a problem, but it can help students only if they are offered steps to progress from their current state to a pattern of more collaborative habits (Noble, 2013). Finally, in order to increase the likeliness that such collaborative habits practiced at school will be applied to civic contexts, schools must create consequential connections. This would imply facilitating collaborative activities that take place outside of the school contexts and its characteristic environmental cues, either in the form of civic initiatives that demand collaboration within the community, or by supporting non-civic collaborative activities that stretch beyond the school such as extra-curricular activities or interest-based virtual communities (Kafai & Burke, 2016).

Overall, the values expressed by the design of activities, lesson plans, problems presented to students, and opportunities to tackle these problems should coalesce to reflect a commitment to the cultivation of specific democratic habits. This effort would involve aspects of the curriculum but would center on the messages the school sends through its design and the commitments that this design reflects. From the disciplinary code to classroom management practices, from pedagogical tools to grading, the school needs to reflect in its design the effort to recognize students' capacity to become contributing members of a democratic community, and through this recognition to support their evolving democratic habits.

Conclusion

Taken together, the three characteristics of habits – social, active and interconnected – and the three components of habit cultivation in school – practice, reflection, connection – underlie a comprehensive approach to citizenship education. Such an approach is not revolutionary, yet it demands shifting our focus when thinking about the role of schools; striving to explore how school activities (in and out of classrooms) can concurrently serve the development of democratic habits. What is demanded is a renewed appreciation of the civic nature of academic learning, echoing Dewey's century old assertion that:

To isolate the formal relationship of citizenship from the whole system of relationships with which it is actually interwoven; to suppose that there is any one particular study or mode of treatment which can make the child a good citizen... is a cramped superstition which it is hoped may soon disappear from educational discussion. (Dewey, 1909, p. 11)

This chapter offered a theoretical framework for thinking about the civic role of schools, and examined its manifestation in existing proven practices. In the next chapter I turn to show how the democratic habits framework can be applied beyond formal educational contexts. As argued in chapter 1, today more than ever, youth develop their democratic habits in a variety of interest-driven activities. One central context that has captured the interest of educators and researchers is video games. In chapter 3, I survey existing efforts to utilize video games towards civic ends, reconceptualizing their possible contributions within a habits framework. As in the case of schools, examining video games from a habit perspective could offer a broader, humbler and more productive approach concerning their civic potential.

Chapter 3

CIVIC VIDEO GAMES – A CLASSIFICATION AND REASSESSMENT

In the past thirty years, video games have grown into one of the most popular leisure activities among today's youth, with 72% of teens in the United States regularly engage in video game play of some sort (Lenhart, Smith, Anderson, Duggan, & Perrin, 2015). The value of this new "national pastime" has been a subject of constant debate: often portrayed as dangerous activities due to their violent content and addictive nature (Brenick, Henning, Killen, O'Connor & Collins, 2007; Ferguson, 2015; Gentile & Gentile, 2008), the passionate engagement characteristic of gameplay, together with the ever widening field of possibilities enabled by technological developments, have drawn scholars to explore the educational potential of video games. Concurrently, the educational roles assigned to games have evolved. Initially perceived as advanced "behaviorist learning machines" dedicated to increasing engagement and effectiveness of standard curricula, recent research has lauded games for their ability to facilitate naturally occurring problem solving, situated learning environments, and active knowledge construction (Barab, Thomas, Dodge, Carteaux, & Tuzun, 2005; Gee, 2003; Gros, 2007; Kafai, 2006b; Squire, 2011; Steinkuehler, 2006). This burgeoning body of research has been coupled by a proliferation of "serious games", intended to offer players more than entertainment value (Boyle et al., 2016). Although empirical research is still scattered, and often suffers from methodological limitations, scholars cite generally positive outcomes when games are utilized thoughtfully in classrooms as well as alternative settings (Granic, Lobel, & Engels, 2014; Qian & Clark, 2016).

This educational whirlwind hasn't skipped the field of citizenship education, and the interest in researching and designing civic games is on the rise, though this still

remains a limited niche (Bachen, Hernández-Ramos, Raphael, & Waldron, 2015; Stoddard et al., 2016; Waddington et al., 2014). What are civic games? As a starting point, I would like to examine the definition offered by Raphael and colleagues in their thorough analysis of the field:

[G]ames 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. (Raphael et al., 2010, p. 203)

Two aspects here are worthy of attention: first, this definition is rooted in the skills and dispositions approach I criticized in chapter 2; second, it is very broad in that can include both a wide variety of games as well as a diversity of outcomes.

While I adapt this broad lens for examining the civic role of games; informed by the democratic habits framework, I offer a slightly modified definition:

Games foster civic learning when they help players to develop knowledge relevant to the civic sphere or facilitate *practicing habits of behavior that can serve* players in public matters in the world outside the game.

Beyond the substitution of skills-and-disposition with habits, this definition puts less of an emphasis on the question whether what is learned in the game is actually applied to the civic sphere, in comparison to Raphael and colleagues. I elaborate on the question of transference from game environments to civic ones later on in this chapter. For now, I note that within a habits framework, transference inherently depends on the broader educational environment. Hence, focusing solely on the game activity is not likely to offer sufficient insights concerning the probability of application.¹⁷

¹⁷ Although studies have asserted the importance of scaffolding and context (Stoddard et al., 2016; Waddington et al., 2014), the civic games literature still commonly focuses on examining games'

Importantly, this definition is intended only to delineate the broad contours of the field. More important than this act of demarcation is the attempt to offer a detailed classification of the types of civic video games available, and the possible contributions of gameplay to citizenship education. To do so, I classify civic games according to the civic roles of educational contexts outlined in chapter 2 – distinguishing between games that focus on civic *knowledge* or democratic *habits* on the one hand, and the opportunities these games offer for *reflection* or *connection*, on the other. This is not an exhaustive review of existing civic video games, but rather an analysis of the current state of the field in service of putting forward a polemical argument concerning the civic role of video games. The first part of this chapter offers a taxonomy of the affordances of existing civic video games. I then proceed to examine the main challenges facing the field of civic video games, while arguing that some of these challenges can be better addressed within a habits framework. The closing section of this chapter introduces a strand of video games research that merits more attention – the civic potential of *connected gaming* – instances in which players are positioned not only as players, but also as makers of games. Accordingly, I offer an analogous taxonomy of the civic affordances of connected gaming, pointing out how game making can enrich the civic contributions of video games.

affordances independently of the context in which they are played. This has to do both with a bias towards focusing on games in isolation, an aspect I criticize later in this chapter, and due to technical and methodological limitations – empirical analyses that concurrently account for the context of application are far more complicated.

Civic Video Games – A Taxonomy

The following taxonomy aims to draw two distinctions (Figure 1). The horizontal axis distinguishes between the educational mechanism employed in games: (i) games that enable students to learn about the civic sphere, focusing on explicit *civic knowledge*; and (ii) games that aspire to facilitate opportunities for interactions characteristic of the civic sphere, and hence cultivate *democratic habits*.¹⁸ The vertical axis distinguishes between the types of participation the games are geared towards. Relying on the framework offered in chapter 2, I distinguish between games that focus on the development of players' awareness and *reflection* concerning civic issues, and those that strive to offer more concrete *connections* to civic participation. Importantly, this distinction does not rely on accepting the practice-reflection-connection framework, as it echoes a central distinction discussed in chapter 1 between civic actions geared towards cultivating *voice*, and those which strive to achieve *instrumental* ends. Put differently, the distinction between reflection and connection is between games whose purpose is to nurture the propensity for civic-minded action and those who strive to facilitate concrete avenues for such action to be pursued.

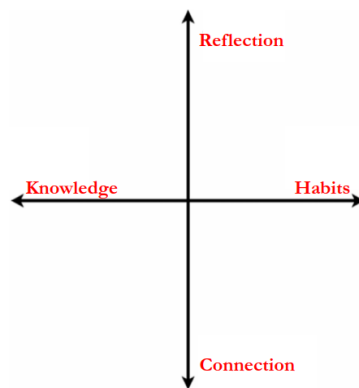


Figure 1. Civic games matrix.

¹⁸ In theory, these two categories are not mutually exclusive, however, in practice most games focus on only one of these aims.

Knowledge-centered Games

The most common educational function of video games, both in general and in relation to civic games, is still as tools intended to support students' knowledge acquisition (Boyle et al., 2016; Stoddard et al., 2016). The two central advantages of games in this respect are their engaging nature, and their ability to offer situated knowledge: positioning players as active participants in scenarios characteristic of the intended subject matter (Middaugh, 2016; Shaffer, Squire, Halverson & Gee, 2005). Therefore, content-centered games are commonly simulations: either role playing games in which players take the role of one of the characters in a civic scenario, or "god games" in which players are positioned as external controllers of larger bodies, such as law firms, NGOs, governmental agencies, or whole states or worlds (Bachen et al., 2015).

The classic model of these knowledge-centered simulations (and the genre most commonly associated with civic games in general) attempts to educate players regarding the civic system: "the set of content and processes that people must know to become informed citizens, such as understanding how the government and the political system work as well as their own rights and responsibilities" (Bers, 2010, p. 149). The most famous example of knowledge-centered civic games is iCivics, a non-profit organization founded by US Supreme Court Justice Sandra Day O'Connor. On the iCivics website, players can play over 20 games, intended to teach "students how government works by having them experience it directly." (<https://www.icivics.org/our-story>). Players take part in a variety of simulations: a candidate for presidency, a lawyer fighting for rights, or an immigration officer (Figure 2). In this manner, iCivics aims to offer players engaging ways to learn about the constitution, branches of government, and other issues such as

immigration (Blevins & LeCompte, 2016; Stoddard et al., 2016). In addition, iCivics offer curriculum materials intended to support the utilization of the games within educational contexts.



Figure 2. Screenshot of the Immigration Nation game, in which players are expected to learn US immigration laws by playing the role of an immigration officer.

While iCivics offers rather simple games, more complex examples abound. For example, a game like Democracy exposes players to the procedures characteristic of election and governance processes. In this turn-taking simulation, players take the role of a president in a democratic country, aiming to get reelected. The president is charged with managing the distribution of government resources and governmental policies in various areas (tax, economy, welfare, foreign policy, transport, law and order, and public services), while taking into consideration the effects of such policies on different voting sectors (Figure 3).

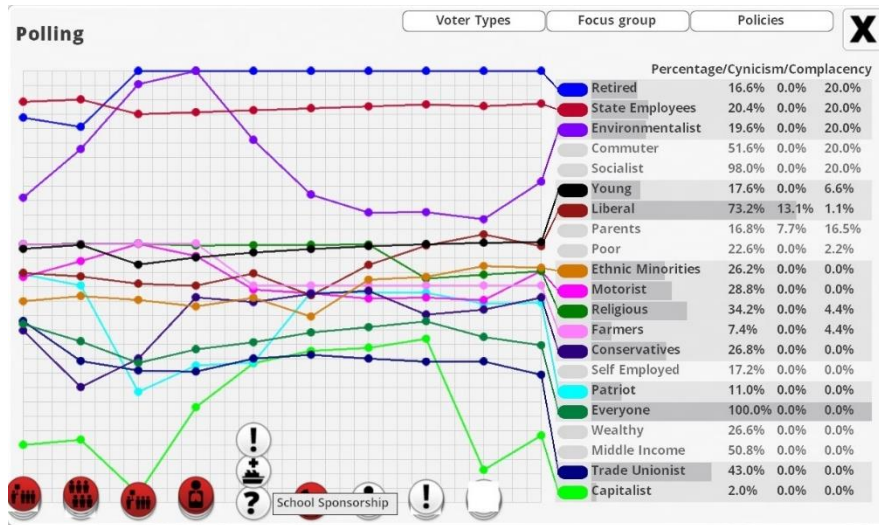


Figure 3. Screenshot of Democracy 3. Illustration of polling information offered to players as they weigh their decisions as presidents.

These decisions are informed by an influx of changing circumstances, which players must tackle in light of the resources at hand, and the consequences of their decisions on voters. It should be noted that knowledge-centered games need not be explicitly educational; the popular commercial game series SimCity (Electronic Arts, 2003) has garnered much academic interest. Players in SimCity are positioned as mayors of a virtual city, and through the choices they must take, and the consequences simulated by the game, players learn about city planning, government, geography, and more (Minnery & Searle, 2014; Nilsson & Jakobsson, 2011).

In the games described thus far, the focus is almost uniquely on developing players' civic knowledge: offering a complex and situated understanding of governance processes and political intricacies. Knowledge-centered games are developed under the assumption that an increase in knowledge will lead to an increased capacity and motivation for civic participation.¹⁹ These games do not focus on facilitating awareness

¹⁹ This assertion remains disputed; for a critical review see Stoddard et al., 2016.

of- or reflection on civic issues, nor do they aspire to create connections to concrete civic contexts. Democracy does not nurture awareness concerning civic issues that might motivate players to action, nor is it a preparation for players to become politicians or campaign managers; its prime objective is to increase their general knowledge and understanding of the political sphere. However, there are games that introduce civic knowledge with a clearer focus on reflection or connection.

Knowledge-centered Games and Facilitating Reflection

A central sub-genre of knowledge-centered games focuses on raising awareness to- and encouraging reflection on civic and political issues. These games attempt to raise players' awareness of concrete social challenges, and motivate them to reflect on such issues, often in an effort to motivate to action through the information and emotional attachment offered by the game. In other words, games are intended to develop players' civic voice – their propensity to view themselves as accountable actors in the civic sphere.

For instance, a role-playing game like *Darfur is Dying* was intended to raise awareness to the civil war and ensuing humanitarian crisis in Sudan, which the game's developers felt was receiving lacking attention by US media and government. In the game, players assume the role of a Darfurian refugee, which must overcome the challenges typical of refugee life: from fundamental aspects such as finding food and water or hiding from armed militias, to more complex missions such as managing a refugee camp (building shelters, growing crops, inspecting health issues and so on, see Figure 4). The game has several overlapping goals: primarily, to increase awareness regarding the crisis in Sudan. Second, to create an affective connection to the crisis by

exposing players to mundane aspects of refugee life in place of the common focus on statistical data. Finally, the game seeks to facilitate players' involvement in the struggles to fight the atrocities taking place in Darfur. A "take action" screen in the game offers several venues for player action: learning more about the crisis, sending US government official messages, donating money and more.



Figure 4. Screenshot of *Darfur is Dying* in which players need to manage a refugee camp. In the bottom left corner, a "take action" key leads players to avenues towards real-world involvement.

Real Lives (Educational Simulations Corporation, 2010), in comparison, does not focus on one context, but rather aims to cultivate reflection on broader civic and political issues such as inequality and the often-overlooked implications of social policy. In this game, players can experience the everyday lives of individuals in various countries around the world (Figure 5). Players must make many different decisions that involve work opportunities, financial standing, health, family life, and participation in civil society. The game thus offers opportunities for ethical reflection, born of challenges or opportunities endemic to one's country (based on real-world statistics of 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. 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. In this way, the game aims to expose players to social contexts which they are not likely to encounter in their everyday lives, and to encourage reflection on the social conditions underlying the circumstances that shape individuals' lives across the globe (Bachen et al., 2015).



Figure 5. Screenshot of *Real Lives*. Example of information offered on game characters.

Real Lives and *Darfur is Dying* are not limited to offering civic knowledge, and have an explicit aim of facilitating reflection and serving as a call for action. The knowledge regarding civic issues, together with the emotional impact of role-playing, are meant to create motivation for civic action beyond the game (Figure 6). However, the games do not seek to translate this increased awareness and more complex reflection with an attempt to teach practical ways to influence civic issues. Players are offered a closed

set of actions which mostly demand a click of their mouse. While the games might be praised for making civic action accessible for players, they do not venture to offer players concrete skills for future civic action.

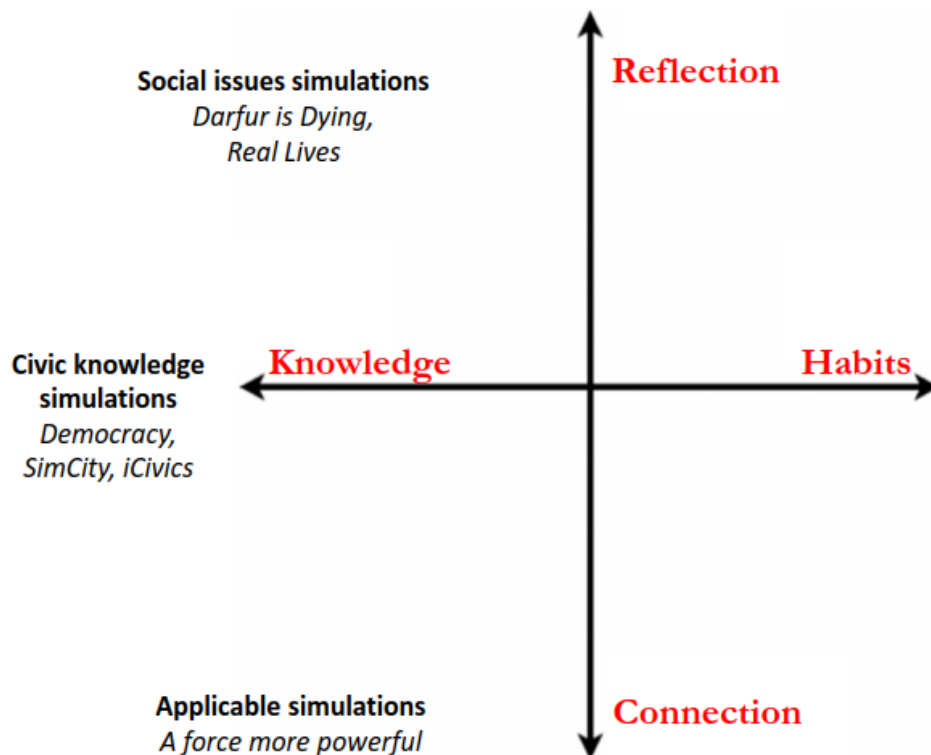


Figure 6. Knowledge-centered games matrix.

Knowledge-centered Games and Consequential Connections

On the other hand, there are games which aim to cultivate tangible skills needed for effective civic participation (Figure 6). These games present simulations of civic challenges which are more closely related to everyday interactions players might encounter in the civic sphere. The expectation is not just for a general increase in knowledge, but rather to prepare players for particular scenarios. For example, the game *A Force More Powerful* (International Center on Nonviolent Conflict & BreakAway Ltd.,

2006) simulates the challenges of nonviolent campaigning.²⁰ The player is positioned as a strategist for a human rights campaign, whose responsibilities include: choosing the movement’s values, formulating the ways in which they should be promoted, organizing protests, fundraising and so on (Figure 7). The game’s developers clearly perceive the game as “an opportunity to join a community of others who want to learn about civil resistance and nonviolent strategies” (<http://peoplepowergame.com/>). Due to their more specific focus, games with an explicit focus on concrete connection to the civic sphere are relatively rare.

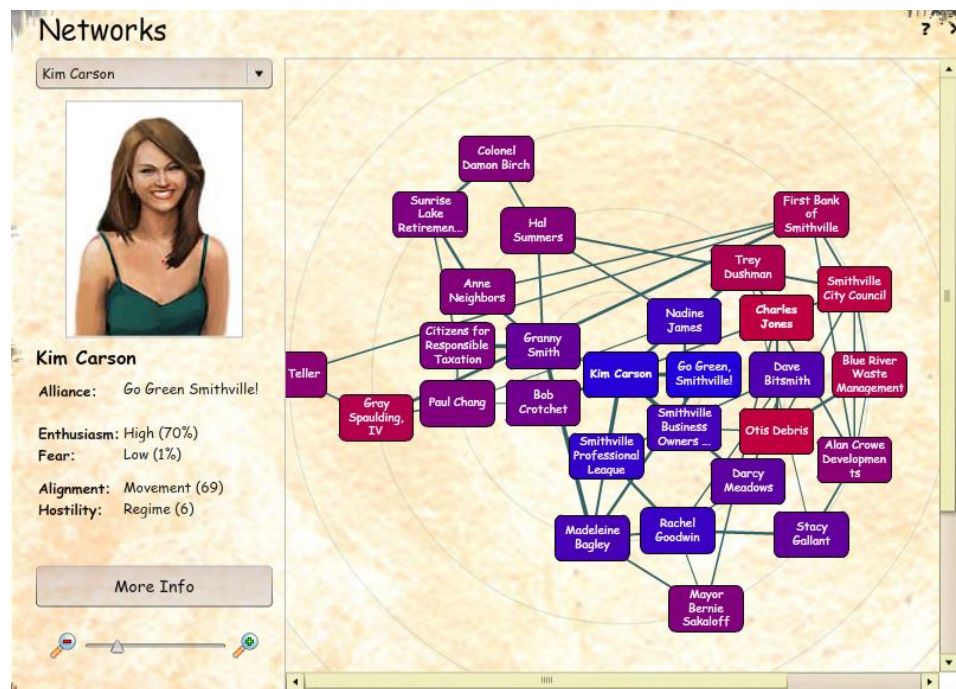


Figure 7. Screenshot of People Power – information on a character in the player’s network.

The civic games surveyed thus far have an important characteristic in common – they are structured around political content and civic themes. Although the type of

²⁰ In later versions, the game’s name changed to People Power.

content and game mechanics vary, these games are explicitly and primarily civic-centered. Even commercial games such as SimCity indirectly increase players' knowledge and therefore contribute to a better understanding of the civic sphere. These games have also been the central (though not exclusive) focus on research related to civic video games. Within a democratic habits framework, it is necessary to broaden the lens through which civic games are examined and survey other forms of games with more diverse civic affordances. The next section describes the spectrum of games which cultivate players' democratic habits. These games focus on the potential games have to offer meaningful practice of desirable habits of interaction (Waddington, 2015). More specifically, they strive to facilitate civic interactions: enabling players to practice behaviors and fulfill roles characteristic of the civic sphere. Therefore, the games themselves need not be explicitly civic, although they can be, as will be illustrated.

Habit-centered Games

As habit-centered games facilitate in-game dynamics aligned with the modes of action characteristic of the civic sphere, they are predominantly multi-player: situating players in contexts where they need to work in concert with others towards shared goals, thus simulating the challenges characteristic of civic action (Hartshorne, VanFossen, & Friedman, 2012; Molyneux, Vasudevan, & Gil de Zúñiga, 2015; Sourmelis, Ioannou, & Zaphiris, 2017). A prime example of the potential of video games to facilitate the development of democratic habits can be found in research on MMORPGs (massively multi-player online role playing games) such as World of Warcraft.

MMORPGs are games in which thousands of players play simultaneously in a real-time persistent environment. Players' avatars are commonly challenged to work together in order to fulfill the game's complex quests (Yee, 2014). MMORPGs' design encourages social interaction among players: in order to overcome the games' most challenging obstacles, players need to organize in semi-permanent groups called guilds or clans. This is the case because avatars in the game have specialized powers (fighter, healer, magician, and so on) which must be synchronized to maximize their potential. The quantity and quality of social interaction and cooperation demanded of guild members in MMORPG is significant: members do not only communicate through their chat windows during gameplay; more experienced guilds coordinate various issues such as manpower, equipment, strategy and role designation outside of game time (Steinkuehler, 2005). Though not directly related to the civic sphere, these games offer important experiences in the type of cooperation and coordination often demanded in civic environments in general, and digitally mediated contexts in particular:

MMORPG players learn to participate as a member of a group, induct others into the game world, and interact with players of different genders and ages from all over the world. These same skills will enable players to participate in real-world problem-solving in areas as diverse as the work place, the family, and civic and global participation. (Curry, 2010, p. 251).

It should be noted that the extent to which such games develop democratic behaviors depends both on the design of the given game, as well as the social norms that govern gameplay within a given gaming community. As is the case with the hidden civic curriculum, in practice many MMORPGs might promote undesirable behaviors (the Gamergate controversy could be perceived as evidence that in practice, this is

unfortunately often the case). Yet, like schools, they have the potential to develop certain democratic habits if they are more intentionally and effectively designed.

One of the main challenges to the perception of MMORPGs as civic games has been the mixed evidence concerning the correlation between in-game behavior and civic engagement (e.g., Lenhart et al., 2008; Williams, 2010). Raphael et. al (2010) argue that MMORPGs are not civic games exactly for this reason:

[I]t has yet to be demonstrated that game play involving skills such as problem solving or collaborating about non-civic matters 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. (p.206).

As argued in chapter 1, the distinction between civic and non-civic participation is becoming less stable and relevant (Ito et al., 2015), an issue I address later in this chapter. For the meantime, I argue that this should not disqualify MMORPGs as civic games, but rather qualify the affordances attributed to these games, and guide their utilization in educational contexts. MMORPGs should not be viewed as civic games intended to directly raise the propensity of players to engage in civic actions, rather, these games are (potentially) an engaging and intrinsically motivated context for players to practice and develop habits of interaction with others that could serve them in the civic sphere. The more interesting question from a civic perspective is not whether participation in such games is correlated with civic engagement, but rather, whether the way games are designed contributes to practicing desirable or undesirable habits of shared living. In the same way that Democracy does not nurture concrete civic skills or habits, MMORPGs contribution is (mostly) limited to the cultivation of habits of behavior relevant to the

civic sphere, not to promoting their application in civic contexts. Creating consequential connections between the habits practiced in these games and civic contexts should be pursued through a more comprehensive educational program.

Whereas MMORPGs are based on unique interfaces which allow in-game civic interaction, games also facilitate civic interaction in an even less direct manner – through the civic ecologies which evolve around games. This implies that the research concerning the civic affordances of games should stretch beyond the game itself to the practical, social and cultural contexts of playing – what Jim Gee (2008) has termed “Game with a big G”. Though games are just one possible focal point around which interest-based communities can develop, as a result of their engaging nature, and the level of challenge they offer, they are particularly favorable stimulators of participatory cultures (Jenkins, 2009). Thus, regardless of their content or mechanics, video games can function as a central hub of online activity which offers children opportunities to develop habits relevant to the civic sphere, particularly in light of the rising importance of digital citizenship. For Example, Gee (2005) describes the multitude of activities that fans developed around the Game Age of Mythology (AoM) (Ensemble Studios, 2002):

The latest news about AoM... Polls that take votes on various questions and issues... Previews and reviews... Forums... Links to other sites of interest... FAQs... Strategy guides and walkthroughs for “newbies”... technical details and statistics about all aspects of the game... art by fans, inspired by the game... new maps and scenarios made by players... improvements players have made to... the game’s “AI” (artificial intelligence)” (pp. 224-5)

The participation and organization of these activities can be perceived as civic participation in the AoM community (see Figure 8). Recent research on citizenship

education has highlighted how such interest-based communities serve as vital pathways for youth to gain practical skills for civic participation, and practice habits of membership in a community (Ito et al., 2015; Soep 2016). When compared to MMORPGs, such activities cultivate democratic habits which are more easily transferred to civic settings (especially digital ones), as they are not in-game activities to begin with. In contrast to MMORPGs, research has shown that participation in such activities correlates with players' civic engagement (Kahne, Middaugh, & Evans, 2008). I now turn to examine other ways in which video games develop democratic habits, with a clearer focus on reflection on civic issues or connection to concrete civic practices.

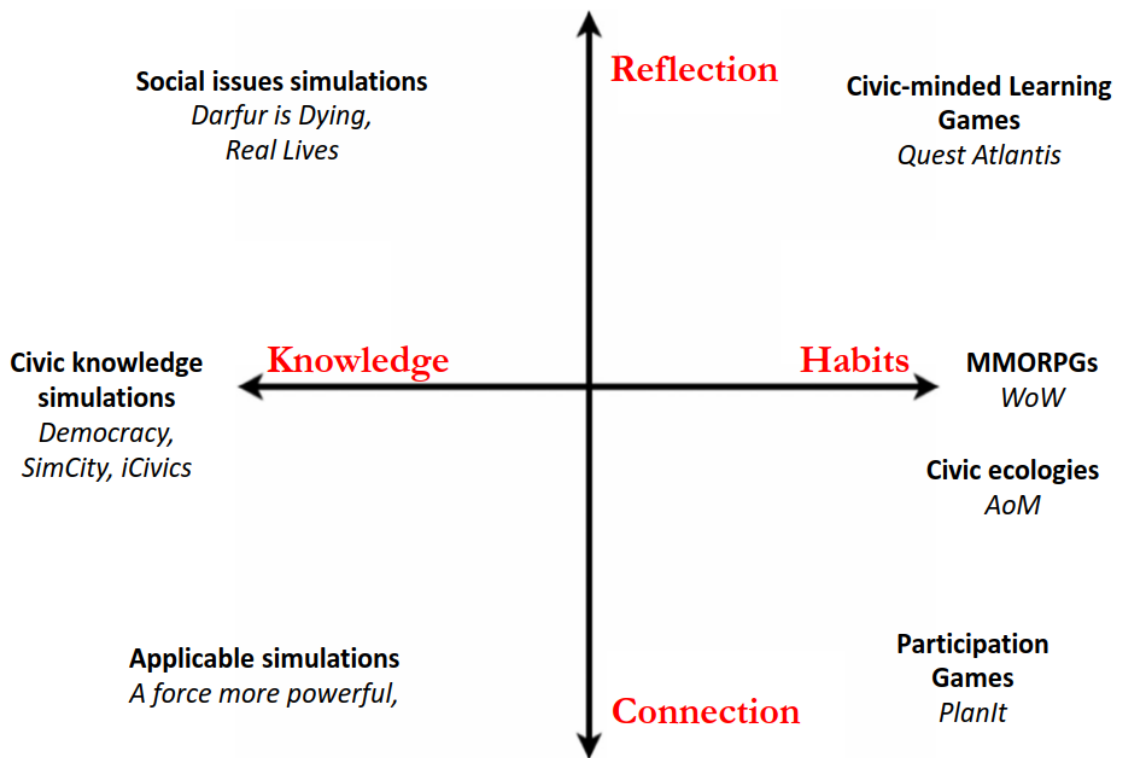


Figure 8. Complete civic games matrix.

Habits-centered Games and Facilitating Reflection

The next category surveyed focuses on games that offer opportunities to practice democratic habits with an emphasis on nurturing reflection (Figure 8). Though in theory such interactions could be promoted in a variety of contexts; in practice, games that focus on reflective civic action have developed mostly within the context of socially aware science education. The most notable example is Quest Atlantis, a multi-user 3-D environment created specifically for educational purposes (Figure 9). In this virtual world, players fulfill various quests in an attempt to help save Atlantis, which demand engaging in collaborative inquiry based science learning (Barab et al., 2005). Though Quest Atlantis is mainly directed towards science learning, it concurrently supports the practice of democratic habits such as collaboration and critical inquiry, while raising awareness and eliciting reflection concerning a series of civic and ecological issues.

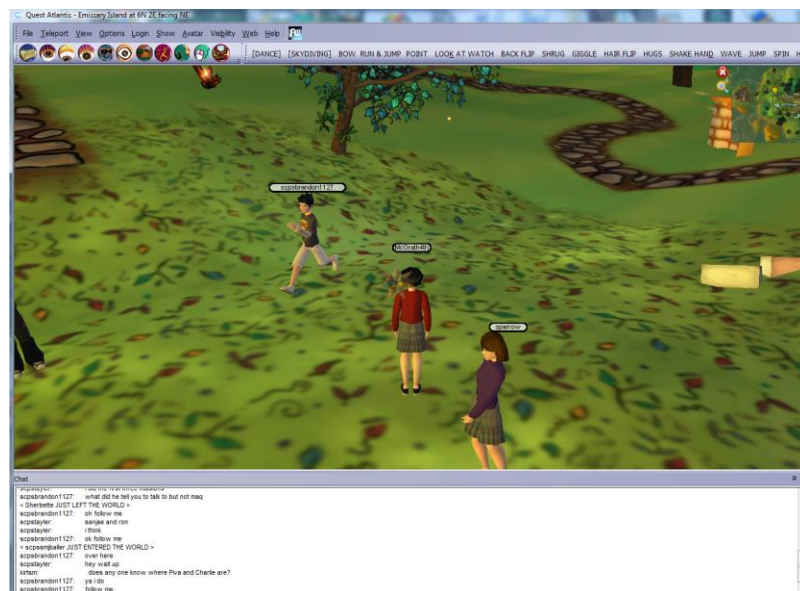


Figure 9. Screenshot of Quest Atlantis, players collaborating on science inquiry.

The fact that Quest Atlantis is a multi-user environment offers players more opportunities to practice democratic modes of interaction when compared to single-player simulations. Hence, it exemplifies how video games can extend the possibilities of offering youth opportunities to practice democratic habits beyond the brick and mortar classroom (Waddington, 2015). Barab and colleagues (2007) describe how their design of Quest Atlantis was intentionally intended to promote academic learning together with the cultivation of broader dispositions such as personal agency, social responsibility, diversity affirmation, and environmental awareness.

Habit-centered Games and Consequential Connections

The last type of games surveyed here are habit-centered games that do not only cultivate democratic habits, but also facilitate opportunities for concrete civic action.²¹ Such games, which aim to bring together game playing and concrete civic participation, belong to the genre of alternate reality games (ARGs). ARGs differ from traditional video games in that they are not independent environments, but rather, they aim to add a “game layer” to “real-world” interactions (Waddington, 2013). In this case, layering game elements on real-world civic participation.

For example, Gordon, Michelson and Hass (2016) designed the @Stake game intended to support participatory budgeting – a process in which community members take an active role in decision making concerning their local municipality’s budget.

@Stake was designed to facilitate effective civic interactions by supporting the processes

²¹ Such games are actually a subgenre of games or gamified environments that aims to encourage citizens to participate in projects directed towards public goods (Flanagan, Punjasthitkul, Seidman, Kaufman, & Carini, 2013).

of brainstorming and deliberation in ways that enhance collaboration, creativity and perspective taking. By positioning players as various stakeholders (activist, city official, single parent) in relation to a given issue, the game promotes deliberation that goes beyond focusing on one's own interests, and structures a more effective decision making process. In an initial pilot in New York City, conducted in 2014-2015, Gordon and colleagues (2016) found the game to be a more effective and creative way to engage in such deliberations. While this iteration of the game relied solely on physical components (cards), similar iterations enhance this basic structure with digital components.

Another example is the game Community PlanIt, a multiplayer, mission-based game that aims to engage citizens in processes of city planning (Gordon & Baldwin-Philippi, 2014). The game is structured around a series of missions in which players need to voice their opinion and offer solutions to issues related to the planning process, both from their own perspective and from the perspective of the characters they are playing. The objective of the game is not only to foster deliberation but also to expose and connect citizens with groups they are not likely to interact otherwise.²² In contrast to the games mentioned thus far, ARGs are intended to facilitate civic practices in the present rather than prepare players for future civic participation. However, such games also simultaneously cultivate habits of democratic communal participation that could be utilized in future contexts in which the game is absent.

In sum, the above matrix aims to offer a comprehensive view of the educational mechanisms and affordances characteristic of civic games. I first reviewed knowledge-

²² Another notable effort at instrumental participation games is Lerner's book *Making Democracy Fun* (2014). However, Lerner most commonly uses games as indirect ways to promote group work, rather than actual platforms for civic participation.

centered games, which harness the technological potential of video games to create engaging and meaningful ways to acquire knowledge and understanding of the civic sphere. Many of these games strive to offer more than knowledge: cultivating reflection or creating concrete connections to the civic sphere, albeit in a limited manner. I then surveyed habit-centered games which structure contexts for practicing democratic habits. My goal is not to argue for the importance of one type of games over the other, but rather to show the varied ways in which games can contribute to citizenship education within a democratic habits framework. Better understanding these diverse contributions of video games can enable a more thoughtful and effective use of civic games, thus tackling the central challenges facing the field, as well as supporting the expansion of civic games to new domains, two issues I examine in the next section.

Games and Habits – Old Challenges and New Frontiers

How would the role of video games shift when examined within a habit framework? The first difference, outlined above, is that the variety and importance of video games' contributions shift. Whereas existing literature tends to prioritize games with civic content, within a habits framework, games that facilitate civic interactions are equally important. Beyond this diversification of aims, there are two more central shifts in the civic role of video games. First, as argued in chapter 2 concerning citizenship education more broadly, a more nuanced understanding of the educational role of video games depends on their enactment within a comprehensive approach. Second, the shift towards more critical, active, and collaborative modes of civic action also demands an analogous shift in the types of player experiences – offering players more active roles and increased

possibilities for actively shaping the game environment itself. In order to better understand why these shifts are beneficial in the first place, I begin by outlining the central challenges identified in the civic games literature: the transference and transparency challenges. I then identify two central biases in the perception of games that partially explain the persistence of these challenges – the depiction of games as standalone interventions, and their perception as finished products. Finally, I detail how increased attention to the civic potential of connected gaming could tackle some of these challenges.

The Transference Challenge

The transference challenge, already mentioned above, centers on assessing the likelihood of transfer from in-game conduct to “real-world” contexts, whether virtual or physical. There is still lacking evidence regarding the correlation between in-game conduct and everyday contexts. (Gros, 2014; Ma, Williams, Prejean & Richard, 2007; Shaffer, 2012; Tseklevs, Cosmas & Aggoun, 2014). Hence, the extent to which habits (or skills) acquired in the game (such as cooperation in a guild raid) can be utilized in other contexts (collaborating on a local civic initiative) is still not clear. Despite the current effort towards establishing an empirical understanding of the conditions that promote or impede transfer, the complexities of interdependent factors, and the dearth of longitudinal research, result in lacking conclusive evidence. Moreover, existing research on civic-minded application of games has shown that although games increase student motivation and engagement, outcomes rely to a large extent on external factors such as teacher

scaffolding and mediation of learning, and the interaction of game-based learning with the general curriculum (Blevins et al., 2014; Sttodard et al., 2016).

The Transparency Challenge

The transparency challenge is concerned with youths' awareness and ability to discern the various ways in which media shapes their perception of the world (Jenkins, 2006). In the case of civic games, this is manifested in students' capacity to consider and analyze the implicit political and social assumptions guiding the games they encounter. This tension is accentuated due to the fact that the ability to simplify the intricateness of social and political reality is both video games' source of strength and their underlying weakness. Raphael et. al (2010) elaborate:

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 medium to explore ethical principles in more complex and systematic ways than other media have in the past... Yet, digital games often reveal little about how they determine the consequences of players' actions within social systems... In civic games that model complex social systems, this can be a barrier to learning about how the world of the game works. (pp. 223-224)

The problem is that most simulations tend to simplify morality to a binary distinction between good and bad gestures, which can later be quantified to progress in the game (Bogost, 2007).²³ This might cultivate modes of conduct guided by "efficiency mindset", in which players' attempts to excel in the game environment might cultivate a

²³ Elsewhere (Dishon, 2016), I have explored the progressive roots of the transparency challenge, arguing that video games facilitate an accentuated version of Rousseau's vision of well-regulated freedom. In this context, I merely point out the worry of players uncritically accepting the assumptions underlying the game environment.

pervasive commitment to evaluating any given task according to the reductionist calculus of maximizing or minimizing a certain category of results (Waddington, 2015). Beyond the structure of the game itself, games inherently promote certain values, or ideological structures that players are often not aware of (Flanagan, 2009). While popular outrage tends to focus on violent games and their potentially corrupting effects (Ferguson, 2015), even more seemingly innocuous games such as the Sims (Maxis, 2000) endorse and transmit values embedded in their structure – in this case, the inculcation of materialist values (Flanagan, 2009). Similarly, games that have been lauded for their educational potential such as SimCity, tend to promote values that are aligned with existing, rather than critical perceptions of reality, such as the prioritization of private rather than public transportation (Bereitschaft, 2016).

From Challenges to Biases

While transparency and transference are crucial challenges that require further research, they concurrently expose more general biases underlying existing perceptions of civic games: (i) the perception of games as standalone products, disconnected from a more comprehensive citizenship education curriculum; (ii) the tendency to perceive civic games as technological objects predesigned for student consumption.

From Standalone Products to Curricular Components

A central part of the problem with civic games lies not in the games themselves, but rather with the way their educational contribution is framed. Games are commonly examined as isolated educational tools (Clark, Tanner-Smith, & Killingsworth, 2016;

Middaugh, 2016). There are obvious practical reasons for this bias – examining the isolated impact of gameplay is complicated, let alone accounting for the myriad influences related to their implementation within a more comprehensive curriculum. Yet, a more precise understanding of the specific objectives games set out to achieve would allow conceptualizing games as invaluable curricular components in a broader educational agenda, rather than “one size fits all” standalone products. When the desired outcomes of civic games are not properly explicated and tied to a more comprehensive program of citizenship education, the effectiveness of empirical research and game design are compromised.

The most vivid illustration of this bias is the argument that there may not be transference from online social gaming to action in the civic sphere (Kahne et, al, 2008; Williams, 2010). The assumption underlying this argument is that playing games that nurture civic skills online, such as MMORPGs, should in itself correlate with civic engagement. However, as I have endeavored to claim, different games have different affordances – MMORPGs should not be judged according their ability to increase civic engagement, as they are mainly valuable as sites for practicing democratic habits. If educators are interested in harnessing the exciting opportunities these games offer, they need to incorporate the games into broader framework dedicated to creating meaningful connections between in-game and civic behaviors.

Hence, though the transference challenge is an important and sometimes overlooked aspect of the educational use of video games, within a habits framework, transference is not a unique challenge to game environments. Although there are reasons to believe that games are particularly vulnerable to this challenge to the acute separation

between in-game and external contexts (Dishon, 2017), a similar line of reasoning has been applied to the isolated and abstracted nature of classroom education (Engle, Lam, Meyer, & Nix, 2012). Research has shown that there is limited evidence concerning transfer of knowledge acquired in the classroom (Nokes-Malach & Richey, 2015), let alone higher order learning (Pellegrino & Hilton, 2013), or more complex behavioral habits (Ben-Porath & Dishon, 2015). Framing transference as a more general educational challenge, rather than a unique problem characteristic of the educational use of games, would be a more productive way to tackle this issue.

The above classification allows educators and researchers to articulate what are the civic contributions of given games. One possible way to tackle shortcomings in existing games would be to develop new games. For example, a MMORPG explicitly focused on civic content might overcome some of the critiques pointed at the civic role attributed to commercial MMORPGs (though it is not clear how feasible it would be to create and support such a complex virtual environment). A more feasible and comprehensive way to address these shortcomings is by situating games within a broader educational program. Thus, if MMORPGs are particularly engaging and useful sites to practice the habit of pursuing shared endeavors, yet there seems to be a lack of transference to civic engagement, perhaps they can be complemented by involving students in action civics programs within their community that are intentionally connected to in-game experiences. Once games are integrated in broader civic curriculums, educators can offer children opportunities to practice democratic habits acquired in the games in other contexts. Instead of assuming (or hoping) these habits will be implemented in civic contexts, educators can create consequential connections and

facilitate opportunities for students to engage in democratic behaviors aligned with the learning offered by games.

Similarly, the central way in which the transparency challenge has been tackled is by encouraging reflection and discussions regarding the design decisions underlying games. One such example is Bogost's (2007) notion of procedural literacy, which involves players asking fundamental questions regarding game design: "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). By interacting with games, and critically reflecting on the biased perception that are implicit in the abstract models that govern their function, students can develop their procedural literacy and counter the transparency challenge. Thus, if a game like Democracy merely offers an understanding of the intricate and messy nature of political reality, students can learn about the historical processes that led to this state of affairs, and the interests it might serve in history class.

From Designed Experiences to Connected Gaming

The second bias characterizing current academic and practical approaches to civic games is the focus on developing innovative and effective games. This is certainly a vital aspect of the field, nevertheless, it should not be its exclusive focus. Papert identified this tendency as "the instructionist desire of having a finished, downloadable, teaching product—namely, the game itself – as the party responsible (rather than the instructor) for teaching the child" (Kafai & Burke, 2016, p. 4). While one of the main advantages of games is that they can be designed as optimal learning experiences (Gee, 2003), this

should not come at the expense of allowing students to take part in this design process. This tendency is particularly troublesome considering the growing emphasis on active, critical and collaborative citizenship. Civic games explicitly attempt to nurture active and critical citizens, yet they lamentably attempt to do so by almost uniquely offering students predesigned games. Though game-playing supports engaged and situated forms of civic learning, game-making endorses learning that is not part of a carefully designed space, positioning youth as shapers of their (physical and virtual) environments, much like citizens in a democracy.

As will become clear, this assertion is not exclusionary in nature – game making is not intended to replace game playing, but rather to enrich the spectrum of experiences players have in and out of games. If citizenship education is intended to cultivate habits of critical and self-directed participation, it is worth expanding the ways in which such habits might be practiced within game contexts. This shift is analogous to the argument concerning schooling laid out in chapter 2. That is, within a habits framework, the focus becomes less on the content students are engaged with, and more on the modes of interaction – or habits – that educational environments afford. Accordingly, if games are depicted as educational environments, it is important to increase the opportunities for youth to be meaningful members within these environments by offering them a more significant role in decision making. In chapter 4, I explore in more detail the latent indirect contributions of game making towards developing democratic habits by describing vignettes from a series of game making workshops I conducted. At this stage, I wish to focus on what Kafai and Burke (2016) have termed *connected gaming* – the myriad ways in which “making and playing are no longer distinct activities but rather

interrelated, mutually informing processes.” (p. 8). Accordingly, the concluding section of this chapter offers a taxonomy of possible contributions of connected gaming contexts towards citizenship education.

Civic Game Making – A Taxonomy

To examine the potential contributions of connected gaming to citizenship education, I position them along the same axes I used in my discussion of the civic contributions of game playing. In theory, almost any game playing category could be transformed into a game making activity by positioning participants as makers. However, my analysis focuses on those applications which are more prevalent today. I start off by describing two categories of game making that are explicitly engaged with citizenship education: making civic games, and virtual civic communities. I then move on to explore three contexts which are not dedicated to civic ends; yet the sort of behaviors practiced in them could support the cultivation of democratic habits: sandbox games, modding and game making communities.

Making Civic Games

The first and most direct way to utilize game making towards civic ends is to offer students opportunities to design games that focus on civic issues. What are the advantages of positioning players as makers of civic games? While I am unaware of studies dedicated to promoting civic learning through game design, the body of knowledge accumulated in game making scholarship can offer insights into the

educational potential of making civic games.²⁴ Research on game making has long showed that allowing children to design games can be an effective way to introduce students to content matter (Earp, 2015; Kafai & Burke, 2015). Designing games demands a complex thought process concerning the issues at hand, as designers do not only learn about content matter, they are also demanded to consider how it could be best taught to future players (Kafai, Franke, Ching, & Shih, 1998). While their inquiry is not limited to civic issues, Flanagan and Nissenbaum (2014) explore how game design is a particularly useful practice for eliciting reflection on values embedded in existing games, as well as positioning designers as active shapers of the values latent in the games they make.

Designing civic games is also a useful way to tackle the transparency challenge. The central way this challenge has been tackled is by encouraging reflection and discussion concerning the implicit assumptions underlying games (Bogost, 2007). When making civic games, in contrast, reflection on such issues is endogenous to the process of game design, rather than an external element added in retrospect (Flanagan, 2009). Designers are motivated to reflect on political assumptions as part of their attempt to achieve their own goals – creating a well-planned game (Kafai & Peppler, 2014). Students do not only analyze the assumptions underlying existing games, they are also challenged to formulate their own suggestions for alternatives, and view their results (Peppler & Kafai, 2007). Through guided game making youth can become aware of the values embedded in games and digital media at large, enabling this activity to serve as an invaluable opportunity to investigate and challenge dominant norms (Belman & Flanagan, 2010b). For this reason, although making civic games can focus solely on

²⁴ The argument presented here equally applies to the notion of modding civic games. However, for the sake of clarity I pursue the civic relevance of modding in a separate section later in this chapter.

teaching civic content matter, if pursued thoughtfully, it is likely to elicit student *reflection* as part of the attempt to make a well-designed game (see Figure 10).

Examining such issues can develop youth’s capacity, and eventually habits, for critical reflection on public projects, societal norms and civic structures.

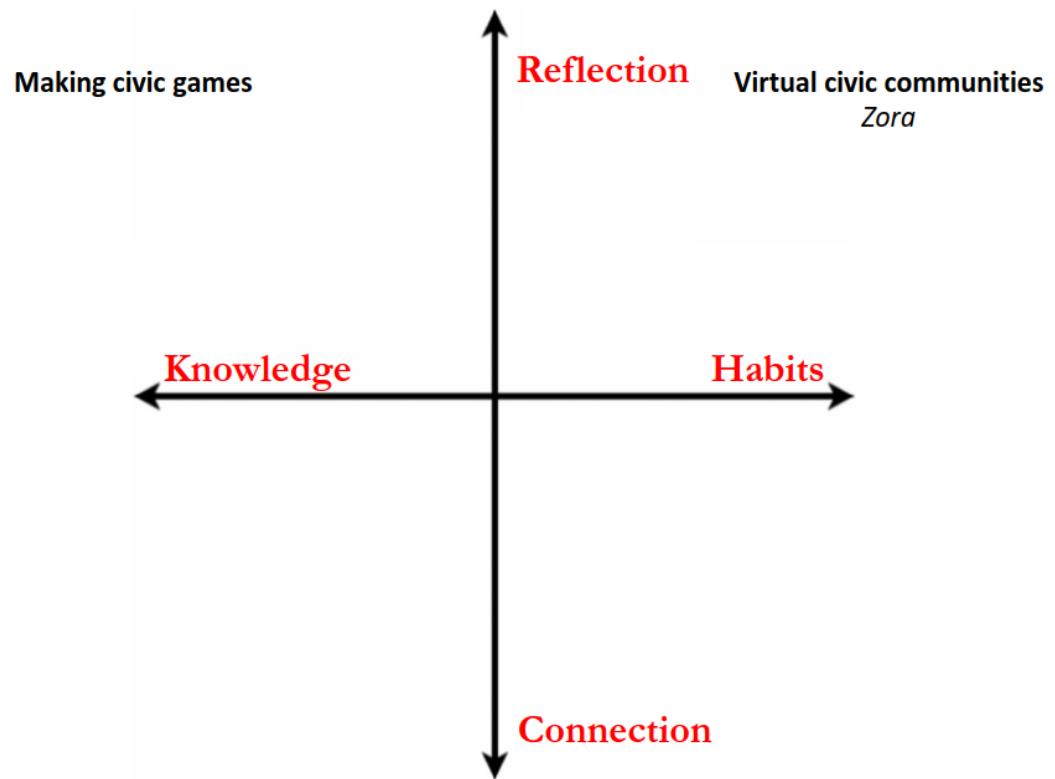


Figure 10. Game making contexts dedicated to civic ends.

Virtual Civic Communities

Another way in which game making facilitates citizenship education can be found in Marina Bers’ development of virtual civic communities (Bers & Chau, 2006; Bers, 2012). Bers utilizes Zora, a three-dimensional multi-user environment, to facilitate community building processes for players. Bers (2012) notes: “the Zora virtual world

provides a safe “social laboratory” for youth to experiment with some of the skills and attitudes needed to become good citizens” (pp. 121-122). Participants (from summer camp youth to undergraduate students) are encouraged to create and explore a virtual community that simulates the challenges of a real-life civic community (Figure 11). Thus, students explore their own identities, and interact with others while setting the common rules and norms of a virtual community.

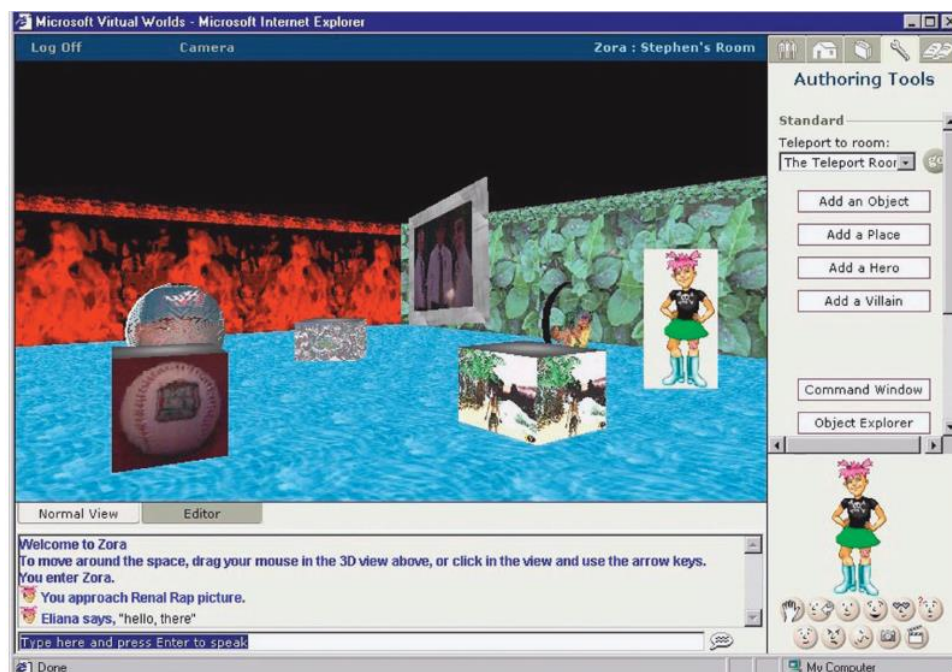


Figure 11. Screenshot of a house built by a player in Zora. On the right – Zora authoring tools, and on the bottom – chat box (Source: Bers, Gonzalez-Heydrich, & DeMaso, 2003).

Therefore, Zora aims to allow students to practice democratic behaviors such as collaboration and deliberation, while creating a space for reflection concerning these practices and the challenges they involve. When compared to MMORPGs, platforms such as Zora offer a more explicit and civic experience, yet the extent to which students can practice these habits is more limited due to the constraints on the number of

participants and the time length of such interventions. Finally, such platforms are less commonly intrinsically motivated as they are pursued as part of a teacher-led educational activity.²⁵

I now turn to explore contexts in which game making can be utilized towards practicing democratic habits in less direct ways. Here the emphasis is on the relevance of the behaviors practiced, rather than the content of the interaction. Earlier I discussed the increasingly active role players have in shaping gaming ecologies by participating in discussion forums, authoring wiki entries, and creating cheat sites. In addition, in analogous manner to the shift towards more active forms of civic participation discussed in chapter 1, commercial games have been increasingly trending towards offering players a more substantial role in game environments, both in- and out of game. A limited model of player making within games has been around for a long time, reflected in modest occasions, such as shaping one's avatar (Kafai & Burke, 2016). A few recent phenomena have significantly increased the width and breadth of this trend: the emergence of Minecraft, the growing prevalence and sophistication of game modding, and the development of game making communities.

Minecraft and Sandbox Games

The overwhelming popularity of Minecraft has shifted the way in which we think about the roles available to players in video games. In this open environment sandbox game, players use square building blocks to construct artifacts in their environments – from

²⁵ Kaufman and Flanagan (2015) also illustrate that explicitly designating games as educational might undermine the game's impact due to reduced player engagement or the triggering of players' psychological defenses.

humble houses to full blown recreation of the Wonders of the World (Figure 12).

Although Minecraft has a more traditional “survival mode” in which players must avoid monsters, it received its fame through its “creative mode”, which offers players open-ended engagement in creating their own worlds (Duncan, 2011). Thus, Minecraft provides an environment in which playing *is* making and world building.



Figure 12. Screenshot of The Temple of Artemis, recreated in Minecraft

From the perspective of democratic habits, Minecraft has three potential contributions to practicing democratic habits. First, the open-ended and self-directed participation characteristic of environments such as Minecraft allows positioning students in more active roles within game environments. This is a significantly distinct experience from the one commonly offered in more traditional video games, where the choices open to players are much more limited. The second contribution stems from the open-ended character of Minecraft but also partially contradicts it. That is, due to its relative lack of limitations, Minecraft could be used to position players as designers in a variety of more content-specific endeavors. For example, Minecraft has already been used to engage

youth in design projects related to urban planning (Heland, Westerberg, & Nyberg, 2015). The advantage Minecraft has over more tailored games is that it can build on youth's prior engagement and mastery of this environment, thus increasing their motivation to participate and contribute, and positioning them as experienced rather than novice users. Thus, depending on its mode of use, Minecraft could potentially function as a context to concurrently promote reflection of civic issues, albeit in limited ways (Figure 13). Finally, Minecraft is a multi-player environment in which youth can come together to work on shared projects. In this respect, Minecraft is equivalent to MMORPGs in its capacity to offer a non-civic context for practicing democratic habits. As mentioned, the advantage of Minecraft is that players are offered more substantial roles in shaping the game environment, and not just collaborating in a more well-defined set of constraints laid out by game designers (Dishon, 2016)

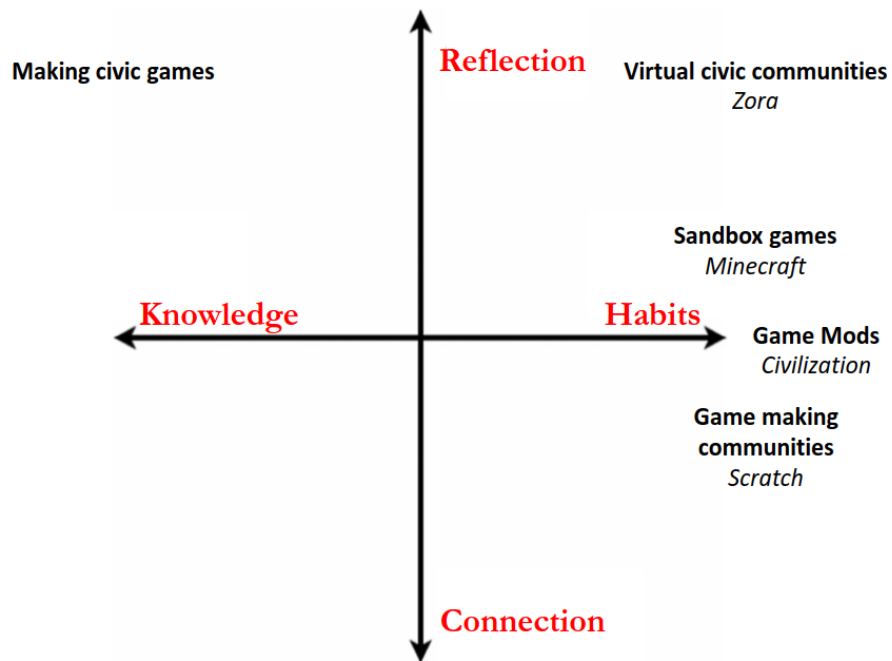


Figure 13. Complete game making matrix.

Game Modding

Another central manifestation of the shift towards connected gaming is that many commercial games today endorse player “modding” – modifications and additions to games created by players – either until a new version of the game appears, or as a core component of gameplay (Gee & Tran, 2015). As with Minecraft, in the case of modding, the neat distinction between playing and making breaks down. Modders are not professional designers paid to create the game, they are commonly players whose interest has led them to take a more active stance towards the games they play. The advantages of modding within a democratic habits framework are analogous to the contributions described above in the case of Minecraft.

First, modding signifies a shift in the attitude of players towards the game they play. Modders deploy a more active stance, perceiving the commercial game not as a finished project, but rather as a starting point for their own actions (Beggs, 2012). Thus, while game modding in itself is not connected to civic engagement, it does cultivate modders’ habit of perceiving themselves as active shapers of public entities. Second, modders not only create modifications to the game, they also share and discuss these modifications with other modders and players (Gee & Tran, 2015; Sotamaa, 2010). Thus, like other interest-based communities, modding serves as a context for interaction and collaboration with others on shared projects, and as a possible gateway towards civic participation. The third advantage has to do with what games players are modding. At least in theory, players could mod any one of the game types described in the first part of this chapter. Thus, increasing the opportunities for in-game making and modding is not a

unique category, but rather a general shift towards relegating more decision-making authority to players. While currently the vast majority of mods have nothing to do with civic issues, future research could dedicate more effort to offering youth opportunities to mod civically-oriented games (educational or commercial). From the option to manipulate the settings that determine voter decisions in serious game like Democracy, to the capacity to design new civically-oriented worlds for commercial games such as World of Warcraft. A rare example of such modding is the case of Civilization, where modders engage with issues which are closely related to the civic sphere, such as the development of social and historical movements (Owens, 2011; Sotamaa, 2010).

Game Making Communities

The final manifestation of the shift towards connected gaming is the emergence of game making communities. Several game making platforms, such as Scratch, Alice and Kodu are structured around online communities of users who share, remix and comment on projects (Kafai & Burke, 2016). In similar fashion to the communities that have organized around playing certain games, game making can support children joining and participating in interest based communities, which are an important gateway towards civic participation (Ito et al., 2015). For this reason, such communities offer a slightly more concrete connection to the civic sphere than sandbox games or modding (Figure, 13). Despite their designation as game making platforms, such communities exhibit once again the blurring lines between making and playing games, as a large part of membership in a community entails playing the games created by other members of the community.

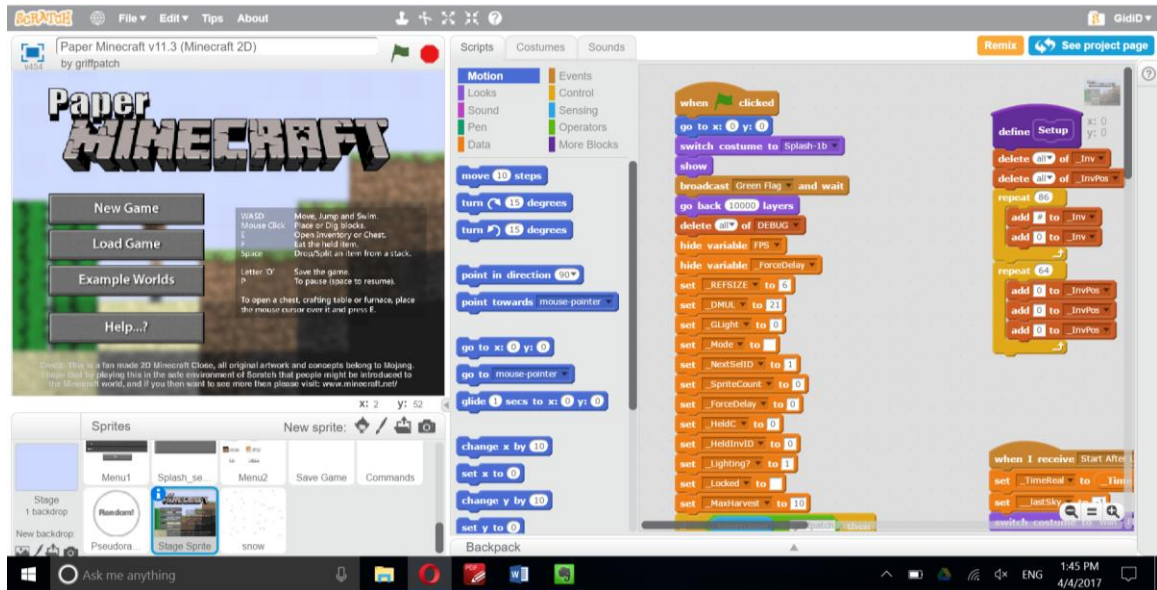


Figure 14. Screenshot of a recreation of Minecraft within the Scratch platform.

The unique feature of game making communities in relation to communities that have developed around game playing is that in such contexts youth are creators and not just users of cultural artifacts. While games such as MMORPGs function as a site in which players practice working collaboratively with others toward shared goals in a *given virtual environment*, game making communities highlight the opportunities for players to *actively shape* such environments (see for example Figure 14 for a recreation of Minecraft in Scratch). Why is this shift important? Situating youth as makers encourages a more critical and active attitude towards the games they design and video games in general. This could offer another way to (partially) tackle the transparency challenge, while facilitating practice in democratic habits attuned to the demands of today’s civic sphere. An accumulated body of research has shown that one of the educational predictors for civic engagement is whether students feel they have voice in classroom contexts (Gould et al., 2011), the same basic insight should be applied to gaming contexts. Enabling youth to be meaningful participants in these contexts – that is, makers

and not just players – is an important aspect of supporting citizenship education through video games.

Conclusion

Educators and researchers have long taken notice of the civic potential of video games. However, within a habits framework, the educational function of video games spreads far beyond how it is commonly understood today. Video games are a central part of youth's lives in the 21st century. As such, they are one of the most important sites in which youth's habits of interaction are shaped. This calls for considering the myriad ways in which video games shape youth's habits (in desirable and undesirable ways), and exploring how games can contribute to the cultivation of democratic habits. To broaden the types of habits practiced, and make them compatible with the demands of today's loosely structured civic sphere, players should be offered more opportunities for connected gaming – meaningful decision making within and about the games they play. The emphasis on connected gaming does not diminish the educational value of game playing. Game making is a much more open-ended and student led process. While throughout this chapter I highlighted the value of such context for developing democratic habits, it is important to concurrently note that game making activities are likely to be more demanding of teachers and students, and harder to regulate. Therefore, there are cases in which the added effort might become counterproductive.

In addition, there is a need to better understand the contributions of given games, and to position them as invaluable components within broader educational curriculums. Video games can introduce new experiences, ignite reflection and conversation, and stir

emotions. Yet, their influence depends on how they interact with other experiences in students' lives. Focusing predominantly on comparisons of games without examining the broader context in which they are used, and the specific aims they strive to fulfill, represents an overestimation of the educational power of games, and might undermine their potential contributions. A more holistic approach to citizenship education would offer opportunities to tackle the transparency and transference challenges, and make better use of the games themselves.

Chapter 4

**CULTIVATING DEMOCRATIC HABITS IN
COLLABORATIVE GAME MAKING**

In the previous chapters I broadly characterized the developments in today's civic sphere, and the ensuing conceptual shift demanded of citizenship education in general, and civic video games more specifically. Chapter 1 surveyed the shifts in modes of civic participation and outlined three democratic habits particularly relevant for the digital age: (i) critical reflection; (ii) work on shared endeavors; and (iii) productive communication across differences. Chapter 2 called for a broader approach to citizenship education, one which depicts schools as public spaces where students can develop and practice shared democratic habits. This implies focusing on the broader academic curriculum, as well as routines and norms characteristic of school life, in place of the prevailing emphasis on tailored civic lessons and initiatives. Finally, chapter 3 expanded the habits framework beyond schools, analyzing the nascent field of civic video game through a democratic habits lens. I argued for integrating in-game experiences with other components of citizenship education, and highlighted the usefulness of games as sites for practicing democratic habits, as well as the need to explore the civic potential of connected gaming.

This chapter aims to integrate the previous three chapters by examining the cultivation of democratic habits in one concrete academic context – collaborative game making. The academic advantages of game making are well-documented: introducing youth to programming, teaching academic subject matter, and developing design skills and system thinking (for a recent review of the field, see Kafai & Burke, 2015). My focus

here is on the indirect contributions of participation in collaborative game making to cultivating democratic habits. Though my analyses center on the collaborative game making workshops I conducted, insights from these workshops could be translated in future research to the variety of connected gaming contexts described in chapter 3.

There is a growing awareness among philosophers of education that the field could benefit from a dialectical dialogue with empirical work (Allen & Reich, 2013; Blum, 2012; Schouten & Brighthouse, 2015; Wilson & Santoro, 2015). Levinson and Newman (2015) state: “empirical research and policy analysis enable philosophy to expand its own reach by illuminating new principles, values, and epistemologies – as well as by recommending new directions for empirical research and policy themselves” (p. 3). Hence, by rubbing them against the messiness of a concrete educational context, I aspire to challenge and refine my theoretical arguments, and better understand the challenges that lay ahead in the path towards their implementation. Accordingly, this inquiry into the civic potential of game making has a dual purpose. First, it is an instantiation intended to explore my broader argument concerning the cultivation of democratic habits through participation in educational contexts dedicated to academic, rather than civic, ends. Second, I reverse the direction of inquiry, examining how an analysis of one educational context could enrich the theoretical argument on which it is based on – namely, the implicit civic contributions of academic contexts.

To do so, I designed and conducted a series of three small scale exploratory workshops that examined the notion of practicing democratic habits via collaborative game making (See appendix A for a more detailed description of the context and methods of the workshops). In these workshops, high school freshmen designed in small groups

tangible video games using Scratch, a youth-oriented programming platform (Resnick et al., 2009), and MaKey MaKey, a small USB device that connects to conductive materials and transforms them into touch-sensitive buttons (Silver, Rosenbaum, & Shaw, 2012). I describe vignettes from the workshops that explicate the potential and challenges of practicing democratic habits in collaborative game making, striving to offer a roadmap to further research and implementation. Ideally, in later stages this would lead to interventions that more concretely measure the relevance of collaborative game making to practicing democratic habits.

The first of these workshops was a pilot workshop centered on refining the workshops' instructional design (see Appendix B for a description of the pilot workshop, and how it informed the design of later workshops). Vignettes from the second iteration – the Collaborative Controllers workshop – *illustrate* how collaborative game making can facilitate practicing the *habit of participation peer-based and self-directed work on shared endeavors*. Then, analyzing vignettes from the third workshop – the Digital Carnival – I suggest that game design can offer a more a general model for developing the *habit of work on shared endeavors*, which I term *iterative perspective taking*. This workshop explicates how contextualizing the habits framework within specific contexts could contribute to conceptualizing this effort more broadly.

Two important distinction are worth noting at the outset of this inquiry. First, my argument is that game making, as a form of instructional design, is useful for practicing democratic habits regardless of the games' content. As argued in chapter 3, the design of games that have civic content is likely to be more productive as an emphasis on civic content matter contributes to explication and reflection on civic issues. Yet, my aim is to

explore the manner in which citizenship education can be promoted across the academic curriculum in non-civic contexts. Therefore, I examine how activities dedicated to academic ends (in this case, learning how to program) concurrently develop democratic habits. This argument is not exclusionary in nature. While I contend that the combination of *making* and *games* has certain advantages from a democratic habits perspective, this investigation appeals to a broader set of activities, supporting the importance of design based activities and connected gaming for citizenship education.

Second, though there are clear divergences between applying habits to game making and civic action, the logic underlying the habits framework is that practicing democratic modes of conduct in a variety of civic and non-civic contexts is a necessary, though not sufficient, condition for cultivating relatively stable democratic modes of conduct (see Ito et al., 2015 for a similar logic underlying the “connected civics” approach). As argued, the extent to which such behaviors will be applied towards civic action depends on a host of contextual factors, including how the game making activity relates to other aspects of students’ lives, in-and-out of educational contexts.

Collaborative Controllers Workshop – Constructing Games and Habits

The Collaborative Controllers workshop (15 hours over eight sessions) was conducted in the Spring of 2015. Utilizing the MaKey MaKey’s ability to transform conductive materials and into touch-sensitive buttons, participants (eight boys, five girls) worked in groups to create collaborative physical controllers – controllers that require collaboration between two or more players – for simple video games they remixed in Scratch (see Appendix C for a detailed description of workshop activities). Both vignettes explore

groups' work on their final project, which spanned over the final three sessions and culminated in a "digital arcade" in the participants' school, offering their peers outside of the workshop an opportunity to play the games and provide feedback (see Table 1 for examples of final projects).

The workshop offered an initial analysis of the possibilities and challenges of practicing democratic habits in collaborative game making. I specifically focused on (i) the affordances of *making* or *design-based activities* for the habit of *peer-based and self-directed participation*; and (ii) the relevance of making *games*, in particular, to the habit of *work on shared endeavors*. I introduce the theoretical rationale underlying each of these aspects, followed by relevant vignettes from the workshop.

Peer-Based and Self-directed Participation

The first and central reason game making can serve as a context for practicing democratic forms of interaction is that *constructionism*, the learning theory underlying game making activities, asserts that students have increased opportunities for learning when they are situated as active constructors of meaningful and public artifacts. Papert (1991) summarizes:

Constructionism—the N Word as opposed to the V word—shares Constructivism's connotation to learning as building knowledge structures irrespective of the circumstances of learning. It then adds the idea that this happens especially felicitously in a context where the learner is consciously engaged in constructing a public entity whether it's a sand castle on the beach or a theory of the universe that can be shared with others. (p. 1)

As can be seen, Papert is walking in the footsteps of Dewey, stressing the active and social nature of learning (Kafai & Burke, 2016). Thus, while sharing Piaget's

constructivist depiction of students as active makers of meaning, constructionism emphasizes how knowledge is created in the process of making and sharing personally meaningful artifacts (Ackerman, 2001; Kafai, 2006a). The social aspect of learning is not an afterthought added once most of the learning has been achieved by individual learners, it is part and parcel of the learning process itself:

While constructionism places importance on the individual learner, it also places equal importance on the role of social participation. Here the individual, the artifact, and collaborative input of the community shape learning, participation, and sharing. (Peppler & Kafai, 2007, p. 370)

In this regard, constructionism is in essence civic – defined by an emphasis on social participation in creating public objects. This affinity is particularly salient in light of the emerging forms of collaborative and self-directed political participation enabled by digital media (Kafai & Peppler, 2014).

The emphasis on the construction of projects is not unique to game making or to constructionism. Constructionism can be perceived as part of a larger family of research approaches dedicated to learning through participation in design based activities.²⁶ The common thread uniting the various approaches to learning through design is the emphasis on three central components in the learning process: defining the problems and searching for possible solutions, carrying out the practical steps necessary to achieve these solutions, and critically (and iteratively) reflecting on this process (Horn, Crouser & Bers, 2012; Ke, 2014; Kolodner et al., 2003; Roth, 1996; Schon, 1987; Shannon, 1990). A similar set of challenges faces citizens in today's civic sphere: defining the problems they

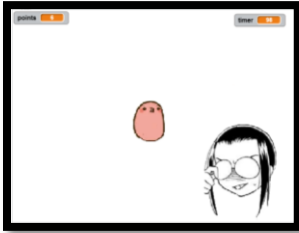


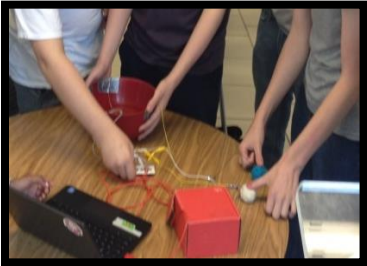
²⁶ In the next section, I elaborate more on the relevance of the iterative aspects of design when I discuss the importance of *iterative game design* to practicing democratic habits.

think are worth tackling, coming up with possible solutions, and implementing the required means (Kahne et al., 2016; Kornbluh et al., 2015; Stokes, 2012). Put differently, design-based activities provide students with expectations and roles analogous to those of citizens working collaboratively to shape their society.

This affinity is also apparent in the character of failure in game making. Video games are often lauded for encouraging risk taking: in games, failure is an opportunity for improvement, rather than a dreaded result which stifles learning (Gee, 2003). While this is a valuable feature of game playing, game making offers different modes of experimentation and failure, which are particularly relevant to the emerging forms of civic participation: a collaborative, open-ended and nonlinear process in which both the goals and the methods utilized to achieve them are largely determined by participants. Game playing is a designed context, one in which players can be certain of the theoretical possibility of success (Dishon, 2016). In game making, on the other hand, success is much harder to measure or ensure; makers encounter failures and setbacks without the promise of an externally defined solution. Moreover, success or failure are not encoded into the game's software by designers beforehand, but rather depend on the actions and reactions of future players.

In what follows, I introduce vignettes from the workshop that examine the potential of game making to function as a context for practicing *peer-based and self-directed modes of participation*. All examples are drawn from the work of one group – *Blaze It* – on their final project (see Table 1), which was prepared over the final three sessions of the workshop and then presented at an arcade in the participants' school.

Table 1. Collaborative Controllers workshop final projects: onscreen and physical design

	Potato Hunt	Blaze It
Video game design		
	Remixed the Scratch “monkey game”: designed new sprites and recorded original sound effects, changed the code in order to allow improved control, added a timer, an instruction page, and various “secret keys” which created audio and visual effects.	Remixed an existing Scratch side scrolling game: adapted the game’s difficulty to be compatible with their controllers, changed the game’s aesthetics and sound effects according to the game’s new “drug dealer” theme, and added instructions.
Collaborative controller design		
	Created a “ring around the rosy” themed controller: players had to run in circles around the controller while holding hands, and stepping on the conductive pads indicating the direction they wished the character to move (one player was connected to the MaKey MaKey in order to close a circuit).	One player controlled character movement by tilting a water filled bowl in the desired direction, allowing the water to touch conductive wire and close a circuit. A second player was in charge of shooting by simultaneously touching two playdoh balls and closing a circuit.

Vignette –Blaze It

The Blaze It group, which consisted of six participants (three boys and three girls), struggled with setting and agreeing on goals. In contrast to previous projects, which were both shorter and more strictly defined, in the final project participants were not offered any limitations beyond the need to create collaborative controllers. The group’s struggles

were particularly notable during the brainstorming stage, in which members were dumbfounded to even begin, and seemed openly frustrated. Maria (all names are pseudonyms) later summarized:

When we were first getting started, we were all pretty, I don't know, we didn't have a lot of ideas, and um, it took a while to come up with something that we all wanted to do... we spent a whole class time I think just kind of sitting in silence.

A whole session in which participants tentatively brainstorm might be perceived as a waste of time when viewed from the perspective of covering a predetermined body of knowledge, or progress towards manufacturing a final product. However, from a civic perspective, these struggles are vital if students are to cultivate the habit of peer-based and self-directed work. Such experiences are lacking from many educational projects in which the teacher (or the game designer) have a stronger say in managing the activity.

The challenges characteristic of a collaborative, nonlinear and open-ended process was a constant theme in the team's work. Blaze It's struggles in creating their controllers illustrate this point. The group's choice of controllers based on tilting water (see Table 1) was creative yet technically challenging, and the group encountered a consistent problem of lagging controllers. In response, members engaged in an iterative trial and error process, tinkering and improving the controllers, as Natasha notes:

With the trial and error... we did see so many ways that it could go wrong and we found so many ways to improve it, and um, like, with each trial we saw, um, I don't know, like, things we could take from it... I think it made our design better at the end.

Though the group was not able to completely resolve this problem, and the controllers required repeated mending during the final arcade, the cyclical process of playtesting and

tinkering was very insightful from a civic perspective – offering a glimpse into the challenges of an open-ended, self-guided and collaborative process of problem solving. Maria later stressed the communal aspect of these struggles: “I learned by seeing what other people were thinking”. Jennifer elaborated on what this process had taught her:

For me, it was like, I am not good at thinking ahead... if I do something it's like, yeah, that's it... I finally thought ahead during the actual arcade... it was thinking in the future, I know it's just a basic human thing, but I don't have it all the time.

The attempt to solve loosely structured problems had broader contributions than any structured solution to the problem (e.g., creating a more precise layout of the conductive wires) could have offered. What Jennifer describes as “thinking in the future” includes a variety of extremely vital habits, both from an academic and from a civic perspective: problem solving, planning ahead, learning from others. These affordances are compromised when students are offered a structured solution to the problem, or when educators take the lead in an attempt to save time or ensure a better final product. Gee (2010) argues that by striking the balance between challenge and “doability” games are “pleasantly frustrating”. In contrast, game making introduces a different form of frustration, more characteristic of civic action – that of collaboratively tackling a self-guided process which lacks external structure that ensures success, as Ben, member of the Blaze It group succinctly stated during brainstorming: “UGH! This is so painful.”

Thus far, I have focused on the benefits of constructionist activities in general. The next section explores the more specific affordances of making *games* to practicing the *habit of participation in shared endeavors*.

Game Design and Shared Endeavors

Although civic projects can be pursued solely in light of individual or group interests, one of the main aims of citizenship education in a liberal democracy is to cultivate students' propensity to pursue shared endeavors – public projects guided by the understanding and appreciation of the diverse perceptions of various social groups beyond their own (Kahne et al., 2016; Kymlicka, 2001; Mutz, 2006). As mentioned, games are public artifacts – created with the intent of being used by others. While this might be true concerning design projects in general, games are a particularly fertile context for working on shared endeavors because they are not only products designed with future users in mind, they are *interactive social systems* (Salen & Zimmerman, 2003). While a designer planning a phone or an architect planning a house also need to consider future users (at least ideally), the advantage of game making is that designers can (relatively) easily view how players react to the games they make due to the fact that game playing is an activity which could be pursued over short periods of time. This opportunity is even more meaningful if game making activities focus on games which are social in nature, thus requiring designers to reflect on the social interactions developed in the game space

As famously noted by Piaget (1997), games are central spaces for children's moral development. In games, children encounter rule-systems under a relative lack of adult supervision and develop the capacity to comply, interpret and negotiate these rules.

Now, most of the moral rules which the child learns to respect he receives from adults, which means that he receives them after they have been fully elaborated, and often elaborated, not in relation to him... In the case of the very simplest social games, on the contrary, we are in the presence of rules which have been elaborated by the children alone... The little boys who are beginning to play are

gradually trained by the older ones in respect for the law; and in any case they aspire from their hearts to the virtue, supremely characteristic of human dignity, which consists in making a correct use of the customary practices of a game. As to the older ones, it is in their power to alter the rules. If this is not "morality", then where does morality begin? (pp. 1-2)

Piaget's description explicates why games are not just products intended for the use of others. They are rule-governed social systems which define conduct across varying circumstances. Therefore, game making can encourage designers to consider how players will interpret and accommodate to the game's rules in different situations.

Hence, establishing an interactive rule system which governs the social interactions within the game space demands reflecting on the perceptions, motivations and behaviors of future players as they develop over time across a host of possible choice sets (Flanagan & Nissenbaum, 2014).²⁷ Importantly, in game making, this effort is endogenous to the attempt to make a successful game, rather than an external element added in retrospect (Kafai & Pepler, 2014). Such experiences can serve as a foundation for pursuing shared endeavors in the civic sphere, as they support the habits of creating projects that are attentive to the needs of diverse future users. I explore the thesis that students can practice the habit of work on shared endeavors by introducing vignettes from the work of the *Potato Hunt* group on their final project.

Vignette –Potato Hunt

The challenges encountered by the Potato Hunt group (two boys and two girls) illustrate the uniquely civic aspect of making *games*: accounting for the perspective of future

²⁷ When discussing the Digital Carnival, I elaborate on the relevance of connected gaming to practicing this habit – simultaneously positioning participants as makers and players.

players. In contrast to Blaze It's tumultuous work process, Potato Hunt's work was smooth and characterized by high levels of collaboration. Where other teams tended to work until the game reached the required levels of functionality, members constantly tinkered with their game in an attempt to improve it. Sarah, a group member, describes:

We worked really well as a team together... we kicked around ideas and no one idea's was really like disregarded, or like, that's stupid... we always built upon them and we just worked well.

However, a large proportion of this energy was directed towards designers' enjoyment rather than future players'. For example, the group invested much effort in designing "secret keys" which created various effects players actually could not access through the controller (participants in the game could only press on the four arrow keys via the physical controller, while the six secret keys were random letters on the keyboard).

This inner-focus was reflected in a series of design choices the group made and which hampered the game's success in the final arcade. While their game was highly successful in internal playtesting sessions, boasting unique game mechanics, advanced coding and polished visual and audio effects, their experience in the final arcade was drastically different. The group only recruited players for 10 minutes of play, in stark contrast to Blaze It which drew a steady crowd of players for the entire 45 minutes. When reflecting on this state of affairs in their debriefing focus group interview, members of Potato Hunt (accurately) acknowledged the game's high barriers for participation which included taking off shoes and holding other players' hands:

Emily: The game was a good idea, it just might have been a little too active because it was a bit hard and a lot of people weren't comfortable with what they had to do.

Sarah: The other games seemed popular because they didn't require as much physical activity and also you had to take off your shoes for the game we created.

Potato Hunt's experiences illustrate the other-oriented nature of game making. The perceived failure of their game in the arcade exposes how designing a successful game requires attentiveness to players' motivations and perceptions. Moreover, it illustrates how game making potentially creates a tension between the designers' perceptions and goals and those of future players, which might be different and even contradictory to their own. In the case of Potato Hunt, the feedback from the arcade allowed them to assess aspects of their game they were unable to think of during the initial design and playtesting.

Interestingly, the high levels of collaboration characteristic of group work stood in an inverse relationship to their awareness of the challenges of collaboration their game presented for players. When explaining why they might have not considered the barriers for participation beforehand, group members stated:

Sarah: Because we were all pretty comfortable with it, because we were all, um, awesome.

Emily: I also probably think it's their fault because they suck.

This focus on their own experiences in the design process limited their capacity to reflect on the possible reactions of players. Moreover, the general agreement between group members led, in this case, to overlooking the diverse reactions players might have to the game. These dynamics are a micro-cosmos of the challenges characteristic of the civic sphere – balancing the perspectives and interests of in-group members with the more

diverse and unpredictable perspectives of out-group members. Reflective design is a challenging practice, even for much more experienced designers. Thus, the group's so-called failure is not a testament on their own shortcomings, but rather highlights the importance of practicing reflection on projects made for the use of others.

Due to the workshop's length, members of Potato Hunt did not have an opportunity to implement the lessons they learned from their failure. Still, their experiences illustrate the unique opportunities for practicing work on shared endeavors afforded in game making. In contrast to most educational projects that are evaluated by a teacher, or by their ability to fulfill a certain function (e.g., programming a functional script), games are other-oriented projects which are assessed according to the reactions of diverse peers. Practicing the habit of viewing their projects from multiple perspectives, and designing it accordingly is not an intellectual exercise divorced from the activity, it is at the heart of striving to make well-designed games. When accompanied by opportunities for playtesting, game making offers experiential and real time feedback concerning the project's weaknesses and strengths, one that is likely to have a more lasting effect than after-the-fact comments offered by an instructor. Therefore, game making does not only facilitate opportunities for considering diverging perspectives, it also increases the motivation to do so.

Whereas game playing can situate players in roles and interactions characteristic of the civic sphere (Curry, 2010), I suggest that game making can add another layer to the simulative civic role of games: providing students with the expectations and roles characteristic of active citizens working collaboratively to shape social environments.²⁸ It

²⁸ I distinguish the perspective taking characteristic of game playing and game making in my analysis of the Digital Carnival workshop.

should be noted that in terms of the classification offered in chapter 3, participants *practiced* democratic habits, yet this was not accompanied by *connections* to civic issues, or *reflection* on the habits or their application to the civic sphere.

In the next section, I further develop the unique civic aspect of making games (in comparison to other design-based activities) – the situated, complex and iterative from of perspective taking it offers. The Digital Carnival workshop shifts the focus of my inquiry – from an examination of collaborative game making as an *illustration* of the usefulness of non-civic contexts to practicing democratic habits, to exploring what insights this activity can *contribute* to the notion of practicing democratic habits more broadly.

The Digital Carnival – Shared Endeavors and Iterative Perspective Taking

Game making is particularly conducive to work on shared endeavors due to the iterative process characteristic of game design. That is, beyond the interaction designers must consider when creating a given game, as games are interactive systems, designers can (relatively) easily examine the reaction of players to the games they have made in playtesting sessions (Flanagan, 2009; Fullerton, 2014; Salem & Zimmerman, 2003). Thus, it is not merely the activity of designing games in itself but the iterative approach to design – generating game ideas, playtesting, and analyzing the results (see Figure 10) – that renders game as a ripe context to practice work on shared endeavors.

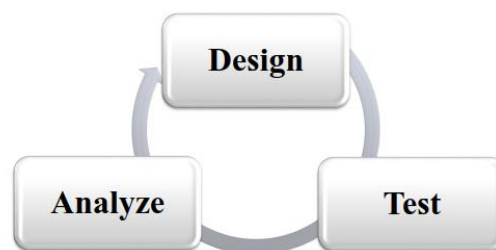


Figure 15. The iterative design process (Zimmerman, 2003).

Why is iterative design relevant to work on shared endeavors? Zimmerman's (2003) delineation of the nature of iterative design illuminates its civic potential:

Iterative design is a design methodology based on a cyclic process of prototyping, testing, analyzing, and refining a work in progress. In iterative design, interaction with the designed system is used as a form of research for informing and evolving a project, as successive versions, or iterations of a design are implemented. Test; analyze; refine. And repeat. Because the experience of a viewer/user/player/etc cannot ever be completely predicted, in an iterative process design decisions are based on the experience of the prototype in progress. The prototype is tested, revisions are made, and the project is tested once more. In this way, the project develops through an *ongoing dialogue* between the designers, the design, and the testing audience. (p. 176, emphasis added)

I suggest that iterative design can be understood as laying out the syntax of Papert's constructionist approach – a cyclical and public process of testing, analyzing and refining, which facilitates the designers' knowledge construction. An important aspect of constructionism is that it offers students "objects-to-think-with" – ways to concretize abstract concepts by connecting them to physical artifacts (Papert, 1980).²⁹ The most famous example of this concretization is the LOGO turtle. Through the manipulation of the turtle in a physical space, children could enrich their thinking on abstract mathematical concepts. Analogously, games can function as objects-to-think-with in the case of shared endeavors. The iterative design cycle facilitates "an ongoing dialogue" between the designers and the testing audience. The collaborative component of game design is vital in this context, as it requires designers to explain their understanding of future players' experiences to fellow designers, while simultaneously allowing them to learn from their peers.

²⁹ This view of science education resonates Dewey's pragmatist understanding of science as "putting objects and ideas to work in various ways" (Waddington & Feinstein, 2016, p. 116).

Hence, when students have meaningful opportunities to playtest, analyze and revise their design, they are concurrently offered an opportunity to practice and refine the habit of work on shared endeavors. Iterative design cycles demand a complex and situated process of considering the perspective of others, which I term *iterative perspective taking*: predicting players' behaviors when designing the game, analyzing players' conduct during playtesting, and manipulating game mechanics in an attempt to reshape players' experiences. Flanagan and Nissenbaum (2014) present an analogous adaptation of the iterative design cycle in the case of value conscious design, which is broken up to *discovery* of the values designers wish to promote, *implementation* in game design, and *verification* through playtesting. My emphasis here is less on the specific values embedded in games, and more on how iterative design facilitates a useful context for practicing work on projects intended for the use of others. In this respect, iterative design offers a more general model for practicing and developing the habit of work on shared endeavors, which can be implemented in a variety of learning contexts.

Comparing game playing and game making can help clarify the unique attributes of iterative perspective taking and its relevance for the habit of work on shared endeavors.³⁰ A game like Real Lives, discussed in chapter 3, aims to offer players situated and emotionally engaging perspective taking, defined as “the active consideration of others’ mental states and subjective experiences” (Todd & Galinsky, 2014, p. 374). Hence, the game focuses on developing a better understanding of

³⁰ It is important to note that perspective taking is hard to cultivate, and even harder to transfer to volatile civic settings, whether practiced in game playing or game making. Therefore, my discussion here should be understood as exploring the possibilities of cultivating perspective taking, while remaining aware that success in such a venture is likely to remain limited. At the same time, even limited success is of vital importance for citizenship education.

perspectives that were previously foreign to players. The educational aims of such an intervention are usually to increase empathy and reduce prejudice towards other social groups (Belman & Flnaagan, 2010a; Todd & Galinsky, 2014; Van der Graaff et al., 2014). Thus, perspective taking in game playing is usually content-oriented and identity-based.

Iterative game design facilitates a different kind of perspective taking experience, with different advantages and limitations. Game design does not offer a nuanced cultural understanding of perspectives that players are not familiar with (unless, again, students are designing civically-oriented games). At the same time, the perspective taking process in game making is more active, complex and intrinsically motivated – designers strive to create their own understanding of how players will use the game (and learn from players' reactions), rather than learn about a perspective embedded in the game by a designer. Here, the focus is project-centered – how will diverse others *use* an endeavor (material or abstract) one is working on.³¹ As in the case of habits more broadly, the emphasis is on the general process (considering projects from diverse perspectives) rather than on the specific content (the experiences of a particular individual or social group).

Beyond the structure of the iterative design cycle, it is important to remain aware of the influence of what audience is playtesting the game. The extent to which designers receive feedback that exposes aspects of the games they had not considered themselves determines how much they can learn in this process. How can educators scaffold this feedback process? To begin with, playtesting and feedback cannot be offered solely at the

³¹ This shift is analogous to the perception of citizenship in terms of shared projects or shared fate rather than shared identity (Ben-Porath, 2012; Williams, 2003), which is also aligned with Dewey's (1927/1988) view of democracy.

end of the process, as is often the case with educational projects (and to a certain extent, in the Collaborative Controllers workshop). Beyond the importance of ongoing, copious, and timely feedback (Gee, 2003), my focus in this section is on the *sources* of feedback. In what follows, I distinguish between three archetypal sources of feedback used in the Digital Carnival workshop: expert feedback, peer playtesting, and real audience.

First, it is important that designers receive *expert feedback* – insights from more experienced designers who can consider and illuminate aspects of the design process not readily available to novices. This aspect is almost taken for granted – it is the assumption of any educational process that students would benefit from teachers who are experts in the field they are teaching (Yoon, Koehler-Yom, Anderson, Lin, & Klopfer, 2015). In the context of democratic habits, expert feedback is vital to illuminate aspects of players’ experiences designers might have not considered. The expert’s role is to support students’ reflection on possible perspective of others, rather than to simply introduce her own perspective. Hence, expertise is not only measured in terms of game design, but also in the capacity to support students’ attempt to view the game from other perspectives.

Second, as argued in chapter 3, game making and game playing cannot be neatly separated. Playtesting is a context in which this interrelatedness comes into play. While playtesting is an opportunity for designers to get feedback on their game, it is also an occasion for players to learn by playing the games designed by their peers (Denner, Werner, & Ortiz, 2012; Kafai & Burke, 2016). Hence, I call this kind of feedback *peer playtesting*. In contrast to a test where the relationship between the student and teacher is one-directional, in peer playtesting students fulfill various roles. Peer playtesting can take place in a variety of ways – from structured playtesting as part of game making in

educational contexts, to the informal process of feedback and iteration taking place in online communities such as Scratch. The important aspect is that *testing* does not overshadow *play*, thus positioning students as creators of knowledge (concerning their game, or others') and not merely recipients of feedback from an external authority figure.

Finally, when possible, students should playtest their games with audience beyond the initial learning context. Not only is exposure to a broader influence likely to increase the motivation of students to create a good game (Kafai & Burke, 2015; Robertson, & Howells, 2008), it also diversifies the variety of player experiences, which contributes to breadth and depth of perspective taking designers engage in. One of the central challenges to work on shared endeavors in educational contexts is that students tend to focus on one particular perspective – that of the teacher. This undermines the very notion of perspective taking, as designers mostly learn about what the teacher thinks a good game should look like. Thus, when game making is disconnected from a broader community of players, it loses much of its civic appeal.

Therefore, designers should be encouraged to present their games to *real audience*: individuals who are external to the learning process. The power of game making communities is that these feedback mechanisms are built into the design of the platform (Kafai, Burke, & Fields, 2010). In more traditional educational contexts, there is a need to proactively facilitate such opportunities for designers to present their games to diverse audiences and learn from their feedback. Importantly, when possible, players should present games beyond the school context. As noted, schools are increasingly segregated according to class and race, and individuals tend to curate their online presence in ways that limit interaction to like-minded individuals. Therefore, educators

should strive to provide opportunities to cross these boundaries. The notion of the game as an artifact supporting a dialogue on a variety of perspectives is jeopardized if designers do not actually see how a diverse set of players react to their game.

I now turn to introduce vignettes from the Digital Carnival that examine how the iterative design process, and the different feedback sources, support the habit of work on shared endeavors.

Vignette – Dictator Donkey and America’s Got no Dignity

The Digital Carnival workshop, conducted in the fall of 2015, was dedicated to participants (ten boys and six girls) working in groups to make augmented versions of classical carnival games, using Scratch and the MaKey MaKey. It spanned over 17 hours, which included eight two-hour meetings at the science museum, and a final “digital carnival” where students presented their final projects in their school (see Appendix E for a description of workshops activities, as well as the rationale for the changes made between workshops). In order to examine the role of *iterative perspective taking* in work on shared endeavors, I introduce vignettes from two groups’ work on their final project: Dictator Donkey and America’s Got No Dignity. These two cases were chosen as the overall trajectory of the groups’ work, as well as their contrasting design choices, illuminated vital aspects of work on shared endeavors through game making.

Throughout students’ work on their final projects, which spanned over the last three sessions of the workshop, I used a series of scaffolds intended to elicit reflection on how game mechanics shape players’ experiences. First, the brainstorming process was carried out using a tailored “carnival version” of Grow-A-Game cards (Belman,

Nissenbaum, Flanagan, & Diamond, 2011). Each group randomly drew Grow-A-Game cards from three different categories: types of carnival games, verbs indicating actions players had to perform, and values that ought to be expressed via gameplay. For example, America's Got no Dignity was assigned the game bean bag toss, the verb singing, and the value open-mindedness. Hence, the group had to create an iteration of the bean bag game, which demanded that players sing, and which would encourage players to exhibit open-mindedness. These design constraints were intended to challenge designers to rethink traditional game mechanics, rather than simply emulate existing games, as happened in previous workshops.

Second, work on this game emphasized the iterative character of game design, as well as the importance of various feedback sources. Designers incrementally received feedback from wider circles in three playtesting sessions: (i) *peer playtesting* in a mini-carnival during the 7th session in which participants' played other groups' games and filled feedback forms; (ii) *expert feedback* offered by NYU professor and professional game designer Matt Parker during the 8th and final session; (iii) *real audience* in the digital carnival conducted in the participants' school, in which their peers outside of the workshop played the games they created. This structure was meant to offer participants multiple cycles in which they could test their game on different audiences and modify their design, thus facilitating more in-depth perspective taking. I start by describing groups' initial design and then recount their experiences in the three playtesting cycles.

Initial Design. As their design constraints, the Dictator Donkey group (three boys and one girl) received the carnival game *Pin the Donkey*, the verb *punishing* and the value

liberty. The group adopted a very free flowing attitude towards these design constraints, viewing them as inspiration for their own ideas rather than strict guidelines, as group members explain (all names are pseudonyms):

Isiah: We just thought of randomly, um [laughing], we heard punishment and liberty... we somehow thought of a dictator punishing the donkey.

Leonardo: We were having fun and saying like. Let's brainstorm with stupid ideas.

Although the game mechanics changed throughout the different playtesting sessions (as I later elaborate), the basic setup remained constant (Figure 16). Their initial game design consisted of a real-life blindfolded player holding a conductive stick who was challenged to walk through a real-world obstacle course attempting to reach a donkey at its end. If the player accidentally touches one of the obstacles (aluminum covered boxes), she closes an electric circuit and loses a life, resulting in visual and audio effects designed in Scratch on the screen (players had three lives). Alternatively, if the player manages to touch the aluminum covered donkey, thus closing a circuit, she wins.

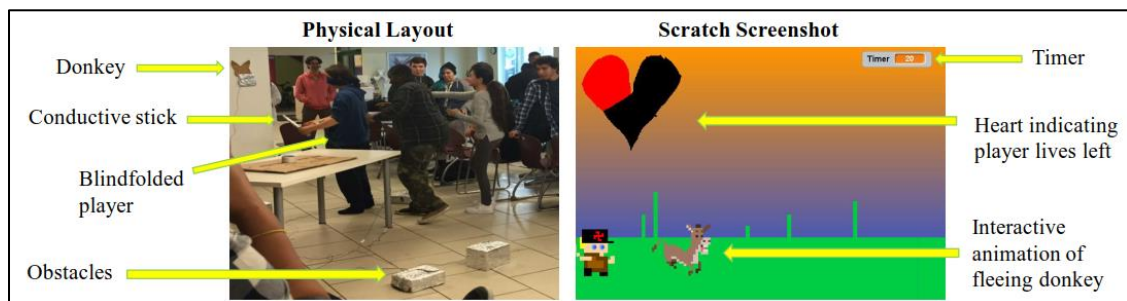


Figure 16. Dictator Donkey – final project.

In contrast, the America’s Got No Dignity (hereafter, AGND) game design more strictly reflected their design constraints (bean bag, singing, open-mindedness). The team (three boys, one girl) devised a game in which participants had to throw a ball at three conductive bottles (Figure 17). If one of the bottles was hit, it fell on a conductive pad and closed an electric circuit. This resulted in two “awful songs” (e.g., Rebecca Black’s Friday) being uploaded on Scratch, and players had to choose which of these songs they would sing. The group spent a considerable amount of time excitedly looking for the funniest songs they could find and imagining their friends having to sing them. Hannah commented on their initial design: “I’m most proud of the [game] idea we have planned and the horrible songs we picked for people to sing”.



Figure 17. America’s Got No Dignity – final project.

One of the main challenges facing game designers is managing the tension between their perception of the game they make and those of future players (Fullerton, 2014). As participants set out to design their game, they need to consider the game from the perspective of future players. While this may seem fairly obvious, as can be seen in both workshops, it is actually one of the more challenging aspects for beginning designers. The Dictator Donkey team started planning their game with a total disinterest for players’ experiences. Rather, their design stemmed from their own internal jokes on

the Grow-A-Game cards they received. The AGND team, on the other hand, did seemingly consider player experiences, designing a game that would elicit open-mindedness by asking players to sing awful songs in public. However, as exhibited by how the group indulged in searching for the most dreadful songs for players to sing, their design was pursued from their position as designers watching the game, rather than thinking how future players would react to the game.

Peer Playtesting. Peer playtesting took place during the 7th session of the workshop (the second session in which groups had been working on the final project). After groups received feedback on their initial design idea in the 6th session, they created a functional prototype of their game, which was then played by members of the other groups.

During peer playtesting, players in Dictator Donkey's game were wary of walking across the obstacle course blindfolded and therefore either kept peeking through their blindfolds during game play, or stopped playing. This sparked a debate among group members concerning how to fix the game:

Isiah: Someone has to guide him!

Leonardo: There won't be someone.

Isiah: That'll be impossible then! How's he going to cross the room?!

Aiden: They'll have unlimited time?

After more playtesting and player feedback, and some internal debate, the group decided to experiment with Isiah's idea of adding a guide charged with leading the players.

AGND's peer playtesting was also characterized by fundamental problems with the game mechanics. Players were reluctant to sing the songs they were assigned after hitting the bottle. When discussing what to do if players do not sing, group members commented:

Patrick: How about we make one song mandatory?

Hannah: They can just leave.

Despite further questioning by the instructor, group members were resistant to the idea that this problem could be addressed by changing game mechanics, and focused solely on technical aspects which were problematic: adding onscreen lyrics and better playback music. While these technical aspects seemed crucial, it should be noted that at this stage, group members did not reflect on the game mechanics as the source of players' struggles.

The groups' different trajectories expose the advantages and limitations of peer playtesting. Peer playtesting allowed designers to get feedback from their peers in the workshop in a supportive and informal manner. While both groups received important insights concerning their game during this stage, they reacted in different ways. Dictator Donkey took advantage of this more informal session to play their own game, and to try out different iterations of the game. While as will become clear, their solution was not successful, members did have an opportunity to think about their game and explore different ways to improve it. In contrast, AGND's experiences expose the central limitation of peer playtesting – due to the informal atmosphere, feedback might not have a strong impact. This was exactly what happened in AGND's case, where group members

chose to attribute the game's problem to players' behavior rather than to their design. As we shall soon see, in later playtesting sessions, group members shifted this point of view.

Expert Feedback. Groups received feedback from NYU professor and professional game designer Matt Parker in the early parts of the 8th session (the third and final session dedicated to their final project). Groups presented their game to the designer, who then played it and watched other members playing it and offered feedback. Feedback was dialogical and focused on encouraging group members to think of ways to tinker with their game mechanics, as well as more technical comments on the Scratch code, the MaKey MaKey circuits, and intersections of the two.

During this second round of playtesting, the addition of a guide solved Dictator Donkey's problem of unwilling participation, but the pendulum had swung too far in the other direction – the game had become too easy. Matt Parker encouraged students to think of a way to counteract this by manipulating the game mechanics rather than merely adding obstacles (which was their initial reaction). The group decided to turn this into a competitive game by engaging the game's spectators as active participants, charged with the role of confusing players by yelling conflicting directions. Aiden reflected in the debriefing focus group on the logic guiding this decision: “if you would not have the other people there, it would just be kind of like, um, the guy, ahh, randomly walking to empty space, and we figured it would be more organized I guess, and it would be more challenging”.

As for AGND, players were still reluctant to sing the songs they were assigned. Moreover, players seemed baffled concerning the game's goal, and repeatedly paused to

ask what to do next. In light of the professional game designer's suggestion that they change the fundamental game mechanics, the team started to brainstorm how to increase the motivation for singing by changing the reward structure.

Dylan: How about instead of him [the second player] picking his song, I [the first player] pick the song.

Hannah: [interrupting] OK, another option, if you hit the bottle, the other person has to sing.

The team followed through with Hannah's idea, and decided players would have alternate turns to try and hit the bottle with the ball. Once a player has hit the ball, the other player must sing one "awful song" until he too hits a ball. Hence, players were now trying to hit the bottle in order to stop singing and force their opponent to sing. This iteration reflected a better understanding of players' experience – they were motivated by a desire to avoid singing. By tinkering with the game mechanics the group created a more feasible reward structure for the game, which integrated the throwing and singing elements.

As can be seen, both groups made substantial modifications to their games in the *expert feedback* stage. Beyond the practical advantage of receiving feedback from an experienced designer, participants treated the game designer's feedback more seriously than that received from their peers or the course instructor, and were more likely to make changes. Yet, this increased malleability plays both ways. The main drawback of expert feedback is that it might undermine students' agency. Participants were too willing to attribute their decisions to the game designer's advice, even when this was not warranted. Thus, designers might simply implement ideas offered by an expert, rather than focusing on their own thinking. This is why it is important that designers receive expert feedback

(from a teacher or an external expert) after they had a chance to experiment with their game and receive feedback from less authoritative sources. Moreover, if possible, expert feedback should be given when players can improve the game, thus avoiding its perception as a grade-equivalent final verdict.

Real Audience. The digital carnival took place in the participants' school, a week after the final session, and was attended by the freshmen class in the school, as well as teachers and the vice principal. Though there were no formal mechanisms to provide feedback, designers received informal feedback via the questions and comments by players, and most importantly – through viewing and interpreting players' reactions.

In Dictator Donkey's game, the addition of yelling proved to be a great success, and the game drew many players and enthusiastic participation by spectators. In their debriefing focus group (held the next day), group members seemed to be very proud of the game they created:

Leonardo: It was fun, at the same time then people were enjoying the game, other people that was not playing the game could participate... I think people enjoyed it, and we also did, so it was great.

Isiah: It was the emotions that people that played were giving.

The social component added to the game in its final iteration turned out to be particularly attuned to the public character of the carnival, a fact designers had not anticipated in light of their playtesting experiences in the workshop.

AGND's game, on the other hand, struggled to take off. Despite designers' encouragement, players were hesitant to sing, and the group struggled to recruit players

(in stark contrast to Dictator Donkey). When reflecting on the digital carnival, group members attributed this state of affairs to the game's confusing goals (there was no win condition that ended the game), and their lack of appreciation of how players would resist singing in a more public space than the workshop. Hannah summarized: "we should have made it easier for them [the players], like, to understand what to do. And like, like what the point or the objective of the game is."

The digital carnival offered designers insights they could not have reached within the confines of the workshop. For instance, only in the digital carnival did AGND members realize that they had not structured an adequate reward structure that would encourage players to sing. In previous playtesting sessions this was masked through the (semi) enthusiastic participation of their supportive peers. It was also here that the Dictator Donkey group realized the power of eliciting social participation. The unique characteristic of this stage was the existence of *real audience* – presenting their work in a more formal setting to individuals who are external to the learning process. Workshop participants, and experts in the field, are to a large extent, insiders. Allowing peers outside the workshop to play their games offered participants more diverse and meaningful feedback, manifested in players' reactions while playing, as well as their decision whether to keep playing (both groups assessed their final project mainly in light of players' reaction in the carnival). Ideally, real audience would include more diverse and distant audiences than designers' peers at their school (a fact on which I elaborate in the summary of this section). Still, the opportunity to practice work on shared endeavors is more meaningful when users are external to the learning context, an aspect which is regrettably missing from most educational settings.

In sum, while both teams initially failed to consider the perspective of others, the importance of iterative game design is that designers were confronted with these deficiencies in the playtesting stage. During playtesting sessions, both teams realized aspects of their games of which they were previously unaware (see Table 2 for a summary of the three playtesting cycles). Although the AGND team took more time to tackle these shortcomings, and were less successful in doing so, both teams engaged in a similar process: they collaboratively offered ideas concerning how to change the game and engaged in a trial and error process of these manipulations in later playtesting sessions. In this respect, game making affords a unique perspective taking experience in comparison to learning about other perspectives, viewing them brought to life through art or reporting, or experiencing them by playing a game. Moreover, efforts to analyze problems in the current design and offer iterations are mostly collaborative – the complexity of this process demands players build off each other’s ideas in order to find suitable solutions. That is, the process of better understanding players’ perspectives is concurrently enriched by the effort to understand how fellow designers interpret these perspectives, as well as the solutions they offer.

Table 2. Summary of insights and iterations in the Digital Carnival workshop.

		Dictator Donkey	AGND
Peer Testing	Design	Initial design based mainly on internal jokes – no consideration of players’ experiences.	Exploring the games in terms of designers’ experiences rather than players.
	Test	The game was too hard – players were wary to cross the obstacle course with their eyes closed.	Players resisted singing.
	Analyze	Game must be made easier.	The problem was with players, not with the game.
Expert Feedback	Design	Added a second player which guided the blindfolded player across the obstacle course.	Technical supports – added lyrics.

	Test	Game was too easy – players easily completed course and were not challenged.	Players still resisted singing, and did were unclear what the game’s goal was.
	Analyze	Need to find ways to make game harder despite the guide’s help.	Reward structure not working – the game does not offer sufficient motivation to sing.
Real Audience	Design	Engaging crowd as active participants who aim to disturb guide’s attempts to lead player.	Changing game mechanics – players motivated to hit bottles in order to stop singing, and force second player to sing.
	Test	Game drew enthusiastic participation by crowd and players.	Players were still resistant to singing – participation was partial.
	Analyze	Social component was more successful than expected – it was attuned to the social nature of the carnival experience.	The game’s win condition was not clear, and designers had not appreciated players’ resistance to singing in public.

This process, which I term *iterative perspective taking* could function as a useful framework for thinking of how to cultivate the habit of working on shared endeavors more broadly. First, requiring students to design projects (which need not be limited to games) in light of the perceptions, needs and expected behaviors of future users. Second, allowing them to test their plans against the actual conduct of users. Third, analyzing how their project might be improved in light of (explicit or implicit) feedback. Finally, this should be pursued in a number of iterative cycles, thus going beyond a theoretical analysis and allowing students to iterate their initial design and learn from further feedback. Figure 13 introduces an adaptation of Zimmerman’s (2003) model of iterative game design to the practice and cultivation of perspective taking.

In iterative game design students do not only receive feedback, they also have the opportunity to attempt to adjust their project in light of this feedback – this process is then both experiential and intrinsically motivated (assuming players care about the games they made and want players to enjoy them, which realistically may not always be the case). Over time, practicing this iterative process of predicting others’ conduct, and

realigning one's projects in light of feedback, is intended to cultivate the habit of taking others' perceptions into consideration when pursuing shared endeavors.

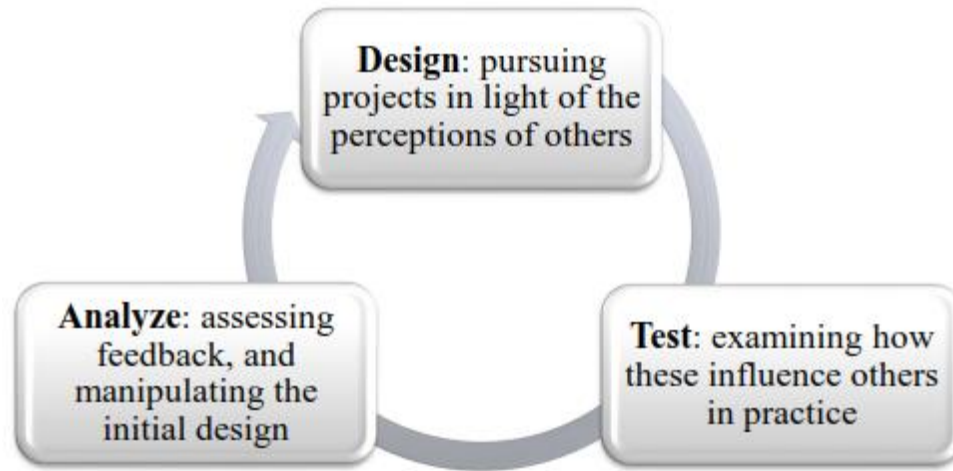


Figure 18. Iterative perspective taking

Conclusion

In this chapter, I presented a preliminary analysis of collaborative game making as a context for practicing democratic habits. Whereas the Collaborative Controllers workshop functioned as an illustration of this potential, the Digital Carnival workshop explored how a more in-depth investigation into one concrete context could enrich theoretical aspects of the habits-based approach, in this case, by developing the concept of *iterative perspective taking*.

At the same time, I remain aware of the highly exploratory character of this study. Accordingly, I point out some of the central limitations of these workshops that should be addressed in future research. First, guided by Dewey's vision of citizenship education, I emphasized the importance of practicing democratic habits across a variety of academic contexts that are concurrently dedicated to academic ends. However, it is clear that the

distance between shared endeavors in game design and in civic contexts is vast. Future research ought to delineate more specific insights designers could achieve through game making, and offer opportunities for the implementation of these insights in other contexts. In other words, complementing the opportunities for practicing of democratic habits introduced in this workshop, with an emphasis on connection and reflection.

Second, in light of the importance of real audience, designers should have opportunities to present their work to a much more diverse group of players. Meaningful perspective taking relies on the possibility of interacting with more diverse perspectives than those of designers' peers, who they interact with on a daily basis, either in their physical communities, or in their curated digital networks. One possible avenue for diversifying participation relates to another limitation of the workshops – the lack of a virtual component. While the choice of pursuing tangible design was intentional – aiming to support in-class collaboration – it is vital to offer students projects that can connect to broader virtual communities. One of the central advantages of making video games is the opportunity for students to interact not only with their classmates, but also with larger virtual networks (Kafai & Burke, 2015). Hence, in future research it would be interesting and vital to examine the extent to which iterative perspective taking can be applied to contexts such as those described in chapter 3: from game making communities, through modding, to collaborative projects in Minecraft.

Finally, as implied by their name, habits require a prolonged process in order to develop into ingrained modes of behavior. Longer interventions would not only deepen students' engagement with the practices of game design, they are also needed in order to monitor the development of habits over time, something that cannot be expected over

such short-term workshops. Moreover, it is vital to measure both the democratic habits practiced and the academic goals of participation, as well as the interaction between the two. Such efforts are essential in order to allow this research project to mature into a more measurable and scalable phase.

I conclude by returning to Papert's critique of the use of technology that opened this dissertation. Papert (1987) states that: "Technocentrism is the fallacy of referring all questions to the technology" (p.4). This chapter demonstrated how the use of technology in citizenship education could be guided by the educational vision of schools as hubs for developing habits of democracy. More specifically, it highlighted the fact that the constructionist approach to learning inherently provides students opportunities for practicing democratic habits due to its emphasis on learning through participation in constructing public projects. Thus, the vignettes explicate how understanding citizenship education as an organizing principle does not require reinventing the academic curriculum. Instead, it entails identifying ways in which academic learning can both support the development of democratic habits, and enrich our understanding of how such habits can be cultivated. In this respect, these workshops were an-object-to-think-with on the abstract concept of citizenship education as the development of democratic habits.

Summary and Afterthoughts

The overarching question my dissertation grapples with is what kind of vision should guide citizenship education in the digital age. Rather than perceiving the technology-driven changes to the civic sphere as the point of departure for this inquiry, I opted to start from reconceptualizing what is implied by citizenship education, and then exploring how technology both shapes and supports this vision. This aim was broken into three interconnected steps: (i) arguing for redefining the civic role of schools as the cultivation of democratic habits rather than individual skills and dispositions; (ii) examining how the democratic habits framework stretches beyond schools, and into the informal and technology-based field of video games; and (iii) contextualizing the notion of developing democratic habits across the academic curriculum and through video games by applying it to one concrete context – collaborative game making workshops conducted with high school freshmen.

In chapter 1, I offered a broad sketch of the developments in the civic sphere in light of the rising importance of digital media. The aim of this background was to situate my theoretical arguments in the context of the current challenges facing citizenship education. I highlighted three central trends that served as the basis for outlining three broad democratic habits educators should remain aware of. First, civic participation is characterized by an increased emphasis on individual choice, in place of the traditional model of citizens responding to calls for action from institutionalized actors. Rather than a naïve adulation of increased choice as inherently democratizing, I argued that this state of affairs puts a heavier responsibility on the shoulders of educators, who more than ever, need to develop the habit of critical reflection on social issues and public projects.

Second, the blurring of the public and private spheres, and the overlaps between social, cultural and political forms of participation, stresses the need to nurture the habit of self-directed and peer-based participation. If youth are expected to play an active role in the civic sphere, schools must prepare them by offering analogous opportunities to interact in more loosely structured contexts. Finally, digital media has allowed communication between citizens beyond traditional social and geographical boundaries. However, in practice, the increased control over communication patterns often results in individuals mostly interacting with like-minded individuals, thus creating echo chambers that accentuate their original positions. Hence, schools should strive to develop the habit of productive communication across differences, which is becoming more important than ever in our current polarized political atmosphere.

These developments illustrate how shared living in a democratic society is a delicate endeavor that should not be taken for granted. The growing awareness concerning the frailty of Western liberal democracies should lead us to rethink the current approach to citizenship education, which centers around civic knowledge, or value-neutral skills, in dedicated lessons or initiatives. The main shift I have argued for in chapter 2 is that schools, and informal educational contexts, should focus less on teaching students about democracy, and make a more intentional effort to immerse youth in environments conducive to practicing democratic habits of shared living. Habits differ from skills and dispositions in that they put a much stronger emphasis on interaction with the environment as a determinant of individual conduct. In opposition to skills and dispositions, habits are inherently context dependent. Hence, they should be understood as a form of practice rather than an individual possession.

From an educational perspective, this implies that the most crucial component of citizenship education is the design of educational contexts as public spaces that facilitate opportunities for shared work toward public goods. While offering students the civic knowledge necessary to be effective citizens remains a vital endeavor, citizenship education should be geared towards thinking about ways to promote the practice of democratic habits across the academic curriculum. The basis for the development of democratic habits is providing youth with the expectations, roles and relationships that treat them as capable, responsible and critical members of their educational communities. At the same time, the habits framework also exposes the main challenge facing citizenship education – the transference (and transformation) of democratic habits developed in schools to other contexts. Such transference will always be partial, and even achieving this more limited aim requires a conscious and cohesive effort on behalf of educators. Therefore, I suggested that beyond offering students abundant opportunities to practice democratic habits, there is a need to promote reflection on such habits, and the creation of consequential connections between the school context and other contexts in students' lives.

While Dewey's vision of democratic habits is already 100 years old, it is particularly suitable for the challenges we face at this moment in time for a number of reasons. First, as described in chapter 1, scholarly work on citizenship and citizenship education in the digital age highlights the diverse ways in which youth become civic actors. The concurrent blurring of the public and private spheres, and the distinctions between social, cultural and political action, implies that while schools still play a crucial role in citizenship education, it is vital to consider how they interact with other spheres of

action. Hence, the shift from context-free skills and dispositions, to stable yet context-sensitive interconnected networks of habits, provides a better lens through which to examine the integration of the various components of youth's civic life. Moreover, the increasing political polarity and the tendency to associate with like-minded individuals, on-and-offline, stresses the need to think of schools less in terms of places where students acquire discrete civic skills, and more as sites in which students are offered civic experiences. In this case, schools provide the opportunity for long-term and meaningful interaction that includes working together towards shared goals with a diverse body of individuals, which extends beyond students' relatively homogenous physical and virtual communities.³²

In chapter 3, I argued that the emergence of novel technologies does not only shape the civic sphere; it also expands the horizon of possibilities for pursuing a habits-based approach to citizenship education. Video games introduce new and rich possibilities for youth to practice a variety of democratic habits in intrinsically motivated contexts: from joint work in MMORPGs, through collaborative science inquiry in virtual worlds, to modding, designing and sharing their own games. The fundamental rationale underlying a habits-based approach also applies to these informal contexts – meaningful citizenship education requires providing youth with contexts in which they have increased opportunities to practice democratic modes of interaction.

Hence, the focus of scholarship on citizenship education, in video games and elsewhere, should not be uniquely on civic content but rather on expanding the extent and

³² This demands going beyond what happens within the confines of schools, and focusing on battling the increasing segregation of schools by class and race. Moreover, the growing trend towards online schools (Miron et al., 2013) further complicates the role of schools as hubs of democracy.

variety of settings in which youth are offered opportunities for critical engagement with social issues, self-directed and peer-based action, and communication with diverse others while working towards shared goals. Moreover, as video games have developed into one of the central leisure activities among youth in the 21st century, they are a key setting in which youth's habits are shaped, specifically in relation to online interactions. Therefore, it is worthwhile exploring in what ways such habits could be geared towards more democratic and worthwhile modes of conduct.

Finally, the vision of cultivating democratic habits in schools and video games relies on its concretization within educational contexts, and within scholarly work dedicated to pedagogy and game playing. Since Dewey's time, an elaborate body of progressive pedagogies has developed, which could support the cultivation of democratic habits. In chapter 4, I describe vignettes from a series of collaborative game making workshops I conducted, striving to illustrate that much of the knowledge concerning how to cultivate democratic habits can be found in existing learning theories. More specifically, I argued that constructionist learning environments are a fertile ground for practicing democratic habits in contexts dedicated to academic ends (in this case, learning how to program).

Constructionism asserts the importance of two aspects of learning that are also pertinent to forming democratic habits in educational contexts. First, positioning students as makers, both of physical objects and abstract knowledge, offers meaningful opportunities for students to develop habits of self-directed and peer-based work, while perceiving themselves as competent and contributing members of their (learning) community. Second, the constructionist emphasis on public projects shifts the focus of

learning from achieving predetermined goals set by a teacher (or game designer) to creating work intended for the use of others. Education becomes not only a process of acquiring or creating knowledge, but also an opportunity to experience the challenges of shared public work. Importantly, as I ventured to illustrate in the notion of *iterative perspective taking*, exploring the civic affordances of academic activities does not only support the aims of citizenship education, it can also contribute to our theoretical understanding concerning how to better cultivate democratic habits. These insights could be relevant not only to the limited aspect of game making workshops, but also to broader and more loosely-structured contexts for game making such as virtual game making communities and collaborative projects on sandbox games (e.g., Minecraft).

The final stages of this dissertation were written as the 2016 US presidential elections unfolded. The events leading up to the elections, as well as those that followed them, shook the ground beneath scholarly work on civic participation in the digital age. While researchers had mostly focused on how digital media supported participation among youth in general, and those from marginalized groups in particular (citing examples such as the DREAMers movement and Black Lives Matter), events surrounding the elections were a particularly powerful demonstration of the fact that peer-based and interactive modes of organization are not inherently democratizing, and can also be used towards un-democratic ends.

The tumultuous atmosphere and increased polarity that characterized these elections might be dispiriting to those working on citizenship education, especially in light of the perceived progress that came before it. However, this does not have to be the

case. On the contrary, recent developments ought to reinvigorate the efforts towards establishing the vital role education should play in a democracy. Moreover, they highlight the need for a deeper and more comprehensive approach to citizenship education, one that explores how educators could support the development of democratic habits of shared living among today's youth, in and out of schools.

These events also reinforced Papert's assertion, which animated this work, that questions concerning technology use in education should not obfuscate the more fundamental dilemmas that underlie them. The tendency to focus on technological fixes to social problems re-emerged center stage in the days that followed the 2016 elections. A lot of attention was given to the design and regulation of technological platforms as means of tackling hate speech and other illicit phenomena. At times, it seemed that the central task at hand was how to fix Facebook, rather than to examine the challenges facing liberal democracies in the digital age. While the challenge of structuring technological platforms in ways that promote democratic interactions is crucial, it should not come at the expense of questions concerning the education of individuals, who both use and design technological platforms.

Therefore, I perceive the development of a habits framework to be particularly timely and important – political reality demands that we develop a holistic approach to how democratic modes of behavior can be meaningfully cultivated. Such an enterprise requires moving beyond dispersed success stories and disciplinary boundaries, and developing a more refined theoretical lens through which to examine citizenship education.

Though worries about democracy are old as democracy itself, the ways in which democratic citizens rise to address these worries changes with the circumstance of every historical era. The central challenge facing our era is re-establishing contexts that promote shared democratic living in an increasingly diverse and segregated society. Hence, rather than seeing the emergence of digital media and other technological developments as a sign that our system of public education is no longer needed, this dissertation set out to argue that these new platforms highlight the urgency of thinking about education, whether in school or through one's computer or phone, as one of the central contexts in which the next generation is offered intentional opportunities to participate in, shape, and develop, habits of shared democratic living.

Appendix A

Context and Methods of Game Making Workshops

The three workshops were all conducted with high school freshmen (ages 14-15) during the 2014-15 and 2015-16 schoolyears (44 participants; 26 boys, 18 girls). Workshops took place in a metropolitan city in a northeastern US state. Participants are high school freshmen who choose to participate as part of a partnership between their science magnet school and a local science museum. Participants reflect the demographic makeup of the school: 46% African American, 33% White, 10% Latino, 9% Asian/Pacific Islander, and 2% other; 49% of students were eligible for free or reduced lunch.

I analyzed the following data sources to address my research questions: (1) Group interactions were documented in observational field notes (taken by a second instructor) and via video recordings focused on group work, and which were subsequently activity-logged and analyzed. (2) Instructor observations were supplemented by students' impressions derived from weekly reflection exercises, emergent interview opportunities, and semi-structured debriefing focus groups, which were transcribed and then analyzed (see appendices D and F for interview protocols). (3) An analysis of participants' games was conducted relying on groups' Scratch code, videos recording their progress, playtesting sessions and set-up of final projects.

Appendix B

Pilot Workshop

A pilot workshop was conducted in the fall of 2014, with 15 students (eight boys and seven girls). It ran for a total of eight hours over four weekly sessions. In the first two sessions participants learned the basics of Scratch. In the final two sessions, groups collaboratively created or remixed simple video games. The central aim of this pilot workshop was to explore the context and the instructional design prior to engaging in more in-depth inquiries. This pilot exposed a series of difficulties in using the Scratch platform as a context for collaborative game making.

First, it highlighted the complexity of facilitating collaboration in an on-screen setting. Scratch does not support simultaneous work on one project. As beginner designers, participants were challenged to plan an asynchronous design project and coordinate their work. Consequently, groups tended to relegate most coding to experienced programmers and collaboration was compromised. Second, due to the workshop's length, as well its instructional design, participants lacked opportunities to receive feedback on their games. Feedback from players was only offered at the end of the last session when students did not have time to incorporate it into their designs. Finally, groups tended to simply emulate versions of popular video games while mainly changing visual aspects of the game without considering the possibility of tinkering with the game mechanics, even when prompted to do so.

In light of these shortcomings, three respective changes were made to the instructional design in the second workshop. First, to respond to the challenges of collaboration in onscreen design in Scratch, a physical design component was added.

Groups were challenged to make games that included both on-screen design, as well as tangible interfaces using the MaKey MaKey. This design element was intended to afford more opportunities for collaboration by expanding the different roles participants could fulfill, and to diversify participation among populations less inclined to take interest in programming activities (Richard, Kafai, Adleberg, & Telhan, 2015). Second, in response to the lack of meaningful feedback in the pilot workshop, greater emphasis was put on playtesting, incorporating more opportunities for providing and receiving feedback from peers as part of the iterative design process, as well as adding an arcade session at the participants' school at the end of the workshop. This addition was meant both to increase motivation in the design process and to offer more meaningful feedback for designers. Finally, to overcome students' tendency to simply emulate commercial video games, the second workshop was dedicated to designing *collaborative physical controllers* for onscreen video games. This design specification was intended to elicit reflection concerning the interaction normally afforded between players in gameplay, and to encourage participants to deviate from a simple emulation of the dominant commercial model of competitive play.

Appendix C

Collaborative Controllers Workshop Activities

Table 3. Collaborative Controllers workshop activities.

Session	Activities
1. Introduction to Makey Makey	<ul style="list-style-type: none"> - Introduction to MaKey MaKey and conductivity. - Rapid design project – using the MaKey MaKey to create collaborative physical controllers (controllers that require collaboration between two or more players) for a predesigned version of Pong on Scratch.
2. Introduction to Scratch	<ul style="list-style-type: none"> - Introduction to the Scratch platform and community. - Learning basic Scratch concepts: sprites, motion, sounds, costumes, backgrounds. - Introductory project – remixing interactive video of participants’ name intended to function as a credit slide for their future games.
3. Advanced Scratch	<ul style="list-style-type: none"> - Learning advanced Scratch concepts: data, sensing, operators, broadcasts, blocks. - Remixing a simple video game: Pong, Outlaw or Monkey Game.
4. Game Design	<ul style="list-style-type: none"> - Full design challenge – onscreen and physical controller. - Remixing one of the Scratch games introduced in the previous session. - Creating physical controllers that demand collaboration among players using the MaKey MaKey.
5. Final project I	<ul style="list-style-type: none"> - Brainstorming and prototyping of final project – collaborative controllers for a video game (on Scratch) of their choice.
6. Final project II	<ul style="list-style-type: none"> - Complete iteration of final project. - Mini-arcade playtesting session.
7. Final project III	<ul style="list-style-type: none"> - Iterating and completing final project. - Preparations for arcade in the students’ school.
Arcade	<ul style="list-style-type: none"> - Presenting their games at their school for their peer to play

Appendix D

Collaborative Controllers Debriefing Focus Group Protocol

1. Can you tell me about the final project your team made?
 - 1.1. Why did you choose to make this game?
 - 1.2. What did you have to learn in order to complete the game?
 - 1.3. Did you encounter challenges? If so, what were they?
2. What are you most proud of about your project? Why?
 - 2.1. What do you feel you learned by making the project?
3. What was it like to work as a group on this project?
 - 3.1. What were some of the challenges?
 - 3.2. Was there a stage that was particularly challenging? (brainstorming, dividing up roles, problem solving)
 - 3.3. What were some of the benefits?
4. Can you describe your role in the group's work?
 - 4.1. Did it change throughout the workshop?
 - 4.2. Would you have preferred to play a different role or fill a variety of roles?
5. What did you think about the challenge of creating collaborative controllers?
 - 5.1. Would it have been easier to create competitive games? More fun?
 - 5.2. What did you have to consider when trying to create a collaborative game?
 - 5.3. How did the need to elicit collaboration among players affect your design process?
6. Out of the three projects you worked on as a group, which one did you enjoy the most? Why?
 - 6.1. What did you learn in the earlier projects that you were able to implement later?
 - 6.2. Was it easier to work in projects in which you did not need to choose the game?
7. Did the workshop make you think about computing differently?
 - 7.1. How do you feel about programming? Did the workshop make you feel differently about that?
 - 7.2. How do you feel about game design? Did the workshop make you feel differently about that?
8. What did you like about the workshop? Is there anything you would change?
9. Anything you might want to add? Any questions you have?

Appendix E

Digital Carnival Workshop – Rationale and Activities

In an attempt to encourage more in-depth reflection concerning the perceptions and motivations of future players, I made a series of changes to the workshop design. First, the workshop centered on designing digital versions of carnival games. In the Collaborative Controllers workshop, designers still too often tended to emulate models of existing video games, and to add a minimal version of collaboration (e.g., *Blaze It* assigning movement to one player, and shooting to the other). This undermined substantial reflection on the game mechanics. Hence, while the second workshop added a physical component to digital games, the third workshop focused on adding digital components to physical games – in this case, carnival games.

Second, this workshop included a more robust emphasis on how player behavior can be manipulated through the design process (see Table 4 for a summary of workshop activities). In sessions 3-5, groups created and playtested games inspired by famous carnival games (bean bag, whack-a-mole, obstacle course). Relying on Flanagan and Nissenbaum's (2014) game design framework, each session was dedicated to examining the influence of manipulating one central game mechanic (rules, interface, narrative) on players' experience (e.g., designing interfaces which demand collaboration). These three components were chosen due to their salience even in simple carnival games, and the broad latitude they offered in tinkering with existing designs. In addition, participants alternated their roles (programmer, designer, maker, manager) between sessions to ensure they have opportunities to learn the various skills demanded in the game design process.

Finally, this workshop focused more specifically on the process of iterative design and insights gained from playtesting, both in the shorter design projects carried out throughout the workshop and particularly in participants’ work on their final projects (as detailed in chapter 4).

Table 4. Digital Carnival workshop activities.

Session	Activities
1. Introduction to Scratch	<ul style="list-style-type: none"> - Introduction to the Scratch platform and community. - Learning basic Scratch concepts: sprites, motion, sounds, costumes, backgrounds. - Introductory project – creating an interactive video.
2. Advanced Scratch	<ul style="list-style-type: none"> - Learning advanced Scratch concepts: data, sensing, operators, broadcasts, blocks. - Programming a scorekeeper and timer.
3. Carnival game design I	<ul style="list-style-type: none"> - Introduction to the MaKey MaKey and conductivity. - Making a digital version of a carnival “throwing” game (e.g., bean bag). - Design element – rules for interaction.
4. Carnival game design II	<ul style="list-style-type: none"> - Learning about the iterative design process. - Making a “hitting” carnival game (e.g., whack-a-mole). - Design element – interface.
5. Carnival game design III	<ul style="list-style-type: none"> - Learning about constructive feedback. - Making an obstacle course. - Design element – narrative.
6. Final project I	<ul style="list-style-type: none"> - Grow-a-game cards activity. - Brainstorming and prototyping final design.
7. Final project II	<ul style="list-style-type: none"> - Finishing complete version of the game. - Mini-carnival. - Iterations of game-design.
8. Final project III	<ul style="list-style-type: none"> - Professional game designer feedback session. - Final iterations and preparations for arcade.
9. Digital Carnival	<ul style="list-style-type: none"> - Presenting the games at their schools for peers to play.

Appendix F

Digital Carnival Debriefing Focus Group Protocol

1. Can you tell me about the final project your team made?
 - a. Brainstorming
 - i. How did you decide to make this game?
 1. Were there challenges in coming up with ideas?
 2. Reaching agreement as a group?
 - ii. How did you overcome them?
 - iii. How did the grow-a-game cards affect your brainstorming?
 1. Was it easier to design with more constraints?
 2. Did you manage to incorporate values in your game? Why was that challenging?
 - b. Prototyping and iterating
 - i. What challenges did you encounter when you tried to implement your idea?
 - ii. How did you overcome these challenges?
 - iii. In what ways did your original design change as you were trying to make the game?
 - iv. Do you feel you managed to iterate and improve your game between sessions?
 - c. Playtesting
 - i. What did you learn in the various playtesting sessions? (internal playtesting, game designer feedback, digital carnival)
 - ii. What aspects of players' behavior did you not consider beforehand?
 - iii. If you had to design a new game now, are there things you would be more focused on/aware of?
2. What do you think about your work as a group on this project?
 - a. Were there any notable challenges you encountered during teamwork?
 - i. How did you handle conflicts?
 - ii. How did you divide up roles/responsibilities?
 - iii. Were there any particular benefits or hindrances in working as a group?
 - b. Could you compare the work on the final project and the shorter projects?
 - i. Was it easier to have a lot of time or a limited timeline?
 - ii. Were there things that you learned in the shorter projects that you were able to implement in the final project?

3. What did you learn about game design in the workshop?
 - a. Was any aspect particularly challenging?
 - b. What advice would you give to a novice game designer?
 - c. How did you feel about designing carnival games?

4. Anything you might want to add? Any questions you might have?

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