Criticality in Game Design Practice

A Master Thesis

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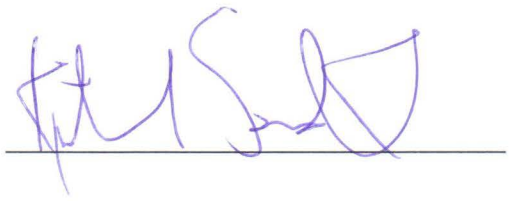

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Abstract

Games and play are currently seen as having relevant impacts in changing a variety of spheres of people's lives, such as work, education, and political action. However, many times games and play are uncritically deployed, as if they existed in a social and political vacuum, ready to be used whenever appropriate. The present research explores the concept of criticality as a productive perspective for problematizing such efforts of changing the world through games and play, with a special focus on game design, bringing to the discussion views from outside the game studies and design domain.

Criticality in game design is two-fold. First, it can mean creating games and play centered on the idea of performing critique and challenging dominant hegemonic values, beliefs and conventions, maybe supporting or creating spaces for change. With that in mind, I investigate existing formulations of criticality in play and games, analyzing the most important elements of that relationship that can affect game design. Secondly, criticality in game design can refer to taking it as a guiding principle or stance during the design practice of game designers, informing design goals, processes and other aspects of game design, turning it into a critical activity itself. In order to understand how criticality can affect design practice, I review and analyze a diversity of critical approaches to design and game design.

Finally, a synthesis of the more relevant elements and themes raised in these detailed analysis is produced, aimed at providing insight and productive questions to the practice of game designers engaged in critical efforts.

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1. Introduction

In recent years, a lot of attention has been placed on what games can do to affect the world and our everyday lives. The rise of serious games, educational games, and gamification exemplify this. Discussions on how games can revolutionize the work place or political and social action have gained recognition and are being investigated and pursued by game makers, the academy, corporations, and other institutions, such as NGOs and social movements. People engaged in overcoming perceived faults and problems of our contemporary times are paying more attention to the domain of games and play, viewing them as viable platforms for their efforts, and there is a widespread growing belief in their potential to affect change.

Many times, this potential is traced to ideas of games as great platforms for motivating or engaging people. On other occasions, the learning involved in play is also summoned as a tool for change. According to this view, if only people learned better about or were motivated to engage more with their surrounding reality, the world might become a better place. In the talks of the more enthusiastic advocates of such ideas, engagement and learning through games seems to be a key concept for the future of work place productivity (Reeves & Read, 2009), action upon urgent social issues (McGonigal, 2011), and for learning the skills needed to be a good citizen and person, in schools structured around "game-based learning" (Quest to Learn, 2012). These qualities appear as instruments of the new and better, as a toolset of a future-friendly, socially responsible, and well-adapted contemporary subject.

I also subscribe to the core idea that games have a part to play in changing the world we live in. However, there are a variety of caveats that need to be addressed, and the general lack of discussion around them is problematic: games and play do not constitute a

neutral domain which can simply be deployed to save the world. They exist within the same broad contexts, the same larger pictures as the rest of society, and are very much produced and influenced by them. Several scholars have problematized the relationship between games and contemporary capitalism, both from macro socio-cultural (Henricks, 2006; Sutton-Smith, 1997) or political (Dyer-Witheford & Peuter, 2009) perspectives and micro, expression focused ones (Bogost, 2007, 2008; Frasca, 2001a). Ideology and hegemony are not alien to games, and this needs to be acknowledged and taken into consideration when proposing their potential as arenas for change.

Furthermore, actively trying to make the world a better place is an inherently political undertaking, one that requires radical consideration of current state of affairs. To change the world "for the better" implies analyzing what needs to be changed in contemporary society: when working towards a desired future, people are posing a critique to that which is the present. To problematize the present is a requirement for this visionary effort, and it is also a condition for acting. From this, I argue that the notion of criticality might be a productive approach to how games and play can challenge and change societies.

To engage in a progressive political effort is a critical endeavor. Criticality, here, is taken to mean the capacity to perform critique and to analytically examine and understand the importance of the varying elements configuring a certain situation. It is also connected to a degree of skepticism regarding underlying assumptions and values. In political action, both meanings of the critical are essential: critique of the present state of affairs, and the ability to find what is radical within it, that which stands at the root of the problems being faced. In the present research, I investigate how criticality has been articulated when talking about games, play, and the design practice involved in the creation of many of them.

The reasons for doing so are many. First, the concept of criticality can help to produce a more reflective and problematizing take on the efforts of changing the world through games and play. I believe it to be an important concept when trying to establish a more political and situated perspective on this specific use of games and play. Criticality can help us understand the connections between making and playing games as a tool for social change and the larger picture of contemporary society, and what is the importance and character of these efforts. To put it in a short and very "meta" way, I believe in a need to be critical of critical approaches.

Secondly, there is a growing group of scholars who have discussed how games and play can be platforms for a diversity of forms of critical engagement (Bogost, 2007; Dyer-Witheford & Peuter, 2009; Flanagan, 2009; Frasca, 2001a; Grace, 2010; Poremba, 2007). In the present research, I analyze their propositions, with an emphasis on how they approach the idea of criticality. These approaches emphasize the importance of play as a transformative and reflective activity, one that is able to question and affect different aspects of human life and the ideologies and hegemonic beliefs shaping them. As will be discussed in more detail later, some of these scholars emphasize the capacity of games to simulate and represent systems as a tool for critical engagement (Bogost, 2007; Frasca, 2001a) ; others focus on how the activity of play can subvert societal and play culture conventions as a reflection and intervention in the players context (Flanagan, 2009; Grace, 2010; Poremba, 2007); and others emphasize how ludic practices can be changed when they resist hegemonic systems (Dyer-Witheford & Peuter, 2009). These views of games, play and criticality are central to the present research.

The above ideas on how games can be critical are mostly focused on the play process. I believe that it is also important to complement this approach with a preoccupation with game design practice. The creation and making of games to challenge

the status quo is a particular kind of design situation, one that is ripe with opportunities for critical reflection. As will be further explained later, I believe that design has an important knowledge production component, and I believe the concept of criticality can help to connect this knowledge constructed in the design practice with the impacts intended.

The main focus of this thesis is to problematize criticality in the domain of games, with a special focus on game design, as a complement to play itself. I propose to do so by investigating the existing theoretical formulations on games, play, and game design which are engaged with challenging the status quo and which are connected to criticality. To complement this discussion, I also bring to the table ideas of criticality in fields such as design and popular education. Such an investigation is necessary in order to understand how the idea of criticality can affect game design processes, and what are the potential consequences and possibilities afforded by a strong critical stance in the design of games and play.

I want to clarify the use of the term "critical game design". I see it as having a dual focus: both the *design of critical games* and a *critical approach to game design*. The first meaning relates to when the design of games and play is centered on criticality, on performing critique and challenging dominant hegemonic values, beliefs and conventions. The second meaning relates to the adoption of criticality in the design practice of game designers, as a guiding principle, a stance, informing the different moments, methods, and aspects of game design as an activity. Both meanings are not exclusive, and I believe that adopting a critical stance towards game design is essential in the creation of games that want to critique and affect the status quo. However, it is not in the scope or focus of the present research to present a methodology or framework for adopting criticality in game design and in play: the idea of critical game design serves more as a working concept to produce questions and themes for consideration, for helping game designers to

problematize their practice and goals, and to propose a series of questions for academic consideration.

I want the present research to engage in a dialogue with the people involved in making games to impact the world. I hope that game designers who are, or want to be, involved in efforts of social change can benefit from this review on criticality in games and play. I also want to clarify that I mean game designers in a broad sense, beyond the professional identity associated with the practice: I wish to speak with those who are engaged in game design practice in a diversity of forms. Activists, artists, designers, game makers, modders, and educators are examples of people who might be able to use the insights in this research on their practices. The questions raised should be helpful for designers to reflect on how they approach their efforts of change through games. I am not advocating for the implementation of all the points I raise across the present thesis, but for designers to look at these questions and find the ones that are more relevant to their specific design situation and goals. I hope that, by pointing to different design approaches and their use of criticality, designers can get new insights from a diversity of practices. For those already invested in a given methodology, I see this thesis as an opportunity to reflect on how their approach is positioned regarding these questions.

In addition, it should be clear that I wish to engage with the ongoing theoretical discussions in the game studies field. Game studies scholars are at the front line of this broader debate on the role of games in contemporary society, and I hope that my discussion of criticality in game design might be useful to them. This is not intended as a debunking of existing ideas or as a dismissing of them, but as an extension and a critical review. By elaborating on critical approaches to design and game design, I aim to bring such approaches into discussion. As mentioned before, criticality in game design seems to

be more focused on the play activity than the design one, and I believe combining both is an important endeavor.

As for the structure of the present thesis, it is broadly divided into five chapters, the first being this introduction. The second chapter, *On criticality, play, and design*, presents the three large domains that together inform the concept of critical game design. Its goal is to lay the basis for discussion in each of them. Regarding criticality, I present the contested nature of the concept, by looking at formulations external to games and play, with an emphasis on Freire's idea of critical consciousness (1978, 1987). On play, the chapter focuses on how games and play relate to ideologies and broader value systems, through the discussion of ideas of simulation and rhetorics of play, as a basis for the analysis of criticality in play in the third chapter. There is also a discussion on how play is seen as a product of design, which is an important consideration when talking about game design. Finally, I discuss ideas about design goals, processes and methods, which are used later on the thesis when analyzing critical approaches to design and game design. Focusing on these concepts is productive to frame game design as an activity.

In the third chapter, *Criticality and play*, I present an analysis of the intersection between criticality and play. Important concepts in that overlap are broken down and examined in detail, with a special emphasis on Flanagan's views on critical play (2009) and different questions connected to the concept. I also discuss the re-making of ludic practices in the games of multitude concept of Dyer-Witheford and Peuter (2009), who bring to the table a political, cultural and social discussion of virtual play in contemporary capitalism. Then, Algava's ludic techniques of popular education in Argentina (2009) are analyzed as an example of criticality and play from outside the games studies field. These techniques are an interesting case as their use of criticality are based on Freire's critical consciousness (Freire, 1978, 1987) at the same time that they form a very situated and

specific play situation, deeply connected with the players' everyday experiences and context.

The fourth chapter of the thesis, *Criticality in design and game design*, reviews a variety of design and game design approaches that connect criticality to design practice. I look at how criticality informs both design goals and design processes. Regarding goals, I discuss design and game design approaches which place criticality at the center of their goals and others that adopt the idea in a more peripheral manner. As for design processes, I identify four major recurring themes across design approaches: subversion, dialogue, reflection and values. By problematizing each of these approaches, I hope to point to how they can impact and inform a critical game design approach.

The fifth and last chapter of the thesis, *Critical game design*, is an effort in providing a synthesis of the discussions in the previous chapters. I revisit concepts from criticality in play and criticality in design, trying to connect them around three themes: context, subversion, and action. Each of these themes provides a series of questions and reflections for problematizing critical game design and the role of a critical game designer. As a final note on this chapter, I connect the idea of critical game design with Freire's concept of critical consciousness as a reflection on the roles of both players and designers when dealing with criticality in play and games.

2. On criticality, play, and design

In order to discuss critical game design, it is necessary to, first, contextualize my inquiry. Critical game design as a concept is at the intersection between three broader domains: criticality, play, and design. Each of these domains is a large field of knowledge, with its own independent traditions of study and practice. The present research aims to understand the inter-relations between these domains in order to clarify and delineate the concept of critical game design in a detailed way. Therefore, this section aims at establishing basis for this analysis, narrowing down areas for further investigation and presenting concepts and ideas that will be explored further.

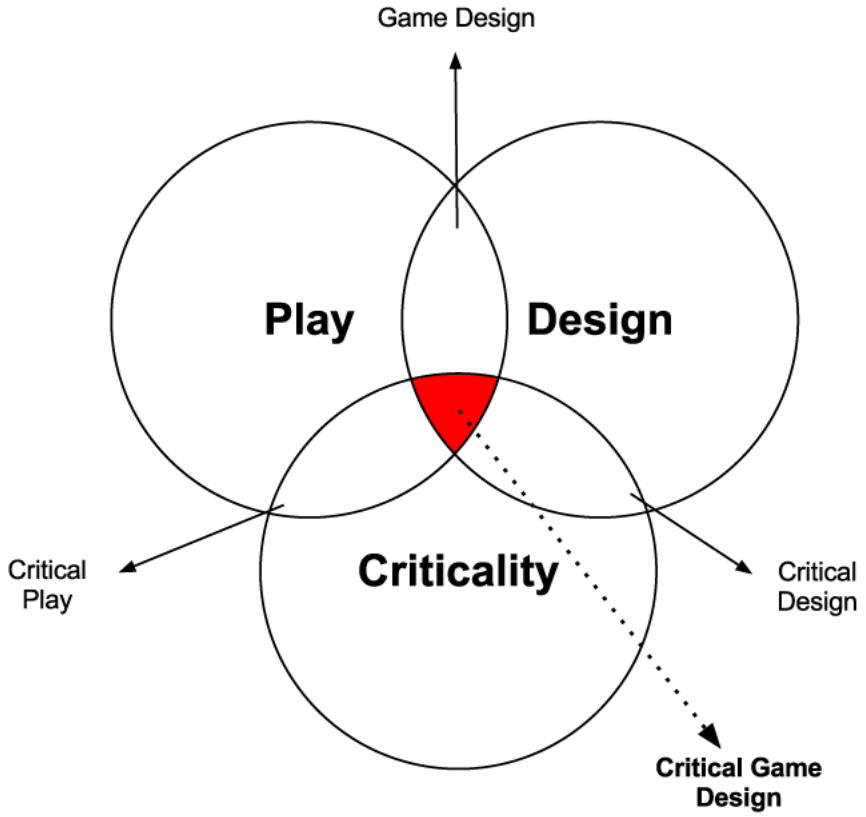

Figure 1. Critical game design and the three domains

The first domain: criticality

"Critical", and by extension, "criticality", are keywords in this thesis and their meanings need to be clarified. The term "critical" carries a diversity of meanings which are sometimes lumped together or indirectly referred to, which can be unproductive for a detailed analysis. It is important to note that in game studies literature, the concept of criticality explicitly applied to play and game design is not a common occurrence, with a few exceptions (Flanagan, 2009; Frasca, 2001a; Grace, 2010), and I believe that clarifying its formulation is essential for its successful application. Furthermore, it must be noted that criticality is also a concept charged with discursive and rhetorical connotations, originating in different intellectual traditions that appropriated the term, which I will show in the present analysis.

Two dimensions of the critical

The two meanings more commonly associated with the term critical are related to, first, critique and, second, cruciality or relevance, and it is important to note that they are not exclusive. The first, **critique**, is based on performing an evaluation or assessment of a topic or situation at hand and producing an opinion, e.g. a *critical* review of a movie. Of course, this meaning does not necessarily imply in a negative judgment of what is being critiqued. It does point to a methodological take regarding its topic: to properly critique something, one should assume a position of skepticism and of questioning that which is active and/or implied in the object of inquiry. Furthermore, this skepticism extends to the actor of the evaluation, who might need to position him or herself in order to clarify the reasoning behind his or her critique and the authority to perform it. Critical, in the critique dimension, highlights the focus on the subjective role regarding the subject's performance when criticizing, his or hers how-to of doing it.

The second dimension, that of **cruciality or relevance**, relates to fundamental or primary qualities that the topic or situation in question presents, which must be assessed according to specific criteria relevant to the context; e.g. the nuclear reactor is about to reach *critical* mass. This meaning points to the connectedness of any critical act: the criteria through which to deem something as crucial or relevant are intrinsically dependent on the context and nature of the object. The crucial dimension of critical, then, has a strong focus on the objective qualities of the matter being considered, but also taking into consideration the position of the subject. The choice of relevance criteria will reflect the framing of the topic in question and is also heavily dependent on the roles played by the subject.

The above explanation might seem somewhat self-evident. However, as will be detailed below, the combination of these two meanings can vary in different applications of the term in ways that clarify what is being assumed to be more important in the context, as well as the intellectual tradition underlying such use.

Contested criticality

The importance of the term critical is not limited to its two-dimensional meanings above. "Critical" only becomes relevant when coupled with other terms, qualifying them and adding to their meanings. Criticality, then, can be better understood as a **stance**, a posture which changes how a certain matter is framed and acted upon. A common coupling, for instance, is the idea of critical thinking. However, this is not a self-explanatory concept either, as it is also contested and charged with connotations that originate on the underlying assumptions and goals of the intellectual tradition informing its articulation. I believe it is productive to look at how the term has been used in a field external to game studies, showing the importance of understanding the basis for its use.

The concept of criticality plays an important role in the field of adult education. In adult education, the idea of criticality became a key concept for discussing the nature of the educational process and its political, social, and psychological impacts: in short, as a productive concept for problematizing the practice of educators and their approaches to education. My goal in this research is also to problematize my field and its impacts in society, namely the use of games and play for affecting the world. Knowing how adult education has dealt with the concept of criticality can inform my research by pointing to crucial aspects of the concept as a basis for questioning what criticality can mean in the games and play field. According to Brookfield, three main traditions active in his field formulate criticality differently: *ideology critique, psychoanalysis, and pragmatist constructivism* (2000, pp. 1–2). What follows is a short summary of these traditions and their formulations, according to Brookfield (2000).

Ideological critique: heavily influenced by Marxism and the Frankfurt School of Critical Social Theory. It is concerned with the process of recognizing how accepted dominant ideologies are embedded in everyday practices. It aims at social transformation through the unveiling of and action upon hegemonic belief systems. Criticality, to the ideology critique tradition, makes explicit the power struggles and domination involved in knowledge practices, and is a condition for activist education and action, such as, for instance, that of Paulo Freire.

Psychoanalysis: this tradition emphasizes criticality as having a personal focus, mainly the individual awareness and overcoming of psychocultural inhibitions. This view of criticality is aimed at reflecting upon the psychological and personal development of the individual, sometimes relating these with how personality is socially and politically constructed, as seen in the work of radical psychologists such as Erich Fromm.

Pragmatist constructivism: this tradition is focused on the ways people learn to construct meanings through their experiences. It highlights the importance of experimentation, collaboration, and openness in understanding these constructions and when creating better social forms. Criticality, here, relates to raising awareness of such processes and keeping a reflective approach, without a necessarily political or social dimension beyond the learning process itself.

From these three traditions, the one more closely connected to the present research is **ideology critique**. Most of the works discussed here, both on the fields of design and game design (Ch. 4) and critical games and play (Ch. 3), use the concept of criticality from a perspective that shares similar goals and tone to ideology critique, i.e. its emphasis on questioning and social transformation, even if they do not explicitly reference sources from this intellectual tradition. Also, some of these views of criticality analyzed later, especially in the design approaches that emphasize reflection (Ch. 4), have also traces of the **pragmatist constructivism** tradition, with their emphasis on reflection and action as basis for construction of designers' knowledge about the design situation. My inquiry, then, becomes one of finding the differences and similarities in the formulations analyzed and how they can, together, illuminate the concept of critical game design.

As a basis for discussion, it is productive to look at a formulation of criticality that is both informed by the ideology critique tradition and presents a holistic, broad-focused character regarding the two dimensions of the term's meaning. The idea of critical consciousness in Paulo Freire's views on popular education provides a good example (1978, 1987). I believe it can enrich my discussion with a more tangible example of what can be the implications and elements of adopting a strong formulation of criticality.

Freire's critical consciousness

In Paulo Freire's works on participatory and politically engaged popular education, the idea of critical consciousness plays a major role. It refers to a person's capacity to perceive and understand their immediate reality by looking for causal and circumstantial correlations on the phenomena perceived (Freire, 1987, p. 39). This part of his concept is similar to ideas of criticality in the pragmatist constructivism tradition, with its emphasis on the subject's experience and knowledge construction, but Freire extends it beyond the knowledge production process. In Freire, the understanding of reality is the basis and condition for that subjects' conscious and reflected intervention, or *praxis* (1978, p. 57), upon the newly perceived problematic aspects which hinder his or her development as an autonomous historical subject.

The critical consciousness concept has to be seen under the light of the historical and societal context in which it emerged. Brazilian society in the 1950s and beginning of the 1960s was going through a massive process of urbanization and industrialization, and the recent inclusion of the oppressed popular masses into more transparent electoral processes formed a scenario of transition. Intellectuals and scholars, gathered around the ISEB (Institute of Higher Brazilian Studies), were engaged in the production of social, economic and philosophical theoretical frameworks for the national context that would foster this transition. Paulo Freire is heavily influenced by this project, and the works of ISEB scholars like Álvaro Vieira Pinto (1960) are essential to his ideas.

The idea of criticality for Freire is always connected to the historical and societal conditions where it takes place. The many dualities (oppressor-oppressed, colony-metropolis, silence-dialogue) central to his work are a reflection of his historical moment and the tensions that were crucial at the time. However, his ideas also carry a strong

universalist appeal as they are loosely based on a broader Marxist project, one that emphasizes Marx's humanist views expressed in his earlier writings (see Fromm, 1966). The cornerstone argument of this humanist Marxism in Freire is the emphasis on the human need for creativity, expression, and human development, and the denial of those through alienation. To be progressive is to strive for such overcoming of alienation, and it is a possible endeavor. Ideology critique in Freire has a foundation on the projected possibilities of Marxist humanism, on the human vocation to be more, to not be oppressed and to become non-alienated.

In order to understand better Freire's concept, the four qualities of critical consciousness summarized by Shor are useful: *power awareness, critical literacy, desocialization, self-organization/education* (1992, pp. 32–33). This summary can help us understand the critical consciousness concept in a more concrete basis. *Power awareness* relates to knowledge about people's own capacity for change in society and history and of dominant power structures in current reality. *Critical literacy* is based on abilities and habits of thinking, reading, and discussing matters beyond surface impressions, taking contexts and situations into consideration. *Desocialization* relates to examination of active regressive values in society which are internalized, e.g. racism, sexism, consumerism. *Self-organization/education* refers to taking the initiative to transform school (crucial to Freire's efforts) and society.

The critical consciousness concept presents a broad-focused view of criticality: it is both aimed at critiquing the status quo of a given context as well as making explicit what are the crucial criteria and abilities involved in such a critique. It is marked by a strong emphasis on the subjectivity of the critic, the individual in the process of becoming critically conscious of her situation, in conjunction with a belief in people's capacity for objectively unveiling and acting upon the essential components of their context. This

holistic conceptualization stems directly from the intellectual traditions and the historical context for Freire's work.

Praxis and dialogue

Two other concepts from Freire's thought are closely linked to critical consciousness: praxis and dialogue. Freire's *praxis* is not that of revolutionary Marxism, but "the action and the reflection of people upon their world in order to transform it" (P. V. Taylor, 1993, p. 56). Praxis is fueled by action and reflection in a dialectical relationship. It provides an interesting parallel with Schön's idea of reflection-in-action: the individual tries to make sense of something he or she does, reflecting on the understandings implicit in that action, which are surfaced, criticized, restructured and embodied in new actions (1984, p. 50). Praxis is reflective and, at the same time, transformative. The idea of criticality as a basis for praxis is interesting for us as it highlights the connection of perception, knowledge and transformative action. When criticality appears as ideology critique, as is the case in critical game design, these themes are intertwined and need to be looked at more detail in their emergence: what are the reflections involved? The actions? What is the transformative potential set in motion? How is it organized? Who are their actors?

The concept of *dialogue* is a hallmark of Freire's pedagogy and general thinking. Dialogue is based on the inter-connectedness of people in their inherently human capacity to name the world and share their perceptions of it (Freire, 1978, pp. 92–93). From his defense of dialogue as the basis for collective, liberating action through education, Freire emphasizes democratic, participatory and bottom-to-top relationships. If a supposedly critical education practice does not assume a democratic and participatory dialogue, then it is not critical (Shor, 1992, p. 27). An example of this emphasis on dialogue is the

opposition in Freire between what he calls “banking education” and his dialogic pedagogy (1978, chap. 4): the former is based on transmission, on communicating an agenda imposed on students; not recognizing their context and needs; the teacher is an authority figure emulating or defending the oppressor position. The latter is based on the respectful exchange between teacher and learner, both trying to learn through their interaction; the agenda is set together with the learners, and the topics of education come directly from their everyday experiences and context. Finally, the teacher should strive to be at the same level of power as the student and be an advocate for their needs. The equality and respect needed for dialogue, then, serves as a condition for a critical education, and the dialogic practice in education creates spaces of praxis for the learners and the teachers alike.

The impact of dialogue's central role to Freire is seen in the ideas of Boal's Theater of the Oppressed (1988) and Frasca's Videogames of the Oppressed (2001a) and they show how dialogue might be used to foster critical stances in practices and formats different from the educational ones addressed by Freire, re-structuring their conventional practices and methods. To my research, the idea of dialogue serves as an entry point for inquiry on the design process and goals of critical game design and on criticality in play: how is the relationship between designers and players? Is there a drive for dialogue? How is the notion of dialogue leveraged by criticality in play and in game design?

The second domain: play

The second domain considered is that of play. As a starting note, I must highlight that I am looking at play both as an activity and at the objects and structures that foster or create opportunities for it. By extension, games, both as activities and objects, are also being considered within this domain. My reasons for doing so stem from the consideration that games and play, and the boundaries between them, are notoriously hard to define, as

seen in the constant definitional debates in the game studies field (cf. Juul, 2011; Salen & Zimmerman, 2003) and the ambiguity of play noted by Sutton-Smith (1997, pp. 3–4). The study of human play is broad and multi-disciplinary, and it is not in the scope of this research to try to summarize or define this domain.

It is necessary to highlight more specifically what are the aspects of play relevant to the present research. In order to understand better the concept of game design as a critical activity, I will look at two important dimensions of play: the different relationships between play and ideology, both in a macro and a micro level, and play as a matter of design. The following section will look at each of these dimensions, connecting them to my later discussions of critical play and game design.

Ideology and play

As I examine how play and games, and their design, form a milieu for criticality, it is necessary to engage with the question of how ideological values are tied in with play, and how play and games are put in context within broad societal value systems. At the more micro level of games representing ideological positions, two interrelated concepts stand out: games as simulations and procedurality. On the other hand, the concept of rhetorics of play is useful at a macro level when considering how games and play relate to broad cultural values and beliefs.

Simulation and procedurality

When establishing the expressive power of games, and especially digital games, authors have emphasized their interactive and procedural potential as a defining and crucial characteristic of games (cf. Aarseth, 2001; Frasca, 2003a). Through their use of rules, mechanics and goals, games are capable of simulating and modeling the behavior of

systems, be those real of fictional (Frasca, 2001a, pp. 25–27).This emphasis on processes is at the base of Bogost's concept of procedural representation: representing processes through other processes, through their behaviors and the rules guiding them (2007, p. 9). In the videogame case, this capacity for procedural representation is potentialized by the computer, which is intrinsically and fundamentally procedural (Bogost, 2007, p. 10). When procedural representation is used in order to make a persuasive claim, Bogost calls it procedural rhetoric (2007, p. 29).

The creator of a simulation or procedural representation is responsible for how the simulation models a system. The author of simulations is not only responsible for the specific instances that the simulation creates, but also for the code, the law that specifies such instances (Frasca, 2001a, p. 46). When simulations are coupled with the goal-oriented *ludus* of games, the simulation author embeds her values and claims at three levels: one of the particular visual, textual and audio representations instanced by the simulation; one of the rules that govern the simulation behaviors, its underlying model; and a final one related to its goals, which determine what is valued by the game's goal (Frasca, 2001a, pp. 48–49).

This emphasis on the simulational and procedural quality of games, and their ability to present arguments through them, is foregrounded when talking about ideologies in games. A reason for that is that ideology as a concept carries a connotation of "hidden procedural system that drives social, political, or cultural behavior" (Bogost, 2007, p. 72). If games and videogames are so suited for procedural representation, then they are able to make ideology explicit in expressive ways: "videogames are particularly useful tools for visualizing the logics that make up a worldview (...), the ideological distortions in political situations (...), or the state of such situations" (Bogost, 2007, pp. 74–75). This capacity can then be leveraged by political games, and then political systems and ideologies can be

experienced and unpacked by players from a detached perspective through their procedural rhetorics (Bogost, 2007, p. 75).

However, I believe this unpacking process is quite complex, and requires a certain level of critical literacy specific to these simulational and procedural arguments which should not be assumed to be universal. When unpacking such claims, players are supposed to engage in a deconstruction of these systems, which would lead to consciousness-raising (Turkle, 1997, p. 71), which demands a specific set of repertoire and attitudes from them. This is a requirement for both Frasca's notion of Videogames of the Oppressed and to Turkle's "simulation-understanding", which advocate the use of simulation for creating estrangement effects and fostering critical thinking. This procedural view of the arguments and ideology in play has been met with criticism, namely that it places the emphasis of the meaning of play on how play has been created, instead of on the actions of the situated players that are actually playing them: game meaning should not be assigned to rules and how players "activate" them, but its construction should be problematized, and centered around the situated player(s) (Sicart, 2011). These are important questions to keep in mind when discussing criticality in play and the creation of games for fostering critical thinking, and they are discussed further in this thesis, when I talk about estrangement and critical literacy in chapter 3, and about context and subversion on chapter 5.

Rhetorics of play

While simulation and procedural rhetorics are useful concepts for representing and exposing ideology in play at an expressive level, Sutton-Smith's rhetorics of play (1997, p. 8) is an important concept when looking at the different roles assigned to play in cultural and social contexts. The concept is structured around his definition of rhetorics, "(...) a persuasive discourse, or an implicit narrative, wittingly or unwittingly adopted by members

of a particular affiliation to persuade others of their beliefs" (Sutton-Smith, 1997, p. 8). Sutton-Smith investigated the articulation of such discourses in a variety of play theories and cultural attitudes towards play, mapping seven rhetorics: play as progress, play as fate, play as power, play as identity, play as the imaginary, play and the self, and play as frivolous(1997, pp. 9–11). Each of these rhetorics has a core set of properties such as its own advocates, ideal types of players, preferred types of play, basis on spread cultural attitudes, and specific definitions of play that support its functions in that rhetoric (Sutton-Smith, 1997, pp. 15–16). These properties are useful when looking at play forms and discourses about them, as criteria for locating the functions and the cultural view around play in a given situation, pointing to the ideological constructions around it.

When analyzing views of criticality and play, identifying and drawing relationships between different rhetorics of play is a productive approach. By leveraging the cultural arguments and the focus of certain rhetorics of play, designers and players can highlight the differences of these same aspects in other rhetorics. Assuming that a genre of game or play form is usually associated with a given discursive position, a critique of its values and assumptions can be constructed around subverting or disrupting such rhetoric or through the intentional exploration of a different one. This type of rhetorical shift can be seen as one of the forms in which criticality and play mix, and in later sections of this research some examples of this form of criticality will be analyzed.

Play as a matter of design

In game design textbooks, the idea that games are created through some form of design act is a given. For instance, in the beginning of her *Game Design Workshop* book, Fullerton says that "since there have been games, there have been game designers" (2008, p. 1). I believe it is useful to problematize this affirmation: to look at earlier games and

forms of play seeing in them the craft of unknown inventors and to perceive them as game designers cannot be considered entirely accurate. It is a re-imagining of the past through concepts and categories of much more recent times, which might give the impression that some of the contemporary meanings specific to these recent ideas were already active by then. I agree that the creation of games and play forms in contemporary times is indeed strongly marked by the notion of design, but it must be pointed out that the idea of game design is also a reflection of the historical, cultural and societal context of play and games.

Play, as a fundamental human phenomenon, has always been present in a variety of forms in known human societies. It follows that the creation of such play forms, opportunities and structures for play has happened throughout history, with varying degrees of rigor and spontaneity. Ancient games and play forms, such as folk games, had their origins forgotten or lost, to be later remembered and studied through historical, archaeological and anthropological investigations: no game designer can be singled out, their development is a historical and collective process. These games changed through time and space, influencing each other and through the development of local variants. The creation of games and play have also been mythologized or explained through religious narratives, which both points to their importance and to a need to understand how play came to be in the first place. Making games and play forms can be seen then as a cultural process, developing in close relation to the time, the place and the people involved.

In contrast, game creation in contemporary times is strongly marked by the professional identity of the game designer, even more so when talking about digital games, which should not eclipse the fact that amateur and enthusiast game makers are also important in that effort (cf. Anthropy, 2012). It is not trivial to point to a specific moment when this game design notion came to be, and such a historical investigation is out of the scope of this thesis. However, linking game creation with design has its consequences

which need to be acknowledged, and the establishing of a game design discipline is one of them. Salen and Zimmerman wrote their *Rules of Play* book as recently as 2004 with the goal of helping to establish this field (2003, p. 1), and there is a large, and growing, literature about the nature, methods, and goals of game design (cf. Fullerton, 2008; Koster, 2005; Salen & Zimmerman, 2006; Schell, 2008). With the expansion of game design as a discipline and the variety of games being created, the body of knowledge surrounding game design did also specialize, with its sub-fields, for instance, educational game design (cf. Cannon-bowers, 2010; Edvardsen & Kulle, 2010; Klopfer, 2008).

From the perspective of my research topic, I will not set out to map all the ways in which play and games are designed, but I will analyze ideas of game design which are leveraged in or influence existing efforts of bringing together play and criticality. Game design as a discipline provides us with different materials for investigation about the practice of creating games, and those are valuable resources, even if in a "meta" or second-order way, for understanding what game designers think about their practices. Furthermore, taking notice of this disciplinary and professionalized context around the notion of game design is important when considering alternative approaches to making play and games. By doing so, it is possible to perceive how critical efforts relate to this general context and how they might be articulating criticism through the adoption of diverse game design practices. Finally, I must note that further discussion on game design will be produced later, both on chapters 4 and 5.

The third domain: design

The third domain being considered is that of design. Design is an important activity, one that is mostly concerned with the purposeful creation of the objects, systems, and practices which form the world we live in. As humans, this world was shaped by

ourselves and, simultaneously, conditions our existence. Design has a myriad of specialized sub-domains, such as product design, type design, and graphic design. Here, I will be looking mostly at the sub-domain of game design. However, it is necessary to first look at the larger domain of design and to point to some of its underlying structures.

The idea of critical game design or, in other words, that game design can be a critical activity, relates to how these underlying structures of design can support and enhance the concept of criticality and its development. My focus in this section is to examine different elements of design that I believe are fundamental for understanding these potential relationships. Furthermore, this connection of criticality and design is explored in other ways by several design approaches which will be introduced later, and the structures discussed here will hopefully further illuminate this later discussion.

Design goals

Design is a productive activity, "[…] the human power of conceiving, planning, and making products that serve human beings in the accomplishment of any individual or collective purpose" (Buchanan, 2001, p. 191). In generic terms, be it concerned with coming up with objects, systems or procedures, design is aimed at creating a new state of affairs through novelty and intervention. As defined by Simon, "everyone designs who devises courses of action aimed at changing existing situations into preferred ones" (1996, p. 55). The question that is productive to my inquiry, and is central to the idea of critical game design, relates to what are the states of affairs that a given design process is aiming at? What are the guiding principles of its goals? Each design discipline will have their respective kind of design goals, and it is no different with game design. Furthermore, each design process has its own unique set of goals.

When the concept of criticality as ideology critique gets in the design mix, the design goals will be affected accordingly, in a variety of ways. First, it must be noted that the purpose of critiquing existing dominant or active ideologies can be diverse in itself, such as, for instance, unveiling hidden or underlying assumptions or actively intervening in the context where they exist. It might be aimed at crucial aspects of the culture surrounding design, such as play culture around games, or at wider social and political states of affairs. Concepts such as raising awareness, empowering, subversion and intervention are key for these types of goal.

Secondly, varying degrees of criticality might be active in the design goals, as in the case of a design aimed at convincing or persuading users about the designer's opinion on a given ideology or how to challenge it. In this case, the idea of criticality as relying in analysis and judgment might be stronger in the designer end than on the user end. The design goal here still relies on criticality, but this quality will consequently spread across the design's process and roles differently. I argue that both the purposes of a critical perspective and where it is more active in the design process are important points to be looked for when examining ideas of criticality in design, critical play, and critical game design.

As a final note on the topic, it is important to point out that design goals are also expressions of the expected impact of the designer's actions upon the world. As such, they provide clues about the designer's view on their own capacity for action and change, and also at what are the spheres of life they believe they can somewhat influence. Put into their contexts, this can be telling of their social, political, and cultural positions and what are the tenets of their projected vision for the reality they are acting upon. I believe that this knowledge is essential to understand what the scope of critical game design is, at least in the part of the game designer.

Design process

An important aspect for the analysis of design is the idea of design process, a dynamic activity which goes through a variety of distinct stages in its way towards its goals. However, as noted by Löwgren and Stolterman, each design process is unique (2005, p. 9) and their complexity and diversity of cannot be fully described in a universal way (2005, p. 15). I agree and will, then, assume a similar position to them, looking at the design process from a perspective of three abstract levels: vision, operative image, and specification (2005, pp. 16–21):

Vision: depends on the design situation, the design goals, and the designer's repertoire, subjectivity, and framing of the situation. It consists of the first, abstract reaction of the designer to the situation. It is contradictory and elusive.

Operative image: it consists of analogies, metaphors, sketches, that give a concrete and operational, changeable, nature to the vision of the designer. It evolves gathering more and more details, continuously changing itself and the framing of the situation at hand and its designed solution.

Specification: with a certain larger and satisfactory amount of details at hand, the designer can then proceed to construct a proposal or final specification of the solution achieved. This is also a dynamic moment, with changes stemming from the process of construction itself and its constraints.

Furthermore, the authors argue that these three levels are not linearly or iteratively active, forming instead a fully dynamic dialectical process (Löwgren & Stolterman, 2005, p. 20). Each of the levels of abstraction is vital in a design process that assumes a critical stance, with the vision level and the operative image ones being the most important.

The vision level is deeply connected to the purpose of the design act, which, in a critical context, implies in the designer's commitment and desire to critique and challenge

the status quo, which is entirely dependent on the worldview of the designer and her subjectivity. The designer's vision, then, assumes a projective quality, a re-imagination of the criticized aspects of the design situation which are being acted upon. As for the operational image level, the designer is actively navigating the problem space of the design situation, learning and re-arranging her views and goals as the emerging details become known. In this level, the design process is aimed at building actionable knowledge over the design situation and the design vision, which, with a critical focus, is also an investigation of the status quo. The more concrete level of specification might be less changed in a critical process, as it is already concerned with the constraints and possibilities of the construction.

In order to further break down the analysis of the design process, Löwgren and Stolterman introduce two other approaches which are relevant to our research: design as a thought process and design as a social process.

Design as a thought process

The first aspect of design as a thought process highlighted by Löwgren and Stolterman is that of the relationship between problem and solution. They argue for a view of problems in design as the "designer's current understanding of the design situation" and solutions as the "designer's ideas on how to shape her intervention in the situation" (2005, p. 22). Then, they go on to use Schön's idea of design as "a reflective conversation with the materials of the situation" (1984, p. 78) to argue that the problem and the solution are constantly evolving throughout the design process. By acting upon the design process, the designer reflects and acts on the situation, which transforms her understanding of it. Adopting Goel and Pirolli's idea of design problem spaces (1992), this production of knowledge in design is clear: by formalizing, acting upon and evaluating the problem, the

designer deals with the incomplete and open character of the design problem itself, striving to find optimal solutions. This is crucial to our view of critical game design, as the knowledge of the aspects of reality being criticized and of how a certain play form can reflect and question them will grow through the design process. Critical game design, then, assumes an important aspect of knowledge creation, which is linked to and expands on its critique aspects.

Other aspects of design as a thought process that are also related to this knowledge creation are the questioning involved (Löwgren & Stolterman, 2005, p. 26) and the capturing of the design situation (2005, p. 30). First, questioning is crucial to a design process, as it is vital to make explicit the assumptions and preconditions active in the situation, and also serves as an important attitude as it challenges the very reasons for the design to happen. When dealing with ideological critique, this skepticism is fundamental, as analyzing ideologies is a matter of unveiling attitudes, cultural narratives, and underlying arguments. By questioning the design situation, the designer assumes a critical stance very similar to the one in Freire's critical consciousness, engaging with the reality of the situation and investigating its active mechanisms, and to Freire's idea of problematization as crucial for learning.

The second aspect of the thought process of design, capturing the design situation, relates to how a design must fit the reality in which the process happens. The designer, then, assumes the role of "a researcher exploring the reality that constitutes the design situation" (Löwgren & Stolterman, 2005, p. 30). However, Löwgren and Stolterman highlight the difference in epistemology and ontology that the design investigation of reality has in comparison with a researcher: to them, the designer is after an image of reality that is actionable within the context of the design task, while the researcher focuses more strongly in the truth of the situation itself (2005, p. 31). In this aspect, my idea of

critical game design deviates slightly from their view: the criticality of ideology critique is very much concerned with the truth of the reality in question, and it assumes that unveiling and challenging existing dominant ideologies and oppressions is a way to bring this truth forward. The intentional and careful choices about how to investigate the design situation will, in a critique context, be very much focused on those aspects of the reality in which the status quo and the critiqued ideologies are most active and represented. In a way, criticality poses a stricter focus on this aspect of the design as thought process.

Design as a social process

Design is a complex process which does not happen in isolation. The variety of people involved and their different roles needs to be carefully considered, and this is a central concern when looking at design focused on critique. Löwgren and Stolterman point to three different circles of involvement with the design process: the core (designers, participating users and clients), periphery (non-participating users and clients, other stakeholders), and context (environment and society) (2005, p. 33). All of them influence the outcome of the design process. I want to highlight the importance of attention to the relationship and the roles ascribed to those involved in the design process.

When dealing with a design process aimed at critiquing the status quo, the relationship between the designers and the other actors involved must be one that is conscious about the allegiances and perspectives of each actor. Power struggles, questions of participation, governance, and relevance are central and need to be reflected upon. The social role of a designer in a critical position tends to be closer to that of a political expert: she must choose between conflicting actors, as the artifact produced is "an intervention in a play of powers where the designer cannot be neutral but has to choose sides" (Löwgren &

Stolterman, 2005, p. 37). I believe this is a relevant aspect to be taken into account when looking at critical game design.

Design and method

Methods are an important concept in design thinking. Using different methods, the designer can expand her repertoire of tools and instruments for learning about the situation and creating the final products desired, and they speak about the how-to of design. Furthermore, methods are "the externalized form, materialized in actions, of the fundamental property of consciousness: intentionality" (Freire, 1978, p. 60), and, for that reason, they should not be seen as completely autonomous from the people performing them. It is central for a critical perspective to take into consideration the intentionality aspect when discussing design methods, but without incurring in an intentional fallacy.

The use of design methods brings a series of advantages to the design process: it enhances communication, planning and coordination; it collects the history and the competence of other projects; and can help with assuring the quality of the design process (Löwgren & Stolterman, 2005, p. 100). These are all strong arguments for the creation and use of design methods. This production of methods is a common endeavor in many design fields, and game design is no different. Therefore, in my later discussion of game design and criticality in design, the critical methods that are advocated by different authors will be important sources to analyze their understanding of their tasks at hand. By doing so, it is possible to learn more about their intentionality and their assumptions about their craft.

Another important point to make is that the present research is not aimed at producing a design method for critical game design, but to understand what are the main factors involved in this type of game design. The choice of design method and tools is too dependent on the design situation for me point to an ideal way of conducting game design

as a critical activity. What can be said about design methods, however, is that their diversity is essential, as it enhances the repertoire for designers engaged with investigating and critiquing reality. By looking at existing ideas on methods for critical game design, it is possible to highlight their design goals and processes, problematize them, and point to areas in which further development might be productive.

Summary

In this chapter, I have discussed the three large domains that inform the idea of critical game design: criticality, play, and design, in order to lay the basis for later analysis of the intersections between them: criticality in play, criticality in design, and, finally, critical game design. Regarding criticality, I have reviewed the different meanings of the term, its contested use according to active intellectual traditions, and Freire's critical consciousness concept. I have emphasized the importance of the ideology critique tradition to the idea of critical game design, due to its focus on examining hegemonies and contexts and transforming them. Regarding play, I have pointed to different ways in which play and ideology intersect, with special attention to ideas of the simulation and rhetorics of play. Also, I discussed how design and play connect and how the game design discipline emerges from that intersection. Finally, I presented a discussion of design goals, processes and methods, presenting their basic structure. By doing so, I want to establish a foundation for my later analysis of criticality in design and game approaches (see Ch. 4), and my discussion of critical game design (Ch. 5), by clarifying how I understand these aspects of design practice.

3. Criticality and Play

In the present research, analyzing the relationships between criticality and play is central. The argument for critical game design is based on the idea that play can be a critical activity. However, this is not a simple statement, as criticality and play can mix in a variety of ways. This section investigates this mix, aiming to explain how these two domains overlap and influence each other. A starting point is to carefully examine the critical play concept of Flanagan (2009). To do so, I will breakdown the components of her definition and discuss the aspects involved in further detail, pointing to the ones that are most relevant to ideas of criticality. Then, the concept of games of multitude, by Dyer-Witheford and Peuter (2009) will be analyzed. Finally, the ludic techniques of Algava (2009) will be discussed as a view on criticality and play external to the field of game studies, which brings forward the idea of critical consciousness for the understanding of the criticality and play mix. To illustrate and clarify my argument, I will provide examples of games and play forms which extend the idea of criticality and play and the points raised in my analysis.

Analyzing critical play

Mary Flanagan, in her book *Critical Play*, presents a foundational definition of critical play, which I believe needs to be quoted at length:

> Critical play means to create or occupy play environments and activities that represent questions about human life. These questions can be abstract, such as rethinking cooperation, or winning, or losing; or concrete, involved with content issues such as looking at the U.S. military actions in Cambodia in the

> early 1970s. Criticality in play can be fostered in order to question an aspect of a game's "content", or an aspect of a play scenario's function that might otherwise be considered a given or necessary. Criticality can provide an essential viewpoint or an analytical framework. Those using critical play as an approach might create a platform of rules by which to examine a specific issue - rules that would be somehow relevant to the issue itself. Critical play is characterized by a careful examination of social, cultural, political, or even personal themes that function as alternates to popular play spaces." (2009, p. 6)

The above definition introduces several aspects of critical play such as its referentiality, scope, goals, forms of criticality, subjects, and nature. In order to analyze each aspect in more detail, the definition can be broken down in smaller parts that make for more manageable discussion. Each aspect also has further implications to the discussion of critical game design which can be better examined one at a time. I believe that these aspects of her definition have an important use, helping to compare very diverse experiences. Flanagan's book shows this, with her wide scope of very diverse examples being discussed through this definition.

Critical play as ideological critique

The main use of the term critical, in Flanagan's definition, relates to performing some form of critique or examination of current dominant situations. Criticism and examination can be connected to play itself or to larger societal contexts. From Flanagan's definition of critical play:

> Criticality in play can be fostered in order to question an aspect of a game's 'content', or an aspect of a play scenario's function that might otherwise be

> considered a given or necessary. Criticality can provide an essential viewpoint or an analytical framework. […] Critical play is characterized by a careful examination of social, cultural, political, or even personal themes that function as alternates to popular play spaces. (2009, p. 6)

The emphasis put in the unveiling of assumed and given aspects of play scenario's functions, the focus on viewpoints and analysis, and the themes listed by Flanagan are similar to Brookfield's characterization of the intellectual tradition of ideology critique in adult education (2000, pp. 1–2). As discussed previously, this tradition takes the term critical to mean primarily critique instead of cruciality: critical is not so much an objective criteria of relevance or a border-line situation, as in the cruciality meaning, but the idea of performing criticism and analysis upon the status quo, with the goal of social transformation. The ideology critique intellectual tradition is concerned with the role of dominant ideologies in everyday practices and to transform society through unveiling and action. The basic hypothesis of critical play echoes this tradition: dominant value systems and hegemonic beliefs are reflected on everyday play and they can be unveiled and questioned through play. However, the impact of critical play cannot be deduced from its definition only. Impact and action are necessary parts of social transformation, the ultimate goal of criticality in the ideological critique tradition.

Flanagan deals with the action aspect, or praxis, of critical play through the concepts of subversion and intervention (2009, pp. 10–13). Subversion relates to the logic of sabotaging or attacking, both in creative and destructive ways, an instituted order, with the goal to overthrow or change it. To subvert involves some level of transgression and uprooting of positions, and requires the knowledge of that which is being subverted, its target. Subversion, to Flanagan, is quite a broad term, able to encompass both conceptual

and abstract efforts or concrete and direct political action. An example of a conceptual subversion is Gabriel Orozco's *Oval Billiard Table* (see figure below), which questions the "large assumptions of movement, natural laws and physics, and the assumed agency in playing a game" (Flanagan, 2009, p. 104), by creating a play space that defies the standards of billiards' space, with its curvy format and red ball hanging from a wire.

Figure 2. Gabriel Orozco's *Oval Billiard Table* (Bass Museum of Art, 2010)

On the other end, when subversion happens in a more concrete basis, she calls it intervention, and points to how artists have invaded or occupied everyday life and spaces in order to undermine or expose its assumptions (2009, pp. 11–13): an interesting example are the playful performances of the *The Yes Men* duo, who impersonate corporate staff, infiltrate official events and media conferences and use those opportunities to criticize corporations, posing as members of that status quo in order to trick or disrupt those events with statements that contradict the usual discourses of corporative culture (Flanagan, 2009, pp. 182–183). Their interventions provoke strong media reactions, and are concrete and direct subversion acts, openly focused towards an activist agenda of disrupting corporate influence in society.

However, the emphasis on subversion in Flanagan work sometimes fails in acknowledging the limits to this view of action. This happens especially due to her focus on discussing a wide variety of examples of critical play: to know the limits of subversive play and acts, it is necessary to contextualize them in the ideological setting which is being somehow subverted. For instance, the subversion performed by *The Yes Men* duo above is intrinsically linked to the ideological landscape of contemporary capitalism, with corporations in a powerful role not only economically but also discursively, setting agendas for media and with high visibility in public debate. Their subversion both leverages and depends on this ideological importance and visibility of corporations in order to criticize their position of power, running the risk of creating extra publicity for these companies, i.e. in the lines of "any publicity is good publicity".

To problematize the different limitations of subversion in each of Flanagan's examples would be an interesting expansion, but one that could be a digression in her efforts. I believe that looking at critical play from a non-situated subversion perspective assigns a narrow range for its impact. Subversion can be somewhat co-opted by the dominant system it is criticizing, as warned by Poremba (2007, p. 777), for instance, by being placed in an institutionalized or sanitized context that draws a clear line between its impacts and everyday life. Its reach might be also limited by the ways in which the establishment critiqued is structured, as is visible in Dyer-Witheford and Peuter's caveats regarding games of multitude (cf. 2009, chap. 7). An example of that structural limitations is how alternative practices such as modding in virtual play can become a tool for both the cheap formation of labor force and for increasing the value of a game, for its producer companies, by harnessing the creative power of the multitude (Dyer-Witheford & Peuter, 2009, p. 25). For subversion to be a more productive concept, the active limitations to subversion and understanding the places of resistance to a given status quo are essential.

Knowing these limits makes for a more grounded knowledge of the play or design situation.

Abstract and concrete questions

Flanagan's definition states that critical play can deal with abstract and concrete issues of human life through either the actual content of the game or play or an aspect of a play scenario's function. These are distinct points when discussing the scope of critique possible through critical play, and also how it might shape or evolve from playing. First, the concrete-abstract divide can be explored, followed by a discussion of the content-play function duality.

Games and play tackling concrete questions about human life present a closer link to actual events and historical, social, and political contexts. Documentary games, which strive to "document (…) events in a historically correct way as well as playfully reenacting them" (Raessens, 2006, p. 215), are clear examples of play being focused on concrete questions. The docu-game discussed by Raessens, *JFK Reloaded* (Traffic Games, 2004), allows players to step in the shoes of Lee Harvey Oswald and perform a virtual version of the assassination of that American president. It does so by simulating the few minutes right before and during the event, and the challenge involved in that experience triggered discussion in players (Raessens, 2006, p. 214).

Newsgames are another example. They can be defined as "serious computer games designed to illustrate a specific and concrete aspect of news by means of their procedural rhetoric, with the goal of participating in the public debate", and by doing so they are as ephemeral as the news they comment on (Sicart, 2009, p. 28). Again, as in *JFK Reloaded*, the simulation of certain aspects of the referred context, through procedural means, assume a central role in newsgames as they use the news as sources to constraint their design at the

same time that they keep its intended message explicit and in the forefront, so as to provoke public debate (Sicart, 2009, p. 31). Both genres are also heavily invested in providing connection with the context through a variety of channels, such as graphics, music, and text.

As for games that deal with abstract questions, an extreme example comes to mind: the digital game/ simulation *The Marriage* (Humble, 2007). The game explores broad themes around marriage and does so through creating rules and assigning symbolic meaning to how these rules play out. Its abstract quality leaves plenty of room for interpretation and does not directly reference concrete situations, either textually or graphically. Players are supposed to reflect and construct meaning from the interaction with the game processes, the playing out of their inputs. The minimalistic aesthetic of *The Marriage*, its use of evocative or expressive simulations, and its reliance on players' interpretational effort echoes the idea that "the author does not set the meaning of a simulation but it is rather interpreted by the player" (Frasca, 2001a, p. 27), and also points to a big reliance on the idea of procedural representation (Bogost, 2007). Abstract games rely in this open-ended view of simulation and interpretation, while the more concrete focused ones set out to establish clear contextual connections and a more explicit topic framing.

How does this abstract-concrete axis change the criticality of play? Regardless of the level of abstraction of a game's questions, I agree with Frasca's view that ultimately the player will be the one extracting meaning from it, and with Flanagan's take that critical play can occur in both types of games. However, what is required from players in abstract and concrete games is somewhat different. In games presenting abstract questions, players have less contextual clues through which to relate the game's meanings to specific situations on theirs or others' lives. Therefore, the repertoire and critical literacy demanded

of them is potentially larger than that of more concrete games: players need to be able to understand the simulation faced, deconstructing the assumptions underlying it (Turkle, 1997). Also, as visible in the examples of docu-games and newsgames, the strong contextual clues place the games in the middle of on-going discussions, inviting players to engage.

Another point at stake in this differentiation between concrete and abstract questions and their respective requirements of critical literacy and repertoire on the part of players is the register in which these games act. When dealing with concrete questions, the register of a game's critical effort is well-defined and bounded by the designer. In *JFK Reloaded*, the register of the game's discussion is both that of the historical, the re-enacting of a historical event in order to elucidate and provide a version of what happened, and of the first-person shooter genre which sets the template for how the player interacts with the game, i.e. a first person perspective, with a cross-hair and the ability and the goal of shooting. Both registers interfere with how the player will connect to *JFK Reloaded*, and they are leveraged by the designers to make their point about the event depicted. It is not clear which register the players will connect to more, that of first-person shooters or that of documentary re-enaction, but putting both together creates a certain estrangement between the usual simplistic destruction in first-person shooters and the somber re-enacting of such a troubling historical event. Ultimately, I believe that players will connect either way depending on their repertoire and critical literacy, but the juxtaposition of them creates an opportunity for reflection.

In the case of more abstract questions, this register is not established beforehand, and its assignment is left to the players. When games are dealing with criticality as political or ideological criticism, this change in role needs to be considered by designers. In the case of concrete critical games, the designer is suggesting a register and situating the discussion,

in addition to presenting her critical claims, and therefore is exposing her position at both these levels. In a way, while concrete questions have the potential to connect in more direct ways with players, it also demands a higher level of commitment and exposure from the designers, and this is a balance that is not trivial to achieve.

Content and functions of play

"Criticality in play can be fostered in order to question an aspect of a game's "content", or an aspect of a play scenario's function that might otherwise be considered a given or necessary" (Flanagan, 2009, p. 6). There is a clear distinction between questioning and reflecting upon a game's content, whatever it might be, and an aspect of a play scenario's function. A play scenario's function can be understood here as the relationship between the play situation and its context. As detailed in the 2nd chapter's discussion of simulations and procedurality, a game's content can take a variety of forms, from its audiovisual and textual elements to its rules and procedural representations. Still, these are mostly related to what constitutes the game and point inwards to itself and the aspects of play relevant within it. To play critically while questioning a game's content would then refer to reflection or critique upon aspects of that content and what they potentially mean. Looking back at how critical play can ask concrete questions about life, the very referentiality showed by newsgames and documentary games falls into this content-oriented case, as seen in the JFK Reloaded example: the simulation and visual content of the game is the basis for its reflection of the historical event depicted. Another example of content-focused criticality could be the videogame *Hush* (Antonisse, Johnson, Baily, Orton, & Pirello, 2008), in which players have to protect a Rwandan mother and her child from a Hutu patrol during the 1994 Rwandan civil war, by pressing keys to have the mother sing a lullaby and stop the child from crying and exposing them (Flanagan, 2009,

pp. 241–243). The game visuals, sounds and interactivity exposes the drama of war and violence through empathy, displacing the player from her context to a different one, inviting her to reflect on that situation expressed in the game's content.

On the other hand, when the function of a play scenario is criticized, by designers or players, the focus of the critique and reflection turns outwards. What is at stake is not only the content of the game itself, but how its play connects to wider value systems and ideologies active in its context. In that sense, this critique focus is well-suited for the challenging of active rhetorics of play. For instance, if a game's play scenario function is commonly associated with rhetorics of power, it can be disrupted by players changing their play to focus almost entirely on chance. By framing play through an optic emphasizing chaos and randomness, the values of context, conflict and identity assumed by power rhetorics are downplayed and made explicit: chance takes away control from the subject, making her less powerful, and conflict is not a matter of skill anymore. An example of a play function shift is that of Yoko Ono's *Play it by Trust*, a chess set in which all pieces are painted white: confrontation and competition in traditional chess give space to cooperation and collaboration (Flanagan, 2009, pp. 112–113), and the difficulty in telling pieces apart and remembering their positions hinder the usual tropes of chess' power rhetorics.

However, the separation between content and play functions should not be exaggerated. It is practically impossible to isolate a game's content from the function of its play scenario, and to do so would mean ignoring their interrelations. It would be hard to separate the rules and materials of chess from its rhetorics of power, and creating this separation, as mentioned in the *Play it by Trust* example, has consequences: changing the materiality of the chess pieces, its content, impacts its rhetorics. In addition to this dialectic relationship, the edges between in-game content and the game's play function, its relationship with its context, can be potential sources for criticality in themselves. Take, for

example, the idea of brink games, "games that embrace the contested space at the boundary of games and life" (Poremba, 2007, p. 772). Examples of such type of games are teenagers' kissing games and truth-or-dare games, where the play situation and its rules enable players to experiment with behaviors that might not be normally sanctioned, exploring this boundary between game and non-game. Poremba brings together the ideas of brink games, forbidden play, and criticality to show not only how subtle the boundaries between games and life are but that foregrounding and appropriating this borderline status can both legitimize and criticize everyday live.

Poremba points that games are not set apart from everyday life, but happen simultaneously, overlaying it and that keeping track of this process leads to a second-order observation of everyday life (2007, p. 776). In brink games, their purposeful use of breaches in the autopoietic systems of games, i.e. the parts of it that are focused in sustaining the play activity itself, can serve as means to "destabilize immersion and force reflection on the construct of the game" (Poremba, 2007, p. 777), providing an opportunity for the critique of the values active in both the non-game and game layers. The mix between critical content in games and creating new relationships between play and its context serves as a trigger for this estrangement about the act of play itself. Here, the referentiality of games dealing with concrete questions of human life comes back to mind: as they point to clear non-game contexts from their choices of in-game content, they also provoke this boundary keeping effort. Sometimes, games that tackle polemical or painful topics provoke estrangement because of their mere existence as games and their concrete references to social reality. Examples of this are the board games *War on Terror* (TerrorBull Games, 2006) and *Train* (Brathwaite, 2009), and the videogame *Super Columbine Massacre RPG!* (Ledonne, 2005), which make arguments about, respectively, contemporary war and politics, the Holocaust, and school shootings in the USA. They

provoke questions such as: why is there a game about this? Should games deal with this topic? Is this “disrespectful”? I believe that as games assume this brink quality, they provoke a distancing, an awareness towards being in play, through both their content and their relationship with their context, activating this critical potential signaled by Poremba.

Critical games and occupied games

After discussing how critical play conceptualizes the content of play and the relationship between a play situation and its context, it is useful to look at what games are being played critically. At the start of her definition, Flanagan points that critical play "means to create or occupy play environments and activities that represent questions about human life" (2009, p. 6). Critical play, then, is an activity that emerges both from objects or systems designed for that purpose and from play situations initially conceived with different goals in mind. Both games explicitly designed for critical goals, e.g. Molleindustria's *McDonald's Videogame* (2006) and *Unmanned* (2012), and for entertainment, e.g. *The Sims* series (Electronic Arts, 2000) and *Civilization V* (2K Games, 2010), might serve as arenas for critical play. The former games have content, both visual and procedural, emphasizing their topics of critique and an activist and tactical agenda, one on corporate greed and the other on militarism and technology. The latter games can be played critically, even if not originally designed with that purpose, by players who, for instance, refuse and resist the consumerist lifestyle of American suburbia in The Sims or who might use Civilization as a simulator for counter-histories: what if the Aztecs had dominated Europe instead? Or maybe the player refuses to use violence at all in the game?

These alternative forms of play, in games not specifically designed for critical play, are possible for a variety of reasons. One of them is the cultural relevance and familiarity of these games: the knowledge barrier for purposeful change and remix of

games that are part of the repertoire of the players is lower, and changes to their preferred play are recognizable and easier to understand. At the same time, the habits of players and play communities might hinder such critical uses through peer pressure and tradition. Existing “non-critical” games can be played critically also due to play's transformative aspect, the moments which allow a gesture of rebellion from the players, a chance to assert their sense of identity through the game itself, breaking the expected behavior of a game's implied player, even if only in a few occasions (Aarseth, 2007). The design implications of this aspect of critical play are patent in Flanagan's later advice to "design for different play styles" (2009, p. 258): a critical game should foster diverse play styles therefore exercising a looser grasp on its implied player.

A point that can be extended from this aspect of Flanagan's definition is a terminological one. From all games and forms of play in which critical play happens, it is necessary to distinguish between the explicitly designed ones and those that are somehow occupied. The first group can be called **critical games** and the second one, **occupied games**. By this act of naming, the scope of the present research becomes more easily worded and reaffirmed: I am focusing on the game design of critical games, highlighting the criticality involved in that activity.

Occupied games refer to this instances where an existing game or play form, which was not originally created with a critical goal, is occupied and appropriated by players in a critical way. It is similar to what Dyer-Witheford and Peuter call counterplay: instances when players subvert the usual norms of an existing game or form of play by exercising choices that defy them, e.g. never choosing a certain fascist faction in a strategy game, playing as a pacifist on a shooter game. In counterplay, players challenge the subjectivities offered to them by games and refuse to cooperate, creating alternative expressions (Dyer-Witheford & Peuter, 2009, p. 193). This act of occupation is, in a way, a

form of praxis and subversion, as it redefines what the possibilities of a play space are. This occupation might also be a form of intervention, if it also disrupts the standard practices of the player community around that game. An example of that occupation-as-intervention is the performance of the artist group OUT, which entered game spaces and online gatherings of the videogame *America's Army* (U.S. Army, 2002) to criticize its militaristic ideology, discussing their political views with players and using the play space as an arena for political action and reflection (Flanagan, 2009, pp. 179–180).

As for critical games, which are my main topic in this thesis, they are connected to the idea of tactical games, which are made expressly with the intention to perform social criticism and to participate in global movements against the logics of contemporary capitalism (Dyer-Witheford & Peuter, 2009, p. 197). Tactical games are very similar to what I am calling critical games, and my reasons to keep a separate name are two-fold: first, to highlight the criticality involved instead of their intended strategies and actions upon the world. Secondly, critical games are not restricted to political critique of contemporary capitalism, with that type of goal being one of many possible. As I am focusing in the design of critical games, I believe the above differentiation between occupied and critical games is necessary.

Unplaying and estrangement

An important part of Flanagan's ideas of critical play is her proposition of three types of critical play actions: unplaying, rewriting and reskinning. While reskinning and rewriting refer to changing the appearances, justifications or narratives involved in play, unplaying deals with the performance of play actions that defy traditional expectations and conventions regarding social roles and values in play (2009, p. 33). Flanagan does not differentiate in details the criticality involved in each type of critical play, and I agree with

Tronstad that there are important differences (2010). Reskinning and rewriting are focused on providing players with different ways to connect play with its external contexts, being important on questioning its relationship and the locus for play. In Flanagan's description of doll funerals, rewriting and reskinning are important elements in asserting the imagination of girls' play beyond sanitized or preferred forms of play, with the use of mourning dresses and narratives that escaped the usual scenarios of doll play (2009, pp. 33–34). Unplaying, in the other hand, works with a more internal scope.

Unplaying is focused on play actions instead of the settings of play. Expectations are questioned through these actions, many times forbidden by the implicit and explicit rules of the game or play form. Unplaying, then, is heavily dependent on the more procedural or mechanics-related aspects of a game's content, with an emphasis on what is stimulated, allowed or disallowed in its rules or mechanisms. While unplaying is deeply connected to this play space, to the player actions that emerge during play, it is also an important concept when thinking about the design space around games, as the game designers are shaping these play spaces beforehand. This connection between unplaying as a play action and as a desired form of critical play is well exemplified by the mechanisms for criticality in play proposed by Frasca in his *Videogames of the Oppressed* (2001a), which was very influential on how videogames have been used to perform ideological critique.

One of Frasca's propositions is that the simulational power of videogames can be used to affect estrangement in players, separating them from familiar situations and distancing them from a topic. This idea is inspired by Boal's and Brecht's critique of the conformism of Aristotelian immersion and catharsis as an obstacle for critical engagement in theater (Frasca, 2001a, pp. 60–61). They strived to counter this approach by breaking the "fourth wall" through a variety of techniques aimed at provoking spectators to reflect upon

their social reality and not just accept the passive representations of it in front of them. Frasca, then, investigated how a similar effect could be created in videogames.

In games he made, such as *Kabul Kaboom!* (2001b), *Madrid* (2004), and *September 12th* (2003b), Frasca experimented with the impossibility to "win" them. While *Madrid* shows a subtle emotional message on mourning and loss, the other games are explicit attacks on the politics of the war on terror. In them, the "best move is not to play", and the inevitable losing and lack of resolution serve as triggers for reflection. Lee has called this type of game "you-never-win" and analyzed them looking for how they provoke critical reflection (2003). Lee argues that such games, by taking out conventions such as ending states, highscores, and visual progress feedback, break the state of immersion of players. In them, players move into a hermeneutic objectivity, i.e. a more interpretative and detached stance focused on the qualities of the game, which faces them with the construct of the game and its engagement with critical statements. This would happen because players are the fulfillment of their initial expectations, which are based on their familiar conventions of how videogames are and on a previous aesthetical subjectivity, i.e. experiencing the game based on a personal perspective. You-never-win "games are meant to morph the player from an in-gaming loser into an off-gaming thinker" (Lee, 2003), a subject reflecting on the game situation taking a more distanced position about the play experience and its interpretation.

Though the unplaying of common expectations of catharsis and resolution, Frasca's games engage the player in the task of making sense of what they went through. Other designers have created videogames which leverage a similar strategy of creating unwinnable games, as in *The McDonald's Game* (Molleindustria, 2006) and *Oiligarchy* (Molleindustria, 2008). In both these games, the player has to choose unethical or dubious options if they aim to do well in keeping a profitable margin as either the fast-food chain or

an oil industry magnate. As the games are you-never-win ones, players would eventually go through the described transition towards critical thinking as discussed by Lee (2003). However, this evolution from aesthetic subjectivity to hermeneutic objectivity and critical thinking is not guaranteed. Ferrari's (2010) discussion of the different approaches a player might take when playing *The McDonald's Game* is telling: he warns about another possible reading, found in discussion forums on the web, in which players "see that malpractice is the only way to maintain profitability, but they primarily identify as a dutiful executive with a responsibility to the company's shareholders" (p. 6). The criticality of you-never-win games and other forms of unplaying, then, cannot be seen as stemming only from its procedural unplaying, but also from the subjectivity of the player and their reasons to identify in one or another way with the game.

Games of multitude

Another perspective on play and criticality is the concept of games of multitude put forward by Dyer-Witheford and Peuter (2009). Games of multitude are different phenomena related to gaming and play that challenge the contemporary configuration of global capitalism (Dyer-Witheford & Peuter, 2009, chap. 7), which the authors explain through an adaptation of Hardt and Negri's concept of "Empire" (2001). In Dyer-Witheford and Peuter's view, Empire is the wide-reaching global capitalism of the 21st century, marked by the strategic importance of immaterial labor, biopower and corporations. This Empire has extreme reach and depth, but it is also chaotic and precarious, threatened by the complex multitudes of grassroots and global social movements resisting it (Dyer-Witheford & Peuter, 2009, p. xxiii–xxiv). Both virtual play and the games of multitude phenomena exist within that Empire context.

The importance I see of the games of multitude view on ideological critique and play is its specific focus. Flanagan's critical play, as seen above, is a quite broad concept and is formulated in such a way that it can be applied to examples from a wide historical range. Language games from the 19th century, board games from the 20th century and videogames from the 21st century are all mentioned as presenting some form of critical play. In doing so, it lacks some specificity in its criticality: the ideological contexts being challenged in her examples are discussed case by case, and it can be hard to see how all these critiques affect, and are affected by, their respective broader contexts. This connection is needed in order to anchor criticality and play within the specific conditions of their surrounding reality, which is both being critiqued and is the fundamental space where this critique happens. Games of multitude are intrinsically linked to late capitalism and its informational and immaterial character. The concept provides a macro political, economic, and sociological perspective connecting a variety of resistance efforts, and does so while also narrowing down the scope of attention to a specific historical and ideological moment.

What is multitude then? According to the authors, the concept can be understood from three interrelated perspectives (Dyer-Witheford & Peuter, 2009, pp. 187–188), which can be summarized as follows. First, multitude refers to new forms of subjectivity which are technically savvy and creative, both requirements for the existence of the immaterial and informational capitalism of Empire. However, these capacities of the multitudinous subjectivity exceed the uses which capitalism assigns to them, which turns them into potential sources for subversion and resistance. Secondly, multitude also refers to the myriad of movements which oppose the pervasive grasp of corporate power in society. This manifestation of multitude takes a variety of forms in its refusal of being reduced to the logics of global capitalism. Thirdly, the multitudes' capacity and will of resistance is

visible in the creation of alternatives, the incipient and many times fragmented pieces of a worldview which is not entirely engulfed by Empire. This production of alternatives is exemplified by the struggle for control over communication, as in indymedia initiatives of counterglobalization media movements. From the milieu of these three perspectives, multitude can launch visionary efforts to change the world (Dyer-Witheford & Peuter, 2009, p. 188). It is within this context that Dyer-Witheford and Peuter place their concept of games of multitude.

"To speak of games of multitude is […] to assert the possibilities of virtual play [to] exceed its imperial limitations" (Dyer-Witheford & Peuter, 2009, p. 214). This exceeding of limitations is analogous to critical play's unplaying, which is also focused on subverting usual conventions and expectations regarding play. However, games of multitude are framed by the authors as proposing a remake of ludic practices beyond those of the capitalist consensus, which is both a broader take, as they include more than just play itself, and a more narrow one, as it focus on the specific limitations and context of contemporary capitalism. Each of the six practices described by Dyer-Witheford and Peuter plays a role in this effort of dissent: counterplay, dissonant development, tactical games, polity simulators, self-organized worlds, and software commons (2009, p. 211). Counterplay and self-organized worlds are focused on players-as-multitude, and discuss how players react in alternative ways to the choices put in front of them by games permeated by the logics of capital. Dissonant development, tactical games, and polity simulators cover the relationship between critical content in games and capital: dissonant development talks about critical perspectives in mainstream games, tactical games talk about games made as activist resistance and critique, and polity simulators deal with simulations focused towards the discussion of alternatives to the dominant procedures of capitalism. Software commons relate to how players and developers react against

intellectual property and commercialization of information through piracy, alternative licenses, and new models of distribution circumventing it.

These practices carry with them potential contradictions in their relationship with the status quo being critiqued. As noted by Dyer-Witheford, the multitude is not only potentially subversive, but oscillates between subversion and submission. The multitudinous subjectivity can be co-opted by capitalist efforts, as in the adoption of potentially critical values as guidelines for new forms of participatory management focused on harnessing their power for profit (2009, p. 188). Furthermore, spectacle and commodification are deeply intertwined with the multitude's will to communicate, and new forms of production and distribution are both spaces for ideological challenge and for production of value and conformism (2009, p. 189). Dissonant development, for instance, is a telling case: the mainstream game industry creates games which perform critiques to the dominant ideologies, but they do so from the perspective of selling a profitable product. Incorporating rebellion serves then as an extra attraction for commodification and spectacle. By acknowledging and contextualizing the limitations of the practices of games of multitude, Dyer-Witheford and Peuter open up the discussion of how they affect, and are affected by, their status quo. This is essential to the criticality involved in games of multitude: acts of ideological critique and resistance are not autonomous or immune to influence and co-option from the dominant structures they critique. Political action and critique in the domain of contemporary virtual play needs to tackle this ambivalent character of the multitudinous subjectivity.

This problematizing take on ideological critique through play is essential for understanding its potential impact in society and players. I believe this take is productive not only in the context of virtual play, but it is also an important aspect when considering the impact intended and the praxis suggested by other forms of play. As pointed by

Flanagan in her discussion of Situationist drifts, spaces and opportunities for critical play are marked by the privileges regarding their participants: who are the players socially allowed or safe enough to drift around a major city? (2009, p. 196). Other factors such as social and economic barriers are also relevant: how can poor people play a critical game about their situation on a smartphone? How do commercial and commodification questions affect the critique being posed by a critical game and its reception and impact with players? The adoption of a given strategy for publicizing and distributing a game might be an essential aspect of their critique, such as exemplified by the media impact provoked by the commercialization of the board game War on Terror (TerrorBull Games, 2012). I see these questions as a crucial factor when envisioning a critical design situation and to answer them in actionable ways implies in carefully examining the broader structures of the active dominant ideology.

Critical consciousness and play

The concepts of games of multitude and critical play seen above are presented from within an academic effort of understanding how games can critique and act against an established dominant order. They are analytical constructs that illuminate their subject, but I believe it is also productive to examine an instance of criticality and play from another perspective which did not originate from game studies. This instance of criticality and play is that of the ludic techniques for popular education described by Algava in his book *Jugar y jugarse* [To play and to be at play] (2009). The perspective I propose is to look at how their ludic activities are embedded in an effort towards critical consciousness as defined by Freire, described earlier in my 2nd chapter.

Context and nature of Algava's ludic techniques

The use of ludic techniques in popular education in Argentina needs to be understood in its historical context. Efforts on popular adult education, in the molds proposed by Paulo Freire, are part of an on-going struggle in the direction of more power to the people. Argentina has a rich history of grassroots social movements. During the military dictatorship in the 1970s and 1980s, popular resistance was brutally repressed, and thousands of activists disappeared or were murdered by the government, in a period that came to be known as the Dirty War. The opposition to the military regime was diverse, spanning armed groups, journalists, artists and social movements. A peaceful group that gained prominence was the *Madres de la Plaza de Mayo*, a group of mothers who gather weekly in the May Square in Buenos Aires to protest about their missing sons and daughters. They still meet every week, as many people are still missing 30 years later. This movement gathered strong popular support and became a focal point in the articulation of resistance to oppression in Argentina. Other initiatives became structured around the group Madres de la Plaza de Mayo, among them a popular university. This university offers courses on social service, law, journalism, and popular education, with the goal to both produce knowledge and a culture of resistance and liberation (Universidad Popular Madres de la Plaza de Mayo, 2012).

The ludic techniques discussed in *Jugar y Jugarse* (Algava, 2009) were initially created and used in the courses of popular education at the popular university from the early 2000s until 2007, when Algava's group of popular educators moved out from the university . The techniques draw explicitly from Paulo Freire's ideas on popular education, which were very influential in Latin America from the 1960s on, especially due to the fact that they were suited for the discussion of the oppression and political struggle happening

across the dictatorial regimes in the region. The mission of that university is similar to Freire's notion that "popular education is defined by the development of a political project of building popular power" (Algava, 2009, p. 12) marked by participation, democracy and the fight against oppression. The concept of critical consciousness, discussed in the 2nd chapter of this thesis, is central to this effort, and the ludic techniques developed by Algava's group are deeply intertwined with it.

It is important now to describe what these ludic techniques are. They are varied games and forms of presential group play, with a strong focus on their social aspects and many times borrowing from existing forms of folk play. Some are more structured, resembling more full-blown games, and others are more improvisational and free-form.

As an example of the first type, one of the activities developed was a variation of football, in which one of the teams had all the taller, stronger and more skilled participants in the workshop and had the power to establish rules freely in their benefit (Algava, 2009, p. 109). The other, weaker, team had to react to these rules as they saw fit. A very unbalanced and unfair game of football ensued, with rules being created on the fly such as the weaker team having to play blindfolded and other similar crippling conditions. The discussion after playing the game was focused around the exercise of power in the game and possible parallels in society, and the difficulties of the weaker team to resist it or to adapt to it. Another example is a cooperative game in which a circle is formed with people pulling a rope along its perimeter, making it very tense, at which point one participant is helped to walk on that rope (Algava, 2009, pp. 153–154). Other collaborative games involved collective production of drawings and writing about specific themes of education, capitalism, and oppression in everyday life. The overarching goals of these games are to foster cooperation, trust, and the sharing of experiences in the members of that play community.

An example of the second type of techniques, more improvisational, is the role-playing and enacting of the difficulties in everyday situations of resistance. The participants create and act out scenes that show, according to them, everyday situations in which political struggle meets with conflict and indifference. This form of play echoes Boal's ideas of the theater of the oppressed, in which performing becomes a tool for those used to be spectators for their creation of images and debate (1988, pp. 143–144). The discussion after the performances is centered on the difficulties presented and other obstacles for political action in their everyday lives. At first sight, it seems also similar to the type of live-action roleplaying from the Nordic school, but while both are embodied role-playing activities that can deal with everyday life and social issues, the Argentinian role-playing example is much less focused on creating a fictional universe shared by the players, being much more based on playfully creating a scene to be presented and discussed, instead of the diegetic worlds with game-like rules of Nordic live-action role-playing (cf. Montola, 2008).

The tone of these activities is purposefully as playful and joyful as possible. To Algava, one of the creators of the techniques, this joyful stance is crucial for the political goals of popular education: "as beings passionate for collective happiness and combating against despairing structures, we must revolutionize culture and build collectively a joyful subjectivity" (Algava, 2009, p. 173). The pleasure of being at play is not seen as just frivolous or as a motivating factor: it is an integral part of breaking free from a culture of silence and repression, in which the oppressed see themselves through the same depreciating lens as the oppressors do (Freire, 1978, p. 54). However, joy and pleasure are contested territories to Algava, and he places the joys of non-resistance as frivolous, while placing joyful combating subjectivities as his goal (2009, p. 176). In a way, Algava and his group of popular educators create an argument about the role of play based on a Marxist

view of a duality of creativity and alienation (cf. Henricks, 2006, chap. 2), where "good play" is, primarily, creative, expressive and anti-alienation, while other forms of play are more or less frivolous or, at the extreme, alienating and affirmative of the oppressive establishment.

Critical play and critical consciousness in Jugar y Jugarse

Looking to Algava's ludic techniques using Flanagan's concept of critical play, a number of traits come to the front when talking on the concrete-abstract diversity of questions, the focus on content and functions of play, and the use of existing games or the creation of new ones, i.e. occupied and critical games. First, most of the ludic techniques are strongly charged with direct references to the struggles of the participants and topics from their everyday lives. Their play is usually very concrete in its references. The moments in which abstract themes take central stage are usually connected to themes that are so crucial to the participants' context, that they are quickly and strongly apprehended and connected to reality. This happens in a similar way to what the New Games Movement did in the U.S. during the 1970s: questions of collaboration, competition and communal play had a strong echo of the counterculture, both as a mindset and as organized social movements, against the Vietnam War, and creating new forms of play and games was a way to reject the war discourse of the time and also to get people to play together physically, creatively and joyfully (Fluegelman, 1976, pp. 7–10). In that context, the player actions, even if dealing with abstract questions, were able to communicate something about their reality.

Secondly, the ludic techniques are strong in content: participants are constantly facing themes and keywords that are part of their political efforts, such as education, liberation, alienation and so on. Play is focused on these themes and on getting the players

to produce their own content, to voice their opinions. Many of the techniques ask players to draw, talk, enact, sing, or write their opinions and experiences as part of the play process, especially when improvising, e.g. the creation and enactment of everyday situations. However, there is also an emphasis in the functions of play. As mentioned earlier, the idea of joy and subjectivity is recurrent and very central. Some of the techniques have as their main goal to just serve as icebreakers and to foster unity among the group of participants, while others are much more focused on eliciting debate and reflection. I believe that the clear understanding of those functions is essential to the structuring of the techniques, and shows an approach to play that is constantly aware of and flexible about how it relates to the broader context of the situation.

Finally, it is important to note that ludic activities involved both newly created games and variations of existing ones. Returning to the example of the unfair football game mentioned earlier, it is designed so that it is clearly recognizable as a football match. An important aspect of re-appropriating and changing existing games, occupying them, is that the dissonance between the original experience and the one created is meaningful to the players. By provoking estrangement in known and familiar play, players reflect on what was holding the initial experience together. This is a good opportunity to reconsider what is at stake in the original play form and what is being emphasized by the new version. Another example of that type of technique is the re-appropriation of the musical chairs folk game in order to be cooperative, i.e. players can only win if everybody is sitting down when the music stops (Algava, 2009, p. 150). The games created expressly for the workshops are usually more open-ended and improvisational, like the role-playing mentioned earlier.

I believe it is safe to say that the idea of criticality in *Jugar y Jugarse* is intrinsically linked with the ideology critique intellectual tradition, and more specifically

with the critical consciousness concept of Paulo Freire. The fact that these techniques take place in workshops of a formation course for popular educators in the Paulo Freire style is evidence of this intellectual influence. Also, these ludic techniques have not only been used in this context, but have influenced initiatives of urban planning in Argentina which strive to be more participatory and democratic (Lerner, 2010), as a way to engage, through play activities, the people affected by new urban projects to negotiate their differences, discuss their situation, and value their community. It is productive, then, to see how the four aspects of critical consciousness summarized by Shor (1992) can be found in Algava's ludic techniques and how they relate to praxis and dialogue.

Power awareness, both regarding people's capacity to change the world and what the power structures active in society are, is a recurrent theme in the ludic techniques discussed. An approach that is repeated throughout Algava's description of their workshops is the emphasis, through group-building collaborative and non-competitive exercises, on the actual and potential transformative power of the people and the participants. Power awareness, then, is constantly connected with the self-organizing, initiative taking praxis-oriented aspect of critical consciousness. Furthermore, the participants usually have a background of grassroots organizations and social movements which is reflected in the hopeful tone and emphasis on sharing stories from their experiences: there is an active need in these workshops and in the framing of the ludic techniques on creating a space of resistance, somewhere where they can exercise their capacity to collectively and personally engage with the surrounding world. Some of the exercises, as in the football match, represented power situations using a more rules-oriented or simulational focus, but in most cases the discussion of power awareness appears in the form of debates and thematic choices. From the practice gained in such

exercises, the participants felt more empowered to engage in transformative action, by having new collective playful experiences.

As for critical literacy and the desocializing, i.e. discussing regressive social values active in society, aspects, they are both intertwined. Critical literacy in the workshops is more visible in the debates and dialogue surrounding the play activities and it is also in these moments that regressive social values are brought forward for scrutiny. Even though there are a variety of exercises dealing with performing radio shows (Algava, 2009, pp. 97–102) or collective writing (Algava, 2009, p. 47) or collage (Algava, 2009, p. 69), there is no big emphasis on a reflection on the specific workings of these media and expressive forms themselves. The same goes for the more game-like activities, with the exception of one exercise which involved players coming up with games of their own (Algava, 2009, pp. 148–150), where it is visible how the participants produced play ideas similar to the others described in the workshop, showing that they are actually forming a different repertoire of play. The participants' dialogue, involved in the critical literacy and desocializing aspects of critical consciousness, is heavily marked by the collective reflection about what went on in the activity, usually involving meaningful connections they perceived between play experience and everyday life. This use of game actions as basis for reflection depends of being able to see them as ways to understand political and social intent, in a manner similar to what Flanagan sees in the New Games Movement (2009, p. 184). Critical literacy, then, is not being understood as knowing more about the medium or a vocabulary of play, but as an ability to discuss and share experiences critically.

Summary

In this chapter, I have presented different ways in which the idea of criticality can inform play and games. First, a close analysis of Flanagan's critical play concept was delineated, engaging with questions about its connections with ideological critique, concreteness/ abstraction, content/ context, games designed for critique/ games played in critical ways, and the idea of estrangement and unplaying. These questions were discussed and problematized regarding the importance of connection with players and with their contexts, as well as considerations about critical literacy, players' repertoire and play culture, and the relationship between critical play and broader societal contexts. The games of multitude concept was then discussed, as take on the criticality of play, even if limited to virtual play, that situates it firmly within its societal perspective and that is concerned with the critical and political practices that emerge around play. Finally, ludic techniques of popular education in Argentina were presented, showing a take on criticality and play that draws on Freire's critical consciousness and dialogic focus. They are deeply situated within its players' context and culture, and the techniques are also firmly situated in active spaces of political resistance and action, showing a different take on how criticality in play can support praxis and dialogue.

4. Criticality in Design and Game Design

There is a diversity of approaches to design that incorporate some form of criticality. In this chapter, I will present and analyze a set of these approaches that I see as more relevant to the understanding of critical game design. Some of them originated on product design, e.g. Critical Design; others from human-computer interaction design, e.g. Reflective Design, Adversarial Design, and Value-sensitive Design; and others from more generic discussions of the design activity, e.g. reflection-in-action, participatory design. I will analyze these approaches looking for what are their impacts in the practice of design, with a special focus on the design process and goals. These critical perspectives to design have informed game design practitioners and scholars, who created their own methods and guidelines about how criticality can shape the design of games and play. Such critical perspectives to game design are then analyzed regarding the different emphasis to criticality in their design approach.

Critical perspectives in design

It is crucial for the discussion of criticality in design to understand what meanings this concept may assume in different design approaches. What does the idea of criticality bring to the design table and why is it of any importance? This section assumes a more descriptive tone, laying the basis for my analysis of them in the last section of this chapter.

Criticality as criticism and reflection

As any other practitioners, designers engage in self-critique and reflection in order to improve their skills and knowledge. The ability to be critical about their own experience or that of others is an important skill, a critical literacy which is developed through time

and practice, essential for learning. As mentioned earlier in the 2nd chapter, the critical-as-critique is marked by the idea of skepticism, both concerning the object of critique and the one performing it. Designers engaged in developing their practice, then, can embrace criticality as a tool for reflecting about their experiences, the decisions taken, the assumptions and values active during the design process, and other aspects of design practice.

Criticism of one's own designs and those of others is crucial for developing a better understanding of design practice. My critique of someone else's design can help me to perceive limitations and challenges on my own practice or even assumptions and values in it I had not noticed before. By seeing the work of others with critical eyes, I might be able to expand my practice or to propose different design directions based on that work. Criticality, then, is essential for both innovating design practice and expanding the boundaries of design, and this is visible in the importance given to critical reviews, post-mortems and other forms of design criticism. This is not restricted to design: in other creative fields, the connection between criticism and practice is also crucial, and it is not unheard of critics making the move from critique to innovative making, for example François Truffaut leaving the *Cahiers du Cinema* to become a film director.

I want to point to four approaches to criticality in design that share this stronger focus on the reflections and critique about design practice: Critical Technical Practice, Value-sensitive Design, Reflective Design, and reflection-in-action. They can be summarized as follows, and their impact in the design process and goals will be analyzed in more detail later.

Critical Technical Practice

Critical Technical Practice (CTP) originated in the field of artificial intelligence and has been appropriated by HCI and other design fields (Flanagan & Nissenbaum, 2007; Sengers, Boehner, David, & Kaye, 2005; Sengers, McCarthy, & Dourish, 2006). It is an approach that aims to use critical reflection about design assumptions as a way to foster technical innovation. It does so through a process of identifying the core metaphors of the field in question, noticing what is left marginalized and then inverting these metaphors to bring these questions to the center (Foster, Compston, & Barkho, 2006). The alternatives created through this process provide new technological breakthroughs, expanding the boundaries of the design in question, with an emphasis on technical aspects. An example of this approach in artificial intelligence is the work of Agre (1997). When researching action planning, Agre kept notes of his own planning decisions in everyday life, but found that translating them into the standard terms and level of abstraction of the AI field was obscuring his insights. By drawing on other intellectual sources that were fundamentally different from the conventional cognitivism and behaviorism of his field, he and his colleagues critically reflected about their field and its dominant way of doing things and worked on different framings and new metaphors, which lead to the creation of AI models and techniques based on an interactionist and situated model of cognition.

Value-sensitive Design

Value-sensitive Design (VSD) is an approach to HCI design, focused on incorporating a wide range of human values into design processes, and sees such values as being shaped by both the people and the technology involved (Friedman, Khan Jr., & Borning, 2002, p. 2). It argues for both a moral epistemology of values, which need to be taken into account regardless of there being participants upholding them, and for a situated

approach, as values might have different relevance from context to context (Friedman et al., 2002, p. 2). As summarized by Sengers et al. in their review of VSD, the three main methods of Value-sensitive Design are:

> **conceptual investigations** drawing on moral philosophy, which identify stakeholders, fundamental values, and trade-offs among values pertinent to the design; **empirical investigations** using social-science methods to uncover how stakeholders think about and act with respect to the values involved in the system; and **technical investigations** which explore the links between specific technical decisions and the values and practices they aid and hinder. (Sengers et al., 2005, p. 51) (Emphasis mine)

Value-sensitive Design, then, focuses the reflective effort of the design process in the figure of the designers and uses the concept of values as a tool for critical reflection. An example of Value-sensitive Design by Friedman et al. is the design of a system for alerting users about cookies in web browsers: they started conceptually investigating the idea of informed consent, which they boiled down to the values of disclosure and comprehension. From there, they investigated how those values had been expressed in previous browsers when dealing with cookies. The knowledge and the reflection over these values then served as the basis for their redesign of the Mozilla browser, creating systems that informed users about cookies through peripheral awareness and just-in-time methods (Friedman et al., 2002, p. 4). It is important to note that additional human values included in a design are not necessarily seen as alternatives or challenges to dominant conventions or other values active in the field. Friedman et al. argue for HCI "to hold out human values with ethical import as a central design criterion – along with the traditional criteria of usability, reliability, and correctness" (2002, p. 7).

Reflective Design

Reflective Design (RD) is an approach proposed by Sengers et al. in the field of HCI design (Sengers et al., 2005, 2006). Reflective Design draws from a variety of other critical approaches to design in order to argue for reflection about design assumptions as a core principle for technology design. By referencing critical social theory, it argues for reflection as a core principle for understanding the social implications of design (Sengers et al., 2005, p. 50), but it does not assume a strong ideological critique. It strives to be a synthesis of different approaches, taking insights from participatory design, Critical Technical Practice, ludic design, reflection-in-action, critical design and Value-sensitive Design. Sengers et al then proposed a set of principles and strategies for the use of critical reflection as a design tool. The principles they found are, in summary (2005, pp. 55–56): 1) designers should reflect on and alter the limitations of their design practice; 2) designers should rethink their role in the design process; 3) designers should support users reflections about their lives; 4) technology should support skepticism and reflection about its own workings; 5) reflection is folded together with action; 6) dialogic engagement between users and designers through technology can foster reflection.

Reflection-in-action

Finally, reflection-in-action (RIA) is a view on design proposed by Schön in his work *The reflective practitioner* that advocates that design is "a reflective conversation with the materials of a situation" (1984, p. 78). Reflection, to Schön, is intrinsically connected to action, and the back-and-forth of acting upon a design situation changes the designer's framing of the problem and the situation (1984, p. 95). Designers act upon the situation through design moves that have a specific character according to their field (1984, pp. 95–97), e.g. an architect sketches imagined views over a topographic map, while a

game designer might replay a prototype with a particular play-strategy. Reflection is triggered by surprises in this process and generates new actions that move the design conversation forward, and is based on a situated view of the design process.

Criticality as ideological and political critique

However, criticism and reflection, with the goals of becoming a better designer, innovating, or being more reflective about design practice, are not the only uses for criticality in design. As mentioned earlier (see Ch. 2), an important intellectual tradition informing criticality is that of critical social theory, which emphasizes how critique can unveil hidden ideologies and hegemonic values and assumptions. This approach is also present in design, and a number of design scholars and practitioners have taken the ideology critique direction when discussing criticality in design. Skepticism and critique, then, are turned outwards, beyond the design activity itself. The ideologies and values being critiqued and exposed by these scholars and designers can be both macro, related to broad societal contexts, and micro, related to assumptions, conventions, and values from the design field or the design context themselves. Criticism and reflection from this more ideological perspective is crucial for design, as it focuses design research and practice in the direction of understanding the world and acting upon it in a more situated way. Perceiving active values, assumptions, and their effects and causes is essential to contextualize design and to understand its conditions and impacts in society.

In a similar way as when discussing approaches to design focused on criticism and reflection, I want to point to three design perspectives which engage in some form of ideological critique: critical design, Adversarial Design, and participatory design. What follows is a short summary of the main concepts in each of them, and their impact in design practice will be analyzed further in the next sections.

Critical Design

"Critical design uses speculative design proposals to challenge narrow assumptions, preconceptions and givens about the role products play in everyday life. It is more of an attitude than anything else, a position rather than a method." (Dunne & Raby, 2007). Critical Design (CD) was proposed by Dunne and Raby, and originates from the field of product and interaction design. It assumes a speculative and conceptual view of design, which draws from conceptual art in focusing on concepts instead of the producer or the objects, with the goal to subvert design norms and values (Mazé & Redström, 2007, p. 5). It subverts conventions of design, such as functionality and user-friendliness, as a way to criticize aspects of everyday life in contemporary society. As an example, the *Faraday Chair* (Dunne & Raby, 1997) (see figure below) was conceived as a critique of how electronic communications are ubiquitous and pervasive in society. It consists of a chair in which the user can take refuge from the flood of electromagnetic waves around her, by confining herself in a cage-like object made from isolating materials, breathing from a tube. The process of discovering and reflecting upon the functionality of the chair is integral to its meaning. Critical design explores value fictions (Dunne & Gaver, 1997), in which existing technology is used to support values different from current hegemonic ones.

Figure 3. The *Faraday Chair* (Dunne & Raby, 1997).

Adversarial Design

Adversarial Design (AD), as proposed by DiSalvo and inspired by Critical Design's use of design products to criticize and imagine value fictions, is a political approach to design. It is not concerned with politics, in the sense of aiding or optimizing institutionalized political practices, but with the political condition of human life itself (DiSalvo, 2012, loc. 294-297). The political thinking behind this focus is called agonism, which has as its foundations "a commitment to contestation and dissensus as integral, productive, and meaningful aspects of democratic society" (DiSalvo, 2012, loc. 353). Agonism is based on a view of democracy that differs from deliberative consensus-seeking models, striving for public spaces of antagonism and political discussion. It is clear that criticality, in an ideological critique sense, is an essential component of such political view. Adversarial Design contributes to that goal as "a kind of cultural production that does the work of agonism through the conceptualization and making of products and services and our experiences with them" (DiSalvo, 2012, loc. 195-196). It does so through the critical unveiling of hegemonies, the re-centering of what is marginalized, and the articulation of agonistic collectives (DiSalvo, 2012, chap. 5). Works of Adversarial Design are meant to engage users in critical reflection and dialogue as a way to foster this specific kind of political thinking and action, with topics ranging from the role of technology in everyday life or the critical analysis of social phenomena.

Participatory Design

Finally, an important view of criticality in design that is also related to ideological and political critique is that of participatory design. Participatory design emerged as a design practice concerned with issues of equality and democracy in the design of workplace systems (Muller & Kuhn, 1993), and later spread, both as method and influence,

to other applications and contexts, including games (Flanagan, 2009; Flanagan, Howe, & Nissenbaum, 2005; Kafai, 1999; Taylor, 2006). This design approach puts a strong emphasis in the active participation of the users or target group in the design process, be it in a direct way in the design activities themselves, e.g. co-designing and participatory prototyping, or more indirectly as stakeholders or informants, e.g. participatory evaluation or subjects of ethnographic studies (Muller & Kuhn, 1993, p. 27). Participatory design is highly critical and aware of power relations in their design process, between designers, user and stakeholders, and also in the design context itself, between the clients, users and other actors involved (Sengers et al., 2005, pp. 50–51). It is a deeply situated approach to design and it is based on a critical and careful examination of the context of the design situation at hand, hence the use of ethnographic methods, for instance. It is also critical of its own impact upon the context and the people involved and the assumptions and social configurations, both at a macro and micro level, permeating design practice.

By outlining these design approaches, I have shown how the idea of criticality is present in design in a variety of ways. However, I think it is important to analyze in more detail how they affect different stages and aspects of the design practice itself, providing a more direct understanding of their varying impacts. All of these approaches share a focus in problematizing design beyond its technical aspects, asking pertinent questions about a variety of topics: the people involved, the stages of the process, the goals of design, the relationship between design and society, and more. This is an essential quality of criticality in design, as it enhances the ability of designers to understand their work by being aware of the different conventions, assumptions and givens shaping it. Being critical about these aspects of design is crucial for the task of "designing the design process" (Löwgren & Stolterman, 2005, pp. 40–41), shaping what will be its guidelines, emphasis, and goals.

Before going into the more direct analysis of criticality in design practice, I think it is important to discuss how the approaches described above have influenced game design ideas. With that purpose, I will now present some approaches to game design that are also marked by the idea of criticality. Then, my later analysis of the influence of criticality in design practice will draw from both game and non-game design sources, which I believe can bring more relevant insight to how criticality has been adopted in game design.

Critical perspectives in game design

While I was able to present seven diverse approaches to criticality in design, criticality in game design is a smaller field. Before going into another somewhat descriptive presentation, this time of game design approaches that embrace criticality, I want to provide some context. It is important to note that game design approaches are in dialogue with design from outside the domain of games. Game designers have adapted and learned from more broad design perspectives when elaborating their own methods and practices, and these overlaps and references will be noted in this section. The development of new game design approaches is very much in conversation with questions springing up in other fields, as visible in the overlap between Value-sensitive Design and the Values at Play method for game design, which will be explained in detail later.

I believe the influence from HCI and more general design ideas is a key point for critical approaches to game design, because it shows that this is not an isolated discipline, fossilized around one specific way of design thinking. This openness is crucial for the idea of incorporating criticality in game design, as skepticism and plurality in criticality and reflection supports and at the same time is based on such openness.

There are four game design approaches that openly engage with ideas of criticality: the Values at Play (VAP) method (Flanagan et al., 2005; Flanagan &

Nissenbaum, 2007), the Videogames of the Oppressed concept (VO) (Frasca, 2001a), critical gameplay (CG) (Grace, 2010), and the Critical Play Method (CPM) (Flanagan, 2009). Three of them, namely VAP, VO and CG, are more specifically focused on the design of computer games, while CPM is broader in its focus, spanning non-digital games.

The Values at Play method

The Values at Play method for game design was proposed by Flanagan and Nissenbaum (Flanagan & Nissenbaum, 2007), as a tool for incorporating human values and social activist themes, such as gender equity, in the design of computer games. It is based in the observation that games carry embedded beliefs, intentional or not, and that they can tackle social themes better if designers consciously tackle such beliefs and values during their creation. The incorporation of human values is not meant to be an alternative to other design goals of computer games, but a complementary design goal. Flanagan and Nissenbaum explicitly note that their method is not restricted to games with activist or critical themes, but is also suitable for educational and mainstream games (2007, p. 2). The criticality involved in the VAP method itself is more of the criticism/reflection type, even though it could be potentially used with more ideological or political goals and it has a clear preoccupation with the politics of the design process, in line with participatory design.

The design approaches that are referenced as influences for the creation of VAP are Value-sensitive Design (VSD), Reflective Design, Critical Technical Practice, and participatory design. The influence of VSD is the more visible one, as the concept of incorporating human values and the stages of the design process stem directly from that approach. PD's influence is noticeable in the emphasis on the role of stakeholders and the awareness of the different contributions and dynamics between the people involved in the

design. As for Reflective Design, its influence permeates the design process through the constant reflection on how the process itself is unfolding and the importance given to continuous review. Critical Technical Practice influence is much minor, and I could not find direct parallels between it and VAP.

Flanagan and Nissenbaum note that the different stages of the VAP method are not necessarily serial, with one feeding into the other in parallel (2007, p. 3). For the sake of clarity, I will explain them in a more linear way. The stages of the VAP method are: *discovery* of values for the design, *translation* of values into game features, and *verification* of the values in the game. These stages are adaptations of the stages of Value-sensitive Design, and their parallels are conceptual investigation, followed by technical development and empirical validation (Flanagan & Nissenbaum, 2007, p. 4). The example used by the authors when explaining the VAP method is a dancing game, PEEPS, aimed at teaching programming to girls (2007, pp. 3–4). In the case of PEEPS, the values guiding the design were: gender equity, cooperation, authorship, and creativity, and the authors note that several different factors determined this choice of values, such as the project definition, the intended game mechanics, the expectations of the stakeholders, the background and experiences of designers and players, and contextual values, i.e. social, political, cultural.

After having the core values defined, the design process enters the translation stage of VAP, in which such values are operationalized, translated into game features (which are tested, iterated, and refined), values are constantly reviewed, and value conflicts and trade-offs are resolved. In the PEEPS example, gender equity was operationalized through girl-friendly features, such as chat systems. Questions about how to represent code so as to achieve a balance between complexity and appeal to players posed trade-offs and disagreements between the team (Flanagan & Nissenbaum, 2007, p. 6). Resolving

conflicts and implementing such features demands more design work, to make sure that the values agreed upon are being represented. This is when the verification stage takes place, and empirical methods, such as interviews and surveys are used to verify, with the players, the communication of the intended values.

Videogames of the Oppressed

Another important critical approach to the design of digital games is outlined by Frasca in his *Videogames of the Oppressed* thesis (2001a). Different from the other game design approaches described, it does not have clear influences from critical perspectives in design, being heavily inspired by Boal's Theater of the Oppressed techniques instead. The view of criticality in VO is similar to Freire's critical consciousness, a shared influence for both Frasca and Boal. Ideological, social and political critique, in VO, are performed in a personal, micro-level, with the hope that becoming more critical about their personal experiences, understanding their causes and conditions, might help players in creating an autonomous and critical subjectivity that enables them to tackle other issues at a more macro-level. Frasca is clear about the impact intended with his Videogames of the Oppressed: to foster critical thinking among citizens as a way to produce better conditions for social change (2001a, p. 75).

Frasca does not describe a specific method or a framework for the creation of critical videogames, but a hypothetical way to frame their design in order to foster critical thinking and reflection about players' surrounding reality. Such critical goals are explored by VO through engaging players in a dialogue about real-life situations while using simulations and modifications as material arguments and basis for discussion. This is done through the creation of simulated personal experiences regarding oppressive situations at a micro level, which, through dialogue, could in the long run impact society.

An example of a VO is the hypothetical *Play My Oppression* system (Frasca, 2001a, p. 88) which would be an online space where players from an already existing community would engage in the individual creation of mini-games that depict, through simple simulations, personal problematic experiences. Then, other participants could play and modify such games in order to explore the issue further and engage in dialogue. Frasca recognizes the technical difficulty of and the repertoire required for creating behavior simulations in videogames, and addresses this by proposing the use of "videogame primitives", i.e. the metaphorical use of interaction and mechanic conventions from widely accessible, classic videogames such as Asteroids or Pong. In an imagined scenario, Frasca describes a PMO game, Insult, in which the classic arcade game Space Invaders is used, with the modification of the player not being able to fire back, as a representation of a participant's situation of being bullied at school (see figure below, left). Then, other participants would access this game, modify it, and maybe add friends to the player character that let him shoot back with art or humor (see figure below, right) or that help him not to listen to the insults (Frasca, 2001a, pp. 103–105).

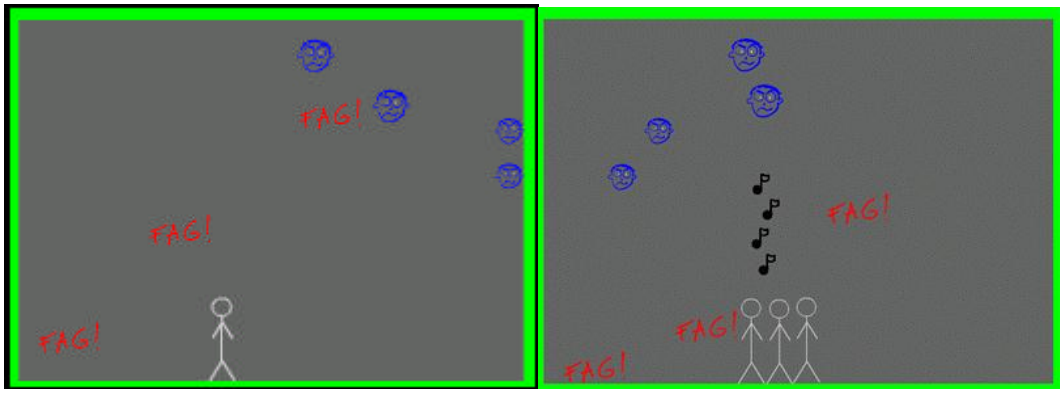

Figure 4. To the left, the original version of Insult; to the right, the modified version with the "firing back" mechanic (Frasca, 2001a)

As a design approach, VO is not focused on describing a design process in itself, but on the importance to use design as a way to engage in a critical conversation with the

surrounding situation and other people in it, which is a similar view to Schön's definition of design as a reflective conversation with the material, concrete questions, of a situation.

It is also relevant to note Frasca's preoccupation with making the process of creating the VO games as accessible as possible, due to the degree of critical literacy needed for the use of mechanics and simulations to represent, even if metaphorically, social questions. To allow for all the imagined modifications and design back-and-forth, he not only proposes the use of minimalistic videogame conventions, but also that tools facilitating that process are needed and should be an integral part of VO (2001a, pp. 106–107). By lowering the entry-level barriers for the creation of mini-games by players themselves, Frasca recognizes the different roles that can be assumed by players and allows them some degree of autonomy from the designer's agenda.

Critical Gameplay project

The design method used by Grace in his Critical Gameplay project (2011) has as its goal to criticize "standards in gameplay experiences" (2010, p. 91). This design goal is informed by the influence of Critical Design, which also places emphasis on subverting design conventions and assumptions. The criticality in this method, then, is also related to a critique of the status quo in videogames, but in a more micro level, that of the experience itself. Grace is also influenced by Flanagan's idea of critical play. The Critical Gameplay project consisted of the creation of a series of small games, using a rapid development cycle, and the subversion of conventions was focused on modifying gameplay mechanics, which he defines as "the actions made available to the player to accomplish their tasks and their results" (Grace, 2010, p. 92). This is quite similar to the idea of unplaying put forward by Flanagan, as the new mechanics he designed are meant to support different values than the usually expected.

As an example, one of the games created, *Black/White* (Grace, 2009a), is meant to provoke critical refection about stereotypes in games, as all characters have the same appearance. Players need to differentiate between friends and enemies based solely on their behavior. The estrangement between what is the norm in videogames, i.e. clearly identified roles for all characters, and the particular functioning of *Black/White* is the main critical aspect of the game, and this same logic applies to the other games in the project. However, I think that, due to the choice of tackling one single convention each time, in a minimalistic and abstract way, the games provide very few reasons for players to engage with them critically beyond the procedural level. As noted in the 3rd chapter when talking about *The McDonald's Game* (Molleindustria, 2006), the subjectivity of the player and their reasons to identify with the game's arguments are as important for creating critique through estrangement as the deploying of procedural arguments.

As for the design process of the Critical Gameplay games, Grace does not deviate much from a more established game design processes: 1) choice of content, 2) basic implementation details of the chosen platform are put into place, 3) assets and content are produced, and, then,4) the rest of the game is implemented and polished (2010, p. 93). Grace also emphasizes the fast development cycles and individual development he adopted as being a non-traditional process (2010, p. 93), but I disagree as it did not seem to change the nature of his process in profound ways, expect as pragmatic constraints: for instance, iterative and rapid methodologies are established ideas in game design handbooks (Fullerton, 2008; Schell, 2008).

The Critical Play Method

Finally, another critical approach to game design is the Critical Play Method which Flanagan outlines in her *Critical Play* book (2009, chap. 8). It is a more recent method than

the Values at Play one, also proposed by Flanagan, together with Nissenbaum. The main design goal of CPM is to create games that stimulate critical play, fostering the questioning by players of real life questions, assumptions and ideologies through play. In order to do so, Flanagan modifies the iterative design model of game design. As mentioned before, the iterative model for the game design process is quite common in the field's literature and is based on the repetition and incremental elaboration of a series of design stages: setting a design goal, develop rules and assets supporting the goal, develop a playable prototype, playtesting, revising if the goal was achieved, and starting again (Flanagan, 2009, pp. 254–255; Fullerton, 2008). She argues that this model needs to be both more reflective about the role of design goals, drawing from Schön's reflection-in-action and the Critical Technical Practice design approaches, and more participatory and open regarding varying play styles and subversion, which are related with including more stakeholders in the process and being aware of the politics of the design process, a clear influence from participatory design ideas.

The modified iterative process in the CPM has the following stages, which are to be repeated in cycles (Flanagan, 2009, pp. 257–258): 1) set design and values goals; 2) develop rules and constraints supporting these values; 3) design for a variety of play styles; 4) develop a playable prototype; 5) playtest with diverse audiences; and 6) verify values and revise goals. The influence of the VAP method is clear in the large emphasis put on the use of values as guides for the creation of a critical game. As with the VAP method, Flanagan also notes that the method could be of use for mainstream game development as a way of suggesting new and radical ways of playing (2009, p. 259). The differences between CPM and VAP are mostly related to the importance given to the diversity of play styles and audiences, which relates to the importance given to players' capacity of appropriating play described in the critical play concept.

The criticality of the CPM is aimed at creating games that "instill the ability to think critically during and after play" (2009, p. 259) and to do so, designers should create "interesting, compelling play environments using the intricacies of critical thinking" and to "offer many possibilities in games , for a wide range of player, with a wide range of interests and social roles" (2009, p. 261). While critical play is based on ideological critique, reflection, and subversion, as discussed earlier (see first section of Ch. 3), the method proposed to achieve it seems much more focused about creating inclusive, values-sensitive, and open-minded games than specifically provoking or exploring ideological critique and subversion. It is not clear how an unspecified values agenda or player diversity lead to subversion, and I think that the CPM seems more suited for the creation of games that foster more of a reflective criticality than concrete critique and intervention. I think the method could be used for the design of more radical and critical games, but it is not the main design goal supported.

Design goals and criticality

After presenting critical approaches regarding design and game design, I will move on to connect them more directly with different aspects of design practice. I will highlight how the approaches described above can impact the goals and the processes of design and game design, looking at how they raise questions that need to be addressed by those engaged in design. However, to analyze the possible impacts of these approaches would not be of much relevance if they are not connected to my idea of critical game design: a critical approach to the design of critical games (see my Introduction and Ch. 2), the making of games and play forms for engaging in ideological and political reflection and critique. Therefore, the following analysis is focused both on understanding how the above design and game design approaches impact design practice and how that impact can

inform critical game design. Finally, this section will focus on design goals and the next will tackle how criticality affects design processes.

When talking about critical perspectives of design and game design, the first step to differentiate their contributions to critical game design is to understand how they approach design goals. Even if a design or game design approach embraces criticality as ideological or political critique, which is my focus on this research, its design goals might not be centered on that concept, being more interested in the goal of creating better products or games, for instance.

Criticality as a primary goal: praxis and dialogue

There is a set of the approaches considered which places criticality, in the ideological critique sense, at the center of their goals: namely, critical design, critical gameplay, Adversarial Design, Videogames of the Oppressed, and the Critical Play Method. Each of them is aimed at somehow changing or problematizing the status quo through the products of their design practice. More precisely, through the impact their products have on their users or players. A unifying thread between some of these approaches, namely Critical Design, critical gameplay, Adversarial Design and Videogames of the Oppressed, is the need to provoke users/ players to reflect and dialogue over the experience of facing or using their products.

There are differences, however, in how such dialogue is supported: Critical Design and critical gameplay do not go into much detail about what should, ideally, happen as a consequence of the user or the player reflecting or engaging in discussion about its design speculations. The contexts in which people experience the products of these approaches, relying on spaces such as exhibitions (Dunne & Raby, 1997; Grace, 2011), create a certain bounded space and it is unspecified how their impacts bridge this boundary to affect

people's perception and actions in other contexts. Dunne wants to distance Critical Design from art, by pointing to its prototypical nature and its production methods, which are technically compatible with mass production, but at the same time recognizes that the design speculations created are conceptual and the work of artist-designers (1997). This is a somewhat unresolved dilemma and points to the difficulty of creating material exploratory designs that do not fit both the needs of the capitalist marketplace nor want to be confined to art spaces.

Videogames of the Oppressed and Adversarial Design are much more explicit about integrating this reflection into some sort of praxis. In the case of VO, the creation, through videogames, of a space for dialogue has as its goal to help players become more aware, critical, and to learn more about overcoming their personal problems. This process would give them potentially useful experience when taking action upon oppressive situations in a broader societal context (Frasca, 2001a, pp. 74–75). In AD, this dialogue produced is an essential part of the political project of its agonistic view of democracy. Creating opportunities and collective spaces for dialogue, then, has as its goal the support of the pluralistic, democratic, and confrontational political view of agonism (DiSalvo, 2012, chap. 4). The attention given to the consequences of the user and player experiences and how they could translate reflection into action in these two approaches is relevant. It is a marker of the importance to understand and take into consideration the larger role of the critical activity in the lives of the users/players and in society. If the goal of a design process is to affect people and stimulate reflection and change, which is the case in critical game design, this awareness is crucial.

As for the Critical Play Method, its goals are less specific about provoking action and dialogue with players. It is much more focused on supporting the activity of critical play, which is where the actual critical engagement would come into being. So, while the

method stresses the importance of dialogue and reflection in the design process, it is not clear how the products of such design would support that critical praxis beyond play itself. The reason for that lack of specificity could be that the method is designed to have a wide range of applications across different types of games and a diversity of values: in short, it is a more abstract proposition, which needs to be adapted according to each design situation. The other approaches, Adversarial Design, Videogames of the Oppressed, and even Critical Design, are more concrete and specific in situating their goals around specific forms of action, e.g. AD's agonism and VO's dialogic awareness, or at least a bounded context, e.g. Critical Design's and Critical Gameplay's speculative products/games.

Criticality as a supporting goal

Criticality can be an important part of design goals even if the product of the design practice is not centered on it. The role of criticality in the approaches where this happens is more focused on informing and supporting other design goals. Being critical, then, is more of a required stance in order to achieve a diversity of design goals: incorporating human values in design products, as in Value-sensitive Design and the VAP method; pushing design boundaries and innovating technology, as in Critical Technical Practice; and creating democratic and situated products or systems, as in participatory design.

As for the Reflective Design and reflection-in-action approaches, the relationship of their view of criticality is more central to design practice, but it is not the main component of their design goals, which are still more focused on producing design products that are better, i.e. more humane and meaningful, with a "positive social effect" (Sengers et al., 2005, p. 57). In these approaches, criticality, in the reflective sense, is an essential component of the design process itself. Design goals are affected in the sense that

they are to be constantly redefined and reframed according to new directions unveiled through reflection in the design process, as in Schön's emphasis on the reframing of the design problem through reflection-in-action (1984, p. 94). Another way in which they affect design goals is by arguing that users should be stimulated to engage in reflection, which would mean making products or services that are: open to interpretation, heavy on feedback, open to participation and that invite a variety of interpretations (Sengers et al., 2005, p. 56).

This more peripheral role of criticality in design goals does not imply that these approaches are less useful for a radical critical perspective to game design. I think they are complementary to a design practice that places critique at its center, because they incorporate criticality in the role of supporting and informing the design process. For instance, if I am designing a game to criticize workplace relations in Brazilian factories, with the core goal of provoking reflection about union demands and newly passed legislation, I might benefit from also incorporating participatory design goals. By adopting its objectives of producing a democratic and situated product, in this hypothetical case a game, I might be more aware of a variety of issues and changes to my design process that can strengthen the relevance and concreteness of my main critical goal.

Design processes and criticality

After discussing the impact of criticality in the design goals of critical design and game design approaches, I move now to a discussion of how their design processes, the ways in which the design activity develops towards its goals, are affected. As mentioned before (see Ch. 2), each design process is unique, and I will not describe an ideal version here. I propose to look at two stages of the design process, i.e. vision and operative image (Löwgren & Stolterman, 2005), aiming to understand how the above approaches impact

each of them. Also, I think it is important to highlight how those perspectives to design embrace the idea of criticality in the social and thought components of the design process (see Ch. 2, section on design processes). This section has, therefore, a more analytical take on the design and game design approaches described earlier, aiming to present a more detailed and synthetic view of how criticality shapes their design processes.

Finally, I believe it is productive to organize this discussion around thematic groups, namely subversion and inversion, dialogue, reflectivity, and values. These are formed based on the ways in which criticality affects the design process of each design approach presented earlier, i.e. which of the themes is emphasized in the different design moments, stages and methods of a given approach, such as, for instance, dialogue in Participatory Design's co-design methods or values in Value-sensitive Design conceptual investigations. I believe this grouping is helpful for understanding their relationships while providing a synthesis more suitable for analysis and critique. Also, I must note that a specific design or game design approach might have elements that fit one or more thematic group, and they are not meant to be exclusive or definitive.

Subversion and inversion-based processes

The design and game design approaches in this group put the inversion or subversion of design, political, social or cultural conventions, expectations and norms at the center of their design process. This is visible in Critical Technical Practice, Adversarial Design, Critical Design and Critical Gameplay. All these approaches structure their design process around methods and design actions aimed at making the most out of identifying, inverting, and re-centering standards, in ways that support their different design goals.

Subversion and inversion in these approaches impacts mostly the nature of their vision and operative image stages. In their vision stage, the main activities involve

understanding, at an initial and possibly quite abstract level, what is the status quo, the conventions and standards which are to be subverted or inverted. The vision stage also involves sketching a rough connection between such status quo and the design goals of the specific design situation. This is different for each approach: in Critical Technical Practice, the emphasis is on the current state of technology and design and how to possibly innovate it. In the other approaches, the focus is more on understanding the current state of design, game design, and society and what can be critiqued and subverted about them based on the design situation.

In their operative image stage, the approaches in this group favor a thought process based on questioning and skepticism. In Critical Technical Practice and Adversarial Design, which present a more structured method for their practices, there are striking similarities: there is 1) an identification step, which should reveals standard metaphors/ assumptions (CTP) or hegemonies (AD); 2) an inversion step, in which the metaphors and standards are inverted (CTP) or that which is marginalized by them is identified (AD); 3) a re-centering step, in which the inverted assumptions or marginalized elements are put at the center of the design process. In Critical Design, this subversion takes the form of value fictions, a thought experiment in which existing technology serves as the basis for imagining values that are not feasible in contemporary society (Dunne & Gaver, 1997) or the explicit singling out and denial of a standard value, like user-friendliness. In Critical Gameplay, the operative image process is not described in detail, but the very specific game mechanics and conventions that are criticized had to be identified and respective subversions imagined, and I believe it is reasonable to say that a similar process could have taken place.

I want to point to some shortcomings I see in the approaches of this group. First, by putting a strong emphasis in the thought aspect of the design process, they are

potentially less aware of its social dimensions, with the possible outcome of missing important aspects of how the context of the design situation and the actors involved affect design practice. In the Critical Technical Practice approach, this issue is addressed by the authors noting the need to incorporate outsiders/ stakeholders and to be aware of the origins and implications of the assumptions/ metaphors being inverted (Foster et al., 2006, p. 208). In Adversarial Design, DiSalvo imagines AD being extended into a more participatory practice which "would engage with groups and communities and use design to collectively and collaboratively explore the political condition and express political issues" (2012, loc. 2403-2404) leading also to "a broadening of the range of political issues and relations engaged through design, providing more sites and subjects for contestation" (2012, loc. 2434-2436), engaging the social dimension of the design process and strengthening its potential for political praxis.

A second potential issue also related to the lack of a view of the social process is that the approaches which are more focused on ideological critique and social commentary, i.e. Critical Design, Critical Gameplay, and Adversarial Design, run the risk of generating products that are too abstract or formalistic. In the case of Grace's Critical Gameplay, for instance, even though the mini-games created are simple, the critiques they perform require a similar play culture and repertoire from the player. Estrangement and subversion of conventions, especially without a clear connection to the subjectivity of the player or user, can be hard to balance with accessibility and relevance, as noted in my earlier discussion of estrangement and unplaying (see Ch. 3).

Dialogue-centered processes

The design and game design approaches in this group are centered on the idea of dialogue as a guiding principle for their design processes. I have included in this group the

Participatory Design and Videogames of the Oppressed approaches, and the Values at Play and Critical Play methods. These approaches are invested in the engagement with users/ players and other involved people and stakeholders during a variety of stages and moments of the design process. Furthermore, they also emphasize the social elements of the design process, as a way of capturing the design situation in a more grounded way.

Some of these approaches have specific methods to incorporate dialogue in the vision stage of the design process. In PD, ethnographic methods, contextual inquiry and future workshops are deployed to inform the design situation and to understand the power configurations active in the design context. In the Values at Play and the Critical Play methods, designers need to be aware of the values held by players and stakeholders, and how to solve potential conflicts between them. In these approaches, dialogue with user/ players and stakeholders is essential to examine the design situation, in its specific, located, and concrete nature, and to position the different people involved, i.e. designers, users/ players, stakeholders, regarding the design goals. The designer is, then, a political actor interfering in a specific socio-cultural and political milieu, where neutrality is impossible, engaging in dialogue with other actors and reframing and developing its goals based on the conditions of this design context.

Dialogue is a defining feature also of the operative image stage in these approaches' processes: in order to create and refine the design vision, a series of sketches, metaphors and other provisional materials are elaborated, with varying degrees of participation and influence from other people than the designers. PD is probably the approach that most strongly embraces dialogue. It developed a variety of methods and activities to support and enhance it during prototyping and sketching. Some examples are: design games, conferences with users and stakeholders, low-tech prototyping, and collaborative prototyping (Muller & Kuhn, 1993, p. 27). In the VAP and Critical Play

methods, dialogue is also important at the operative image stage, with design steps specifically meant to understand and evaluate new sketches and metaphors together with players and stakeholders, like playable prototypes, and to operationalize and refine the values that guide the design. In CPM these design steps are more open to feedback from players that deviate different from just checking if the designers' goals are met, with its emphasis on testing with diverse audiences and different play styles. In Videogames of the Oppressed, dialogue in the operative image stage is slightly different, as the players themselves are mostly engaged in game design and prototyping, as in the *Play My Oppression* example (see second section of this chapter). Therefore, the players dialog over the prototypes and simulations they create in the direction of refining and seeing alternatives to their visions, reframing and analyzing their designs. In VO, then, players are in a constant operative image stage, and the designer role is focused on supporting this.

I see a variety of useful insights from this thematic group of design processes. First, their focus on participation and in understanding the design process as a social one goes a long way in fitting these processes within the social and political contexts in which they happen. By creating a more grounded understanding of what are the social core, periphery and context of this specific design process, and by incorporating other in the process, these approaches also provide a good position for coming up with products or games that deal with questions that are concrete and relevant to the people in the situation.

When talking about making games that critique and aim to change a certain status quo, this situated and dialogic approach can certainly help in knowing and engaging with the people affected by hegemonic and dominant ideologies. In short, these more dialogic approaches contextualize, through participation, the design process, which stops design from happening as if it existed in a social vacuum. These approaches also support well the four qualities of critical consciousness (see Shor, 1992): they are strongly marked by

power awareness, regarding the design process and its context; they leverage people's knowledge and foster their critical literacy through participation in design; they can help in identifying the regressive social values and beliefs active in the design context; and they are potentially able to help the people involved in engaging in challenging their problematic social and political situations. On the other hand, the approaches in this group are also very demanding approaches, which take the design process beyond the comfort zone of a design studio and take control out of the designers as they depend on the other people involved. I believe this can be both a hurdle and a motivation for the adoption of such approaches.

Reflective processes

This thematic group presents approaches that place a strong emphasis on the reflective aspects of the design process. Namely, the approaches are Reflective Design and Reflection-in-Action. In both, the defining aspect of the whole of the design process is the need, for designers, to be reflective about their actions and the knowledge that is being constructed throughout the design process. A point worth noting is that it is somewhat hard to separate both approaches, as Reflective Design is heavily influenced by Schön's reflective practice concept, and both are quite similar in their emphasis on reflection in the design process.

Reflective Design, because of the influence of Critical Technical Practice and Critical Design, also assumes inversions and subversions as important heuristics for reflection during the vision stage of the design process, as they can make the designer more susceptive to surprises and new insights into the situation. In Reflection in Action, there is no specific heuristic or step regarding the vision stage, but an argument about how such visions are starting points for the reflection process: an initial problem, understood as the

“designer's current understanding of the design situation” (Löwgren & Stolterman, 2005, p. 22), and solution coupling, in an elusive form.

Reflection is the driving force in the operative image stage which will help the designer in navigating the design situation towards a concrete final product. Both approaches highlight that reflection is embedded in and shapes the design actions by the designer, assuming the form of a critical stance always looking, even if unconsciously, for questions to ask to the design situation. Through such reflection-in-action, his or her understanding of the design situation is reframed and details and their implications are revealed. Each sketch, prototype or mockup has the potential to trigger or materialize new knowledge for the designer, which will lead to new design moves until a satisfactory intervention in the design situation can be specified with confidence.

It is clear that criticality, in this thematic group, assumes a role of criticism and reflection, aimed at an awareness and maturity about the knowledge produced and developed in design. This view of criticality is similar to how the concept is understood in pragmatist constructivism (Brookfield, 2000), with its emphasis on the reflectivity involved in learning. However, such form of criticality is also compatible with a more ideological critique oriented design practices. Reflection and questioning are essential abilities for the exercise of a skeptical stance towards anything, and it is no different when dealing with challenging ideologies, conventions and regressive social values. A reflective stance is also valuable in helping designers understand the role of their subjectivity in their practice, making them more aware of how they are exercising it.

Even though reflective approaches are compatible with and almost a requirement for more ideology or political views of criticality in design, I believe that the almost exclusive focus on the thought process of the designer is not enough to contemplate the social dimension of the design process as a whole. This has the potential downside of

making the process too isolated from its context and to ignore the roles of different actors involved. Reflective Design addresses this issue by emphasizing the need to support users' reflections about their lives, giving them the most opportunities to do so by incorporating feedback and encouraging their participation in the process (Sengers et al., 2005, p. 56). Finally, connecting this group of approaches with the idea of critical game design, they provide an important reflective dimension to criticality in the design process, one that is quite holistic and that works well in combination with other critical perspectives, but that might not be enough to create meaningful and engaged critique in its own.

Values-based processes

In this group of approaches, the design process is centered on the theme of incorporating values in design, and its criticality is mostly related to the reflection and careful examination necessary for this goal. The approaches that form this group are: Value-sensitive Design and the Values at Play and Critical Play methods. In all these approaches, the design process is structured around the basic structure of investigating values that can support design goals and fit the design situation, translating these values into prototypes and other design materials, and verifying if the values are being successfully communicated to users/ players in the final product.

As for the stages of the design process, the focus on conceptually, empirically, and technically investigating values starts very early on. In these approaches, this investigation (Value-sensitive Design) or discovery (Values at Play method) step present elements of both the vision and operative image stages. As all of these approaches also emphasize the iterative nature of the design process (Flanagan, 2009, pp. 255–256; Flanagan & Nissenbaum, 2007, pp. 3–4; Friedman et al., 2002, p. 2), the boundaries between vision and operative image-focused design actions are fuzzy. In the discovery or investigation

moments of their methodology, values are used as tools for reflecting on the design goals and on how they can fit the design situation. They are treated in a similar manner as other design elements, being materialized into lists which are iterated and refined and further negotiated with stakeholders and users when conflicts emerge.

Another important step of their design processes is the translation or implementation of values as design features, which is based around an investigation of how such features can support design. I believe this focus can be problematic at times, because a set of features might not carry the same values in all occasions. In the case of VAP and, in a smaller degree, the Critical Play Method, this idea of translation ends up assigning a large weight to rules and mechanics of a game, which, as mentioned earlier (see Ch. 3), might not be the most relevant place in which meaning and values are being constructed in a play experience. The experience of the player with the game depends on a variety of factors together with its rules and mechanics, and maybe a more productive approach would be to focus more on the players, their contexts, subjectivities and experiences. The larger emphasis on play styles and diverse audiences in the CPM method seems to be a move in this direction.

There is also an emphasis on understanding empirically which values are relevant to the people involved in design besides the designers (Flanagan & Nissenbaum, 2007, pp. 4–5; Friedman et al., 2002). Also, in the description of the value conflicts that might emerge it is clear a preoccupation with the social process of design. However, in the case of the Critical Play Method, the role of players is quite restricted to that of testers, which somewhat conflicts with the values cited as examples, e.g. empowerment of marginalized groups, and the call for a more non-hierarchical, participatory exchange (Flanagan, 2009, p. 256). If players can mostly act as validators and testers of a design proposition, how can they have a critical say or exercise some power over the design process and on the values

being pursued? They become limited to a more responsive role in which they cannot directly influence the setting of the design agenda.

Finally, I want to highlight some issues with the approaches in this thematic group that I believe are relevant when considering how they can inform critical game design. First, the use of values as working concepts for reflection is very productive for critical goals in game design, as they provide a common vocabulary for the analysis of the situation and the experience of players. A second point of attention is that the use of values in these approaches is not specific about supporting ideology critique goals and its design process does not specifically address this critique effort, except in the case of Critical Play Method, which does aim to support play aimed at that. But even in the Critical Play Method, there is a common thread of noting that these approaches can be of use for conventional and mainstream design and game design (Flanagan, 2009, p. 259; Flanagan & Nissenbaum, 2007, p. 8; Friedman et al., 2002, p. 7). This complementary or "reformist" role for values in the design process lacks the subversion or the connection with contexts of resistance or praxis seen in other approaches. I believe this does not make the values-based approaches to the design process less relevant for critical game design and efforts of ideological critique through games, and they can be made more relevant if game designers use them centering design around values close to ideas of subversion and dialogue.

Summary

In the above chapter, I have reviewed a variety of design and game design approaches that are informed by the idea of criticality. I have first looked at critical perspectives to design in general, identifying approaches according to the view of criticality to which they subscribe. Later, I presented game design approaches that are informed by criticality, describing their goals and proposed processes, as a foundation for

analyzing them together with the more general design approaches. This combined analysis was divided into problematizing design goals and design processes. On the design goals front, a group of approaches from both design and game design placed criticality, in an ideological critique sense, at the center of their goals, designing so as to provide for that criticism. Other approaches adopted criticality as a peripheral concept, which was leveraged to enhance other design goals. As for design processes, I was able to identify four major themes around which these critical approaches can be grouped: subversion/ inversion, dialogue, reflection and values. In each of these themes, I have presented how they shape the design process and some of their benefits and shortcomings for supporting the idea of critical game design, which are important points for consideration to designers engaged in making games for ideological critique. Important questions found are related to: the connection with players' and designers' context, formalism, player participation in the design process, the role of reflection for ideological critique design goals, the values-as-features idea, and values as working concepts for the design process.

5. Critical Game Design

In this chapter, I want to address more directly the idea of critical game design, situated at the intersection between criticality, play, and design. This is not meant as a presentation of a method or a design framework, but rather as a synthesis of key ways in which these three domains can mix. The reasons for not producing a method have been delineated before (see Ch. 2, section on design and methods), and I would like to add that it would be hard to create such a proposal without engaging in empirical investigation of design processes and in practical design research and experimentation. Here, my goal is to discuss in detail, based on the analysis and review elaborated on previous chapters, questions I believe are key to designers when incorporating the idea of criticality to the design of games engaged in ideological critique or, more broadly, changing the world. I believe that this work of synthesis and problematization can be a valuable reference for reflection and for inspiring practitioners in rethinking and reimagining their game design practices. Finally, I decided to structure this chapter as a discussion regarding the themes of context, subversion, and action, along with a final reflection on critical game design and Freire's concept of critical consciousness.

The chosen themes, context, subversion, and action, are very interrelated and it would be a mistake to understand them from a serial or static perspective. I see the questions articulated by these themes as being in a full dynamic and dialectical relationship. It is crucial for practitioners involved in critical game design practice to investigate and to know as much as possible about the context they are aiming to affect and the context where design is happening. This contextual inquiry involves several factors, such as the players' and the designers' context, at a micro level, and the social and political configurations of society, at a macro level. After all, critical games do not engage players

within a social vacuum. The theme of subversion relates to the forms in which designers and players engage in creating and experiencing criticality, in an ideological critique sense, in play, and the variety of aspects that are relevant for both these processes. As for the action theme, it is related to what the consequences of such critical play experiences in players are, how they engage players and designers in a variety of forms of political action, and the question of how such action feeds back into the context in which they happen.

Context

The theme of context I want to explore refers to the surrounding reality around the design practice and the play experience, both on a smaller level and a societal one. Context is a crucial element of critical game design for three reasons: first, any critique effort has subjects involved, who need to be understood in relation to how they exist in society. Secondly, carefully examining contexts is essential in order to perform critique because of the need to construct an understanding of what is crucial there, what are the relevant aspects for critique that resonate with the people in a given historical, social, cultural and political situation. Thirdly, the critical activity itself, be it playing a game or designing it, is inseparable from the context in which it happens (cf. Mäyrä, 2007), and is shaped by such context at the same time that it also reframes and somewhat produces it (cf. Dourish, 2004).

The two basic roles of the subjects involved in the game design of a critical game are the designers and the players. Of course, this is a reductive categorization, as there can be many actors influencing that process, such as institutions, NGOs, grassroots movements, and different player communities, but I believe it can be a productive one. The designer is immersed in and shaping the context of the design practice, and she should always consider the intricate dynamics of that context, its social dimension mentioned

earlier, but it can be easy for her to not get much involved or to investigate the context of the intended and actual players. In order to construct this knowledge, to better immerse herself into the players' context, the designers can make use of some of the approaches mentioned earlier that emphasize dialogue and player participation in the design process, such as Participatory Design or the more value-based approaches, e.g. Values at Play and Critical Play Method, that are clear about empirical investigation with players and the use of methods such as contextual inquiry and ethnography. This investigation extends beyond play testing or focus-groups: it is important, as a critical game designer, to be able to engage with the players' context with an eye towards a series of issues, such as localized power struggles, cultural positions and repertoires about play, social and cultural values active in that context, and the broader society surrounding the players. Also, ethical and moral issues that are important in that context might be better understood and taken into consideration. Reflecting upon the players' context helps the designers to frame the design situation in more grounded ways, as well as embracing their own situatedness, and gives support for considering what the impacts of their intervention could be, helping the designers to navigate that context and to act upon it in ways that are potentially more relevant to their critical propositions.

Such knowledge is not only important for knowing the players, but also for developing critical goals that are relevant and meaningful in their context. This affirmation does not imply that the designers should efface themselves and be completely subordinated to context, but that their propositions, realized through the playing of the games they create, should be communicable to players and support their appropriation of the game, and knowing the players and their context is central. Ideological values, expectations and conventions exist somewhat at a contextual, broad level: a given approach to play culture, for instance, might assume very different values and beliefs in different historical and

cultural contexts, as seen in the concept of rhetorics of play (Sutton-Smith, 1997). Also, instances of play are intertwined with the political, social and cultural aspects of the society in which they take place, as is visible in how contemporary videogames both support and resist the logics of late capitalism (Dyer-Witheford & Peuter, 2009). As ideological critique in games is concerned with criticizing and challenging status quo, it always depends on a certain degree of contextual investigation. Such investigation is not restricted only to the designer end of game design, but also extends, perhaps more crucially, to the players: Frasca's videogame of the oppressed *Play My Oppression*, discussed earlier, is all about engaging players into an exploration of theirs and others' problematic experiences and their context, as a way for them to understand what are the issues at play and optimally be able to act upon them.

Looking at contexts is not only important to understand the status quo being critiqued, but also to locate and identify spaces and contexts of resistance within and against it. Such spaces can help designers framing and choosing their critical goals and forms of subversion. Connecting critical games with, or at least being aware of, other efforts of critique and resistance can be an important source of inspiration and engagement for designers and players alike. In my previous discussion of the ludic techniques of popular education in Argentina, the strongly situated character of these games placed them within already existing spaces of resistance, i.e. a people's university and other grassroots social movements, and such context is a defining feature of their play experiences. They are aimed not only at creating awareness and dialogue over dominant ideologies and social and political issues, but also in supporting such spaces of resistance by emphasizing a shared struggle identity and knowledge. Their critical effort is strongly shaped by the context of resistance in which it takes place, which is also much intertwined with the players' context and everyday lives: this effort has an important character of supporting

that specific player community within that space of resistance. Identifying and engaging with such contexts of resistance is something to be carefully considered by game designers aiming at ideological critique.

Another important question when designing for critical play, in an ideological critique sense, is the level of concreteness and abstraction of the questions tackled in the game or play form. An example of a game exploring a concrete topic is the *War on Terror* board game (TerrorBull Games, 2006), which satirizes the Western media discourses on terrorism and war on the aftermath of the 9/11 attack. An opposite example of a game dealing with a more abstract topic is the *Earthball* game from the New Games movement (Fluegelman, 1976), in which a crowd of players engages in pushing a globe over one of the two ends of a field and by doing so they negotiate themes of contest and cooperation. Both games draw a lot of their meaning from the historical, political and social context in which they appear: *War on Terror* borrows heavily and explicitly from the imagery and arguments about terrorism to which their players are exposed every day, while the *Earthball* game has to be understood under the countercultural movements opposing the Vietnam War on the USA during the 1960s and 1970s, a period also marked by the Cold War. I mention these examples as a way of showing that regardless of a critical game dealing with concrete or abstract questions, an important component of their criticality for players resides in how they fit into a broader context: even a game that emphasizes less concrete or explicit questions can serve as an arena for reflection if it is connected to the players' context in a meaningful, relatable way.

The relationship between play "content" and its context is also a productive one for critical game design. As noted when talking about Poremba's ideas of brink games as activating second-order observations over everyday life, the effort by players in keeping the boundaries of play and the autopoietic structure of games can be breached, in ways that

highlight the construct of the game and of the play situation. When a game's content or, better, the players' experiences and actions with and interpretation of that content leads them to ask about the very act of being at play, a series of issues reflecting on its surrounding reality arise.

An example of such a game is the *Hit the Bitch* online game (Born or Unge i Voldsramte Familier, 2009), in which players are being verbally taunted by the video of a woman and can only respond (so as to progress in the game) by hitting her, until a progress bar of being a "gansgta" fills the top of the screen. At that point, the game says that "100% gangsta means 100% idiot", shows the woman lying on the floor bleeding, and shows links for more information about violence against women in Denmark. This game was created with the goal of raising awareness regarding that terrible phenomenon, and it does so through shock: to play the game is quite a violent and uncomfortable experience, and arguably even an immoral one. When I played it the first time, I closed the game after the first slap: I did not know what triggered it (I later found out it happens through a mouse movement) and I could not keep playing. I was left wondering why the designers decided to make a game about this that worked in such a way. Questioning why the game existed made me also reflect about who the designers were trying to talk to and what my personal thoughts on violence against women were. The shock of the game's content made me reflect about the context of its existence and the phenomenon it portrays: in a blunt way, it did engage me critically. This relationship between content and context is fertile ground for subversion and ideological critique, and critical game designers can leverage this in their efforts, hopefully in less brutal ways.

Finally, it is not my goal to point to an optimal way or method for critical game designers to take in consideration the different contexts involved when making critical games, nor to disregard how existing game design approaches engage in contextual

investigation. The emphasis I am placing in this contextual focus should be understood as an argument for designers to assume an openly political and situated role. Designers should adopt a strong reflective stance and to design their design process in a way that can make the most of learning from their context and that of players, at a micro and a macro level. Critical game designers need, then, to problematize, to question, how their goals and the game design approach or approaches they are using can support this investigation in their actual design situation.

Subversion

A recurrent theme in my analysis of critical game design is the idea of subversion, the systematic effort in undermining and changing a given state of affairs. This idea is central to criticality as ideological critique and to critical approaches to game design and to design. It is also present in the concept of critical play proposed by Flanagan, as discussed earlier, which advocates that play's subversive elements. While agreeing with the emphasis on subversion, I think that it needs to be questioned and carefully considered in order to be a more productive notion. A way of starting this questioning is to look at how the idea of subversion connects both to the goals of creating critical games and to the different ways in which subversion is leveraged to support these goals.

The idea of subversion is quite analogous to ideological critique: following the intellectual tradition of critical social theory, criticality in the ideological critique sense is aimed at unveiling dominant ideologies and hegemonic values with the goal of social transformation, of acting upon such values in order to change what is problematic and oppressive about them. Subversion as a goal shares a similar perspective: to highlight, invert, and exploit such hegemonic values striving to undermine their dominant character. When talking about subversion and critical game design goals, these efforts of

transformation can be aimed at a wide range of questions, from conventions and expectations around play culture and mainstream games, as in the unplaying concept and the videogames from the Critical Gameplay project (Grace, 2011), to personal situations of oppression, as in the Videogames of the Oppressed game *Play My Oppression*, to broad societal contexts or events, such as poverty, e.g. *Spent* (McKinney, 2011), and the Palestine-Israel conflict, e.g. *PeaceMaker* (ImpactGames, 2007). Furthermore, such questions are not tackled in isolation, and smaller scale subversions of conventions of dominant play culture can serve as a venue that feeds into the critique of the consequences of macro historical contexts and events, as in some you-never-win videogames, like *September 12th* (Frasca, 2003b), discussed earlier.

While the idea of subversion is connected to the goals of ideologically critical games and play, the ways in which it can be incorporated into the design of critical games must be problematized, and this relationship with ideological critique should not be considered a given. As mentioned in my description of subversion-based design processes, the basic structure for the creation of subversive designs presents an identification stage, in which knowledge about the status quo and its marginal elements is produced, an inversion/ subversion stage, in which marginalized values and dominant assumptions are identified and inverted, and a re-centering stage, in which these marginalized or subverted ideas are put into the center of the design process. The importance of this basic structure for mixing subversion and design can be clarified by looking at the use of estrangement as a tactic for subversion.

Estrangement, the process of removing something from its usual place and associations, is a recurrent tactic for fostering criticality in games. This mechanism is at the base of the concept of unplaying, in which expectations and conventions regarding play are reversed with a critical purpose (Flanagan, 2009, p. 33). I have discussed in Ch. 3 how this

estrangement tactic can be aimed at provoking a shift, in players, from a stance of aesthetic subjectivity to one of hermeneutic objectivity (Lee, 2003). This shift gives players a critical distance from which they can reflect on their actions and interpret their play experience. What I want to highlight is that this opportunity for interpretation provided by estrangement is reliant on the players' critical literacy, i.e. the ability to comprehend a topic beyond its surface in a critical and situated way, their play culture and their repertoire. For instance, *Wait* (Grace, 2009b)is a critical videogame from the Critical Gameplay project that wants to subvert the conventions of pace and action in videogames by only revealing the elements of the game world if the player avatar is kept standing still, contemplating the scenario. Every move fades all the audiovisual elements away, and the world is only shown again if the player stops. The interpretation of the subversion in this videogame presupposes a player that had enough experiences with fast-paced first-person games so as to recognize the dissonance between this game and the expectations and conventions being critiqued.

A player with a different background and other play experiences as her repertoire might have a hard time unpacking the critique in *Wait*, and probably was not even considered as a an audience in the first place. I am not arguing for all critical games to be as inclusive so as to encompass all imaginable players: what I want to emphasize is the need for game designers to reflect over the players' repertoire, background and critical literacy when making use of this unplaying or more general estrangement-based design tactic. Doing so could help game designers to engage with players, by making them, the designers, more aware of which conventions and assumptions could be potentially more relatable to the players. This is visible in the subversion of the conventions of folk games, such as musical chairs, and sports, such as football, in the ludic techniques of popular education in Argentina (Algava, 2009): both games are part of the players play repertoire

and, especially in the case of football, of their cultural contexts. Subverting elements of such games in order to explore issues of cooperation and power struggle is very relatable for the players, as they can unpack and connect the newer versions in relation to the older ones and use that as a basis for critical reflection.

A way to address this need for knowledge about players and their context is to emphasize the social aspects of design, to look at the game design process as a situated practice. Drawing from my earlier discussion of criticality in design approaches, I believe game designers could appropriate some of the practices and methods from approaches focused on dialogue and values, as a way to complement the idea of subversion. Dialogue-centered and participatory approaches state the need for giving voice to users/ players in several moments of the design process, and deploy methods and design actions aimed at addressing this need. For the design of subversion in critical games, such methods could bring the player closer to the designers by incorporating them in the different stages of creating subversion: identifying, together with players, the dominant conventions and ideologies active in the design situation, re-centering them and collectively discussing how they can be subverted, and, finally, designing to support this subversion in ways that are meaningful to players.

To guide such discussions, game designers could also use elements from values-based approaches, like Values at Play and the Critical Play Method. The notion of investigating and conceptualizing values can be productive in this collaborative effort of designers and players, with values serving as operational concepts, as evolving metaphors and sketches for the needs, expectations and preoccupations of the actors involved in the process. Such cooperative value investigation could then feed back into more subversion-focused design actions, like the value fictions of Critical Design: instead of using current technology to support non-conventional values coming only from the designer end, they

could have been created together with players. My argument here is for critical game designers to incorporate dialogue and values as ways for engaging with players for the design of subversion in games.

Another important aspect of subversion that needs to be addressed by critical game designers is that not all subversions lead to ideological critique, nor are they immune to being coopted by the very hegemonic systems they critique. As in the dissonant development practice described by Witheford & Peuter (Dyer-Witheford & Peuter, 2009, pp. 194–197), the mainstream games industry can very well incorporate critiques to capitalism within their products, commodifying such critical efforts by using their subversion as an extra attraction for spectacle. The idea of subversion is also important in the context of technological and technical innovation, as exemplified by the Critical Technical Practice approach to design: it is based on a process of inverting conventions and designing new technology around what was previously at the margin, developing potentially profitable new products and knowledge. Subversion, then, is not an automatic gateway for ideological critique and social transformation.

After all, it can also happen "the other way around". The board game The Landlord's Game is probably the most famous case of a game that was originally designed as a political critique against poverty and land monopoly and was later remixed and turned into a profitable product, now famous world-wide: Monopoly (Flanagan, 2009, pp. 85–87). As noted by Flanagan, other games were later designed over the same framework, many times criticizing the capitalist belief of accumulation depicted in Monopoly. The idea of occupied games, i.e. critically playing existing games that were originally designed without explicit critical goals, is a two-way street: nothing stops a player or designer from re-arranging a critical game into one that affirms the dominant values of society.

Action

The last theme I want to discuss is that of action, or praxis. Freire defines praxis as "the reflection and action of people upon the world in order to change it" (1978, p. 40) and I want to emphasize this reflective character of action in critical game design. It is clear that the ideological and political criticality of critical game design is aimed at being an effort for change, either in a direct interventionist way or a more indirect creation of its conditions. This affirmation does not imply that all critical games should be judged according to clear-cut possible effects they could have in players and in the criticized context, or that they should present comprehensive solutions to such problematic issues. Social values, hegemonic beliefs and ideological systems are too broad and pervasive to be "solved" solely through play and games. Nevertheless, players and designers are engaging in different forms of action, and to problematize such action is a productive endeavor for critical game designers to reflect on and shape their practice and goals.

The first point I want to raise is related to how critical game design practice is, in itself, a form of praxis in the Freirean sense. Game designers produce critical games as a way to investigate and affect the world: as political actors, making games is their medium of choice. However, this is a quite broad and all-encompassing statement to be of much use for reflecting upon the praxis of critical game designers. I believe it is important to look at how these critical games are related to their context, and what impacts they might have. As an exemplar of that focus, we can look at critical videogames and the games of multitude practices discussed in chapter 3. Critical videogames are intrinsically linked to the idea of tactical media, disputing capitalism's supremacy on media distribution and agenda, as a response to the informational and global character of contemporary capitalism. Critical videogames are also tactical games, connecting "autonomous game-production capacities […] with radical social criticism and global movements against Empire" (Dyer-Witheford

& Peuter, 2009, p. 196), serving as alternatives to the agenda and conventions of mainstream videogames. These games create a politicized culture around videogames, critiquing and trying to move players towards anti-hegemonic positions. Their makers are at the margins of the game industry, occupying and creating spaces of resistance. Such multitudinous practices and resistance spaces should be leveraged by critical game designers, who should reflect on their engagement and how they position themselves and their practice within broader social-political landscapes. The very existence of critical games and play in that environment is a form of action.

Furthermore, another way in which design relates to action is through the idea of inquiry: "a process of skilled examination and reconstruction that renders problematic situations sense-able" (DiSalvo, 2012, loc. 2258-2259), clarifying them so as to enable action. This is a central idea of Adversarial Design, in which inquiry is focused at the political as a way to express and give shape to the problematic and confusing nature of political situations. In order to support the political project of agonism and pluralist democracy, Adversarial Design objects give shape to complex issues in ways that allow for examination, contestation and controversy. I believe this inquiry focus is also useful beyond Adversarial Design and agonism, and is a component on the creation of simulations and games that strive to portray a complex issue for players. In Frasca's Videogames of the Oppressed games, with the constant creation of games and mods by their players, game design can also be understood as an inquisitive activity focused on unveiling and understanding problematic personal situations, e.g. *Play My Oppression*. Critical game designers are faced with a diversity of choices when designing a game. The navigation of this design space entails in a production of knowledge about the critiqued situation, and the final product of the game can be seen as the materialization of the designers' actions and a result of their inquiry while designing it. Being aware of this

inquiry aspect of game design can be a helpful stance for those invested in critical game design.

Game designers are not the only ones acting through or influenced by critical games: fostering action and reflection in players is probably the most central goal for critical game design. Several points related to players' praxis through or as a result of criticality in play and games have been discussed across the present thesis: players reflecting upon their realities, players engaging in subversion and intervention through play, play communities as spaces of resistance, players participating in the creation of games about their contexts, and players engaging in dialogue with each other. By thinking about what praxis they want to suggest for players, critical game designers are also defining their goals and should consider appropriating different design approaches to emphasize this desired praxis. Such praxis is very dependent on the players' context and situation and designers should also take this into account. For instance, if I am designing a critical mobile videogame about homelessness and poverty, and my intended players are smartphone users, the praxis I will try to suggest will probably be different than if they were the homeless people themselves. Most probably, the platform for the game would also not be a smartphone either.

Keeping this hypothetical example in mind, it would probably not be a smartphone game or a videogame at all not only because of a probable lack of player repertoire in mobile videogame play, but because play repertoire, access to technology, and play forms are heavily dependent on economic, social and cultural conditions. Marginalized groups have different access to and experiences with play and games. Even if my smartphone game about homelessness had a great subversive point of view, challenged several conventions of mobile games, and raised crucial questions about that social condition, it

might not be capable of provoking action if my intended player audience cannot effectively access and unpack it.

Dialogue is another important aspect of the action and the impact of critical game design. As mentioned earlier when discussing the impacts of criticality in design goals (see Ch. 4), the idea of provoking dialogue between users/ players is fundamental in design approaches that put criticality at their center. Regarding the action aspect of critical game design, dialogue between players during and after play happens as a way of sharing their perceptions of the world and how such perceptions are problematized by the playing experience. Dialogue serves as a collective effort of reflection over the critique experienced or suggested through play: if play is subversive by provoking estrangement in players, dialogue is the moment in which they critically re-insert themselves in their context, with new experiences to feed reflection and to share. I believe critical game design has a lot to benefit from designing with this dialogue in mind. Two very interesting examples of dialogue that is deeply intertwined within ideologically critical games and play are the Videogames of the Oppressed and Algava's ludic techniques of popular education, already described earlier. In them, the practice of dialogue is fundamental in creating or supporting spaces for collective action and ideological resistance. Not surprisingly, both examples are influenced by Paulo Freire and his dialogic pedagogy, in which dialogue is the base for literacy and critical consciousness.

Towards critical consciousness

Critical consciousness is a person's capacity of questioning and analyzing the context they are immersed in, leading to reflection and action upon it so as to intervene on its problematic aspects (Freire, 1987, p. 39). In Paulo Freire's thinking, critical consciousness is a condition for social transformation, for the overcoming of oppression

and hegemonic domination, and is an expression of the political condition of men and women. It is a human capacity, one that emphasizes the subjectivity and power of people for consciously and actively taking control of their lives, challenging that which stands on the way. As mentioned before (see Ch. 2), the idea of critical consciousness was born in a historical moment of oppression and struggle, and it is marked by it. Becoming critically conscious is a difficult process, one that, for Freire, can only come through dialogue and education, and his pedagogy is his answer to this need. In this process, people immersed in their context in alienated ways move towards a position of emersion, of critical distance and reflection, of problematization. Through questioning and dialogue, they might become more understanding of their situation in grounded and relevant ways, re-inserting themselves in it and acting upon them.

I believe this process of becoming critically conscious is intertwined with the three themes of critical game design I discussed in this chapter: context, subversion, and action. Players and designers alike are engaged in this process, and experience, in different ways, this immersion-emersion-insertion triad. These two types of actors exercise their critical consciousness either by designing or playing, and by participating directly or indirectly of both.

The critical game designer is not only planning and creating games and play forms for challenging status quo: she is also moving along this immersion-emersion-insertion axis. She does so in her critical immersion on the design situation, building knowledge with and about players, inquiring contexts and values, exercising her critical literacy in a situated way. From her position as game designers, she envisions, refines and tries out play experiences tackling the assumptions and conventions identified in her immersion, materializing an expression of aspects of her findings for the players to play out. And finally, by making the game and having it played, she is creating an opportunity, maybe

even leveraging and joining existing initiatives and critical movements, for players to insert themselves critically in their contexts. Throughout this process, she is reflecting on her design actions, and her design approaches and goals inform and are informed by such reflection. Critical consciousness can be seen, then, as an important capacity and a powerful stance to assume when designing play for ideological and political critique.

Players also engage in a process similar to that of becoming critically conscious when they experience and play with critical games. Players are immersed in their context and their play situation. In this immersion, they engage in play loaded with their play repertoire, background and subjectivity with their assumptions, conventions and expressions of dominant values. However, in the play of a critical game, these set of values, conventions and their context might be subverted, questioned and problematized. When making sense of their experience, both while participating in it and afterwards, the player interprets these subversions in relation to her subjectivity, exercising and developing her critical literacy. The same can be said when occupying a game by playing it subversively: the difference would be that in that case the player is the one setting up the questions to a play environment instead of responding to an already subversive setting by the game. This experience of critical engagement through play might help players to become more aware of their own capacity for change, or it might provoke them into reflecting and acting upon the issues critiqued. This does not mean agreeing and subscribing to the game's critique, but to engage with it. Maybe even mod it to reflect their opinions and worldviews.

I have drawn this parallel between critical consciousness and critical game design because I believe that critical game designers can benefit from understanding their activity from a political and humanist perspective. Across this thesis, I have explored the relationship between criticality and the activities of play and game design, with an

emphasis on how the criticality concept can inform the latter. Critical consciousness as a concept situates ideological critique, and points to the importance of players' and designers' contexts, subjectivity, and dialogue. Furthermore, being a critically conscious person requires a non-trivial degree of critical literacy, situatedness, and reflectivity, which are important qualities when engaging in ideologically critical game design. Looking at critical game design as an activity that involves exercising and developing critical consciousness is a useful perspective for practitioners who want to affect the world through games and play to consider the goals of their practice and their role as politically engaged subjects.

6. Conclusion

Looking back at the questions posed at the start of this thesis, I believe I have successfully presented a case for the careful consideration of the criticality concept in games and game design. I have discussed, first in the domain of games (Ch. 3) and, then, design and game design (Ch. 4), how criticality is a plural concept with important ramifications in these domains. I have favored, across this thesis, a view of criticality concerned with ideological critique and status quo change, in accordance to my perception that efforts of social transformation through games and play need to be problematized and situated. This choice of focus is specially reflected on the conclusions I draw on my final chapter, pointing to the themes of context, subversion, and action as crucial for elaborating critical game design as a practice that strives for this political impact.

I am confident that the analytical reviews I produced, both regarding critical views of games and play and regarding design and game design approaches, can be informative and useful for game designers and scholars interested in political action and social change through games. They can serve as focus points for reflection and development of new methods and approaches to play and game design, by providing both an overview of the current state of discussion in these domains and questioning how these ideas can support critical game design. Furthermore, I have brought to the table the critical consciousness concept of Freire as a view on criticality that, I believe, is especially useful for understanding criticality in play and game design, with its holistic character and emphasis on reflection, praxis, dialogue, participation, and contextual examination. The use of this concept in play, as in the example of Algava's ludic techniques in popular education, is an interesting case to consider and to bring closer to the game studies line of sight.

Finally, I want to address the fact that the main focus of this research was game design as an activity and how it can be shaped and influenced by a critical stance on the part of game designers. Overall, I have engaged with the process of making games, and less attention was placed on the output of that process, the games and the play experiences themselves. This choice of focus was intentional, as I wanted to highlight how criticality is not only present at play, but also in other moments of a games' or play forms' existence. The discussion of the aesthetic and formal qualities of games and of the specific impacts on players of a given play experience supporting criticality was somewhat peripheral in this research, but it was touched upon when discussing subversion, unplaying and estrangement, and the relationship between play and political action. In a way, by discussing and analyzing game design and criticality, I have circled the subject of play itself, as if painting the surroundings of a silhouette. I believe that exploring play in this context with more detail, i.e. actually painting all the internal features of the silhouette figure, can be the goal of future research.

Future directions of research

The theoretical analysis and discussion I elaborated in this project has plenty of room for expansion and to serve as basis for other academic and practical work. The first future direction of research I see is to engage with the game design activities discussed theoretically in a more grounded, qualitative way. Instead of looking at the theories and propositions of game designers engaged in making critical games, such research would investigate their practices and design processes through qualitative methods, possibly engaging in ethnographic study and interviews. By doing so, our understanding of critical game design as a practice would be more closely connected to the current state of game design work and also would be more connected to the actual questions encountered by

game designers "in the wild", and it would certainly raise new questions and problems for consideration. Furthermore, such qualitative research could also be extended to the players of critical games, in order to investigate their relationship with criticality in play and the impacts of critical games. This qualitative research could span a variety of game mediums, i.e. videogames, board games, live-action role-play, providing a more comprehensive account of critical game design as a practice.

A second important direction for further research would be to focus more on the formal and aesthetic aspects of the output of critical game design, the games and their play. How can the questions raised about context, subversion, and action be materialized in play features and incorporated into actual game design practice? What are the defining features, aesthetically, of a critical game? This research could be based on design experimentation and case studies, as it could benefit immensely from a practical focus. Such design experimentation could happen together with the qualitative approach described above. It could be aimed at developing new game design methods for creating critical games, or refining and testing existing design approaches in an experimental setting, informed by the critical game design concept discussed in the present thesis. Furthermore, it could be expanded by a systematic analysis of games and play that engage in critical efforts, trying to draw a comprehensive map of their qualities, to identify more specific recurrent themes and methods beyond estrangement and subversion, and to understand their situation regarding the players' and designers' contexts.

References

2K Games. (2010). *Civilization IV*.

Aarseth, E. (2001). Computer Game Studies, Year One. *Game Studies, 1*(1).

Aarseth, E. (2007). I Fought the Law: Transgressive Play and The Implied Player. In B. Akira (Ed.), *Situated Play: Proceedings of the 2007 Digital Games Research Association Conference* (pp. 130–133). Tokyo: The University of Tokyo. Retrieved from http://www.digra.org/dl/display_html?chid=07313.03489.pdf

Agre, P. (1997). Toward a Critical Technical Practice: Lessons Learned in Trying to Reform AI. In G. C. Bowker, S. L. Star, W. Turner, & L. Gasser (Eds.), *Social Science, Technical Systems and Cooperative Work: Beyond the Great Divide*. Hillsdale, NJ: Erlbaum.

Algava, M. (2009). *Jugar y Jugarse* (2nd ed.). Buenos Aires: América Libre.

Anthropy, A. (2012). *Rise of the Videogame Zinesters*. Seven Stories Press.

Antonisse, J., Johnson, D., Baily, C., Orton, J., & Pirello, B. (2008). *Hush*.

Bass Museum of Art. (2010). Where do we go from here? Selections from la Coleccion Jumex. *Bass Museum of Art*. Retrieved May 25, 2012, from http://www.bassmuseum.org/art/where-do-we-go-from-here-selections-from-la-coleccion-jumex/

Boal, A. (1988). *Teatro do Oprimido e outras poéticas políticas*. Rio de Janeiro: Civilização Brasileira.

Bogost, I. (2007). *Persuasive games : the expressive power of videogames*. Cambridge MA: MIT Press.

Bogost, I. (2008). *Unit operations : an approach to videogame criticism*. Cambridge Mass. London: The MIT Press.

Born or Unge i Voldsramte Familier. (2009). *Hit the Bitch*.

Brathwaite, B. (2009). *Train*.

Brookfield, S. (2000). Contesting Criticality: Epistemological and Practical Contradictions in Critical Reflection. *AERC 2000, An International Conference. Proceedings of the 41st Annual Adult Education Research Conference*. Presented at the 41st Annual Adult Education Research Conference, Vancouver, Canada: The Adult Education Research Conference.

Buchanan, R. (2001). Design and the New Rhetoric: Productive Arts in the Philosophy of Culture. *Philosophy and Rhetoric, 34*(3), 183–206.

Cannon-bowers, J. (2010). *Serious Game Design and Development: Technologies for Training and Learning*. (J. Cannon-bowers & C. Bowers, Eds.) (1st ed.). Information Science Reference.

DiSalvo, C. (2012). *Adversarial Design* (Kindle ed.). The MIT Press.

Dourish, P. (2004). What we talk about when we talk about context. *Personal and Ubiquitous Computing*, *8*(1), 19–30. doi:10.1007/s00779-003-0253-8

Dunne, A., & Gaver, W. W. (1997). The pillow: artist-designers in the digital age. *CHI '97 extended abstracts on Human factors in computing systems: looking to the future*, CHI EA '97 (pp. 361–362). New York, NY, USA: ACM. doi:10.1145/1120212.1120434

Dunne, A., & Raby, F. (1997). Hertzian Tales, 1994-97. *Dunne & Raby*. Retrieved May 11, 2012, from http://www.dunneandraby.co.uk/content/projects/67/0

Dunne, A., & Raby, F. (2007). Critical Design FAQ. *Dunne & Raby*. Retrieved May 11, 2012, from http://www.dunneandraby.co.uk/content/bydandr/13/0

Dyer-Witheford, N., & Peuter, G. de. (2009). *Games of Empire: Global Capitalism and Video Games*. Univ Of Minnesota Press.

Edvardsen, F., & Kulle, H. (Eds.). (2010). *Educational Games: Design, Learning and Applications*. Nova Science Pub Inc.

Electronic Arts. (2000). *The Sims*.

Ferrari, S. (2010, May). *The Judgment of Procedural Rhetoric* (Master Thesis). Georgia Institute of Technology, Atlanta.

Flanagan, M. (2009). *Critical Play: Radical Game Design*. The MIT Press.

Flanagan, M., Howe, D. C., & Nissenbaum, H. (2005). Values at play: design tradeoffs in socially-oriented game design. *Proceedings of the SIGCHI conference on Human factors in computing systems*, CHI '05 (pp. 751–760). New York, NY, USA: ACM. doi:10.1145/1054972.1055076

Flanagan, M., & Nissenbaum, H. (2007). A game design methodology to incorporate social activist themes. *Proceedings of the SIGCHI conference on Human factors in computing systems*, CHI '07 (pp. 181–190). New York, NY, USA: ACM. doi:10.1145/1240624.1240654

Fluegelman, A. (Ed.). (1976). *New Games Book*. New York: Headlands Press.

Foster, N., Compston, L., & Barkho, D. (2006). MAIL: a framework for critical technical practice. *Proceedings of the 18th Australia conference on Computer-Human Interaction: Design: Activities, Artefacts and Environments*, OZCHI '06 (pp. 205–212). New York, NY, USA: ACM. doi:10.1145/1228175.1228212

Frasca, G. (2001a). *Videogames of the Opressed: Videogames as a Means for Critical Thinking and Debate* (Master Thesis). Georgia Institute of Technology, Atlanta.

Frasca, G. (2001b). *Kabul Kaboom!*

Frasca, G. (2003a). Simulation versus Narrative: Introduction to Ludology. In M. J. P. Wolf & B. Perron (Eds.), *The Video Game Theory Reader*. New York; London: Routledge.

Frasca, G. (2003b). *September 12th*.

Frasca, G. (2004). *Madrid*.

Freire, P. (1978). *Pedagogia do Oprimido* (5th ed.). Rio de Janeiro: Paz e Terra.

Freire, P. (1987). *Education for critical consciousness*. New York N.Y.: Continuum.

Friedman, B., Khan Jr., P. H., & Borning, A. (2002). *Value Sensitive Design: Theory and Methods* (Technical Report No. 02-12-01). Dept. of Computer Science & Engineering - University of Washington.

Fromm, E. (1966). *Marx's Concept of Man*. New York: Frederick Ungar Publishing Co.

Fullerton, T. (2008). *Game design workshop: a playcentric approach to creating innovative games* (2nd ed.). Amsterdam ;;Boston: Elsevier Morgan Kaufmann.

Goel, V., & Pirolli, P. (1992). The structure of Design Problem Spaces. *Cognitive Science*, *16*(3), 395–429. doi:10.1207/s15516709cog1603_3

Grace, L. (2009a). *Black/White*.

Grace, L. (2009b). *Wait*.

Grace, L. (2010). Creating Critical Gameplay Design. *ACE2010 Proceedings of the 7th International Conference on Advances in Computer Entertainment Technology, Nov. 17-19, Taipei, Taiwan* (pp. 91–94). Presented at the 7th International Conference on Advances in Computer Entertainment Technology, Taipei, Taiwan: Association for Computing Machinery.

Grace, L. (2011). Critical Gameplay. *Critical Gameplay Project*. Retrieved May 11, 2012, from http://www.criticalgameplay.com/page2.html

Hardt, M., & Negri, A. (2001). *Empire*. Harvard University Press.

Henricks, T. S. (2006). *Play Reconsidered: Sociological Perspectives on Human Expression* (1st ed.). University of Illinois Press.

Humble, R. (2007). *The Marriage*.

ImpactGames. (2007). *PeaceMaker*.

Kafai, Y. B. (1999). Video Game Designs by Girls and Boys: Variability and Consistency of Gender Differences. *From Barbie to Mortal Kombat: Gender and Computer Games* (pp. 90–114). Cambridge Mass.: The MIT Press.

Klopfer, E. (2008). *Augmented Learning: Research and Design of Mobile Educational Games*. The MIT Press.

Koster, R. (2005). *A theory of fun for game design*. Scottsdale AZ: Paraglyph Press.

Ledonne, D. (2005). *Super Columbine Massacre RPG!*

Lee, S. (2003). "I Lose, Therefore I Think" A Search for Contemplation amid Wars of Push-Button Glare. *Game Studies*, *3*(2).

Lerner, J. (2010). What Games Can Teach Us about Community Participation: Participatory Urban Development in Rosario's Villas. Presented at the Places We Live: Slums and Urban Poverty in the Developing World, Washington, DC.

Löwgren, J., & Stolterman, E. (2005). *Thoughtful interaction design : a design perspective on information technology*. Cambridge, Mass: MIT Press.

Mäyrä, F. (2007). The Contextual Game Experience: On the Socio-Cultural Contexts for Meaning in Digital Play. In B. Akira (Ed.), *Situated Play: Proceedings of the 2007 Digital Games Research Association Conference* (pp. 810–814). Tokyo: The University of Tokyo. Retrieved from http://www.digra.org/dl/display_html?chid=07311.12595.pdf

Mazé, R., & Redström, J. (2007). Difficult forms: critical practices of design and research. *IASDR'07: International Association of Socities of Design Research 2007 - Emerging Trends in Design Research*. Presented at the IASDR'07: International Association of Socities of Design Research 2007, Hong Kong.

McGonigal, J. (2011). *Reality is broken : why games make us better and how they can change the world*. New York: Penguin Press.

McKinney. (2011). *Spent*.

Molleindustria. (2006). *McDonald's Videogame*.

Molleindustria. (2008). *Oiligarchy*.

Molleindustria. (2012). *Unmanned*.

Montola, M. (2008). The Invisible Rules of Role-Playing: The Social Framework of Role-Playing Process. *The International Journal of Role-Playing*, (1).

Muller, M. J., & Kuhn, S. (1993). Participatory design. *Commun. ACM*, *36*(6), 24–28. doi:10.1145/153571.255960

Pinto, Á. V. (1960). *Consciência e realidade nacional: A consciência ingênua* (Vol. 1). Rio de Janeiro: Instituto Superior de Estudos Brasileiros.

Poremba, C. (2007). Critical Potential on the Brink of the Magic Circle. In B. Akira (Ed.), *Situated Play: Proceedings of the 2007 Digital Games Research Association Conference* (pp. 772–778). Tokyo: The University of Tokyo. Retrieved from http://www.digra.org/dl/display_html?chid=07311.42117.pdf

Quest to Learn. (2012). FAQ. *Quest To Learn*. Institutional.

Raessens, J. (2006). Reality Play: Documentary Computer Games Beyond Fact and Fiction. *Popular Communication*, *4*(3), 213–224. doi:10.1207/s15405710pc0403_5

Reeves, B., & Read, J. L. (2009). *Total Engagement: Using Games and Virtual Worlds to Change the Way People Work and Businesses Compete* (1st ed.). Harvard Business School Press.

Salen, K., & Zimmerman, E. (2003). *Rules of play : game design fundamentals*. Cambridge Mass.: MIT Press.

Salen, K., & Zimmerman, E. (Eds.). (2006). *The game design reader : a Rules of play anthology*. Cambridge Mass.: MIT Press.

Schell, J. (2008). *The art of game design : a book of lenses*. Amsterdam ;;Boston: Elsevier/Morgan Kaufmann.

Schön, D. A. (1984). *The Reflective Practitioner: How Professionals Think In Action* (1st ed.). Basic Books.

Sengers, P., Boehner, K., David, S., & Kaye, J. "Jofish." (2005). Reflective design. *Proceedings of the 4th decennial conference on Critical computing: between sense and sensibility*, CC '05 (pp. 49–58). New York, NY, USA: ACM. doi:10.1145/1094562.1094569

Sengers, P., McCarthy, J., & Dourish, P. (2006). Reflective HCI: articulating an agenda for critical practice. *CHI '06 extended abstracts on Human factors in computing systems*, CHI EA '06 (pp. 1683–1686). New York, NY, USA: ACM. doi:10.1145/1125451.1125762

Shor, I. (1992). Education is Politics: Paulo Freire's Critical Pedagogy. In P. Leonard & P. McLaren (Eds.), *Paulo Freire: A Critical Encounter* (pp. 25–36). London: Routledge.

Sicart, M. (2009). Newsgames: Theory and Design. In S. Stevens & S. Saldamarco (Eds.), *Entertainment Computing - ICEC 2008*, Lecture Notes in Computer Science (Vol. 5309, pp. 27–33). Springer Berlin / Heidelberg. Retrieved from http://www.springerlink.com/content/cn258140105p4775/abstract/

Sicart, M. (2011). Against procedurality. *Game Studies*, *11*(3).

Simon, H. A. (1996). *The Sciences of the Artificial - 3rd Edition* (third ed.). The MIT Press.

Sutton-Smith, B. (1997). *The ambiguity of play*. Cambridge Mass.: Harvard University Press.

Taylor, P. V. (1993). *The texts of Paulo Freire*. Buckingham; Philadelphia: Open University Press.

Taylor, T. L. (2006). Beyond Management: Considering Participatory Design and Governance in Player Culture. *First Monday*. Retrieved from http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1611/1526

TerrorBull Games. (2006). *War on Terror*.

TerrorBull Games. (2012, January 3). Our Favourite Quotes. *TerrorBull Games Blog*. Retrieved from http://www.terrorbullgames.co.uk/press/quotes.php

Traffic Games. (2004). *JFK Reloaded*.

Tronstad, R. (2010). The Productive Paradox of Critical Play. *Game Studies*, *10*(1).

Turkle, S. (1997). *Life on the Screen: Identity in the Age of the Internet*. Simon & Schuster.

U.S. Army. (2002). *America's Army*.

Universidad Popular Madres de la Plaza de Mayo. (2012, May 8). Homepage. *Universidad Popular Madres de la Plaza de Mayo*. Retrieved May 11, 2012, from http://www.madres.org/navegar/nav.php?idsitio=2&idcat=95&idindex=29