

Rationalizing Play: A Critical Theory of Digital Gaming

Sara M. Grimes and Andrew Feenberg

Applied Communication and Technology Laboratory, School of Communication, Simon Fraser University, Vancouver, British Columbia, Canada

This article constructs a new framework for the study of games as sites of social rationalization, applying Feenberg's critical theory of technology. We begin by making the case for a consideration of games as systems of social rationality, akin to other modern systems such as capitalist markets and bureaucratic organizations. We then present a conceptualization of play as a process through which the player focuses attention away from the undifferentiated action of everyday life toward a differentiated sphere of playful activity. This approach reveals how the experience of play changes as it becomes rationalized through the technological mediation and widespread standardization that occurs as games become large-scale social practices. We propose a theory of the rationalization of play (ludification), which outlines the key components of socially rationalized games, which we then apply to the specific example of massively multiplayer online games (MMOGs).

Keywords critical theory, massively multiplayer online games, play, rationalization

One of the fastest growing leisure activities of the new century, digital gaming has quickly developed from a marginalized children's pastime into a multi-billion dollar global industry. According to recent estimates, the global digital games market generated \$41.9 billion in sales in 2007, and is expected to surpass \$68 billion by 2012 (Bond, 2008). Industry analysis firm comScore Media Matrix estimates that approximately 217 million people worldwide played online games in 2007—a number that continues to multiply as broadband Internet access spreads across Asia and other regions (Castronova, 2005).

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Address correspondence to Sara M. Grimes and Andrew Feenberg, Applied Communication and Technology Laboratory, School of Communication, Simon Fraser University, 3520-515 W. Hastings St., Vancouver, BC, Canada V6B 5K3. E-mail: smgrimes@sfu.ca, feenberg@sfu.ca; web site: <http://actlab.org>

Accordingly, academic attention to digital gaming has increased significantly in recent years as scholars struggle to understand the phenomenon and the booming industry that has formed around it.

Although a number of digital game theories have now emerged from a variety of perspectives, applications of critical theory to the study of digital gaming are still in the preliminary stages. With few exceptions (Kirkpatrick, 2008), existing work in this area (including Postigo, 2003; de Peuter & Dyer-Witthof, 2005; Taylor, 2006a; Grimes, 2006) has focused predominantly on the expansion of production processes into digital play (such as labor, commercialization, etc.), reproducing the same work/play binary that has long characterized critical scholarship of play and leisure (Gruneau, 1999). Other contributions, such as those of Kline, de Peuter, and Dyer-Witthof (2003), Brookey and Booth (2006), and Taylor (2006b, 2006c), which have focused on how the structural limitations of digital games (either commercial, social, or technological) impact player agency and interaction, have failed to relate these limitations back to play itself. To date, very little attention has been paid to formulating a critical theory of digital games that would allow a broader understanding of how play practices may themselves come to reproduce the larger processes of rationalization at work within modern capitalist societies.

Yet there is much to suggest that digital gaming—especially in massively multiplayer online games (MMOGs)—is a particularly suitable candidate for a broader application of critical analysis. Games, as Feenberg argues, “exemplify formally rational systems” (1995, p. 193). Similar to economic markets, legal systems, and scientific research, games break loose from the undifferentiated communicative action of “ordinary” life to impose a rational form on a sector of experience (Habermas, 1984). Rules define a play domain with unambiguous measures of success and failure and a clear-cut distinction between strategic and nonstrategic action. With the addition of technical mediation and commercialism, games

become the basis for the production of a form of “institutional order” analyzable on terms similar to those employed in the study of other systems of social rationality (Weber, 1958; Henricks, 2006). As technically mediated, commercial systems through which large populations of players assemble to engage in organized social interaction, MMOGs provide an ideal case study for exploring the relationship between games and social rationality.

The term “social rationality” is used here in a purely descriptive sense to refer to organizational practices that resemble paradigm instances of rationality such as science and mathematics. Three types of practice satisfy this condition: (1) exchange of equivalents; (2) classification and application of rules; and (3) optimization of effort and calculation of results. We do not intend to imply that practices that differ from what we call “social rationality” are irrational, nor do we claim that only science and mathematics are rational in a broad understanding of the term. Practices corresponding to all three principles appear in *individual* or *cultural* forms in all societies. For example, a pick-up soccer game has rules but it is not a form of social order imposed by large-scale organization and so does not qualify as an instance of social rationality in our sense. Similarly, a tribal custom sanctioning respect for the property of others or guiding craft work may be rational in the sense of enhancing the survival chances of the community, but if it is not imposed consciously but simply inherited from the past, it too is not socially rational. The *differentia specifica* of social rationality is the role of the three principles of rational practice in social organizations and media systems, which, on a large scale at least, is unique to modernity (Feenberg, 2008).¹

For the purpose of studying social rationality, Feenberg’s theory of instrumentalization offers a unique entry point. Instrumentalization theory was introduced to analyze technology on two levels: the primary instrumentalization, which describes how “functions are separated from the continuum of everyday life and subjects positioned to relate to them,” and the secondary instrumentalization, which focuses on the social, cultural, and political forces that influence design choices as these functions are realized in devices and systems (Feenberg, 1999, p. 202). The two instrumentalizations are analytic categories that are helpful in understanding the two-sidedness of technical artifacts, which are both technically rational and socioculturally meaningful.

Although instrumentalization theory was originally conceived of as a framework for understanding technology, the approach extends to other systems of social rationality as well. As Feenberg explains, “All rational systems have this double aspect as, on the one hand, a structure of operations based on one or several of the three principles of social rationality, and, on the other hand, as a com-

plex lifeworld experienced by those they enroll” (2008).² As games become rationalized through corporate control and technologization, the rational features fundamental to all formal games assume an unexpected prominence. The exchange of moves between players who are equalized at the outset corresponds to the first principle. Strict rules and strategies exemplify the second and third principle. MMOGs impose these three types of rational practice as follows: Players and player moves are standardized through the program code (exchange of equivalents); formal rules are established by the game engine and operators as well as the player community (classification and application of rules); and player efforts are optimized and calculated through numeric leveling and points systems that are further reinforced by the status and social capital granted to players of high standing (optimization of effort and calculation of results).

At the same time, however, MMOGs are constituted by a collaborative play experience that extends beyond these rational systems. Similar to Bakhtin’s carnival, MMOGs are characterized by a type of “symbolic action which is rarely mere play: it articulates cultural and political meanings” (Stallybrass & White, 1986, p. 43). As Taylor (2002) describes, MMOG players invest a significant amount of time congregating, creating content, producing cultures and communities, sharing in leisure activities, and transgressing limitations of the game. These players hold a high level of situated knowledge that enables them to engage with digital games technology in unanticipated ways that have tremendous impact on the development, content, and function of games within digital culture. Thus, MMOGs can also be understood as a site of struggle between players and corporations over the design and usage of game environments and their contents.

Critical theory offers a unique entry point in this regard, one that integrates and expands upon Marx’s critique of capitalism and Weber’s critique of rationality. By situating technologies within the social, institutional, and ideological contexts from which they are born and within which they evolve, critical theory addresses both the symbiotic relationships that exist between the technical and the social, and the specific threat of technocracy in modern societies. In this way, critical theory allows for a deeper consideration of the ways in which games serve multiple functions for both their owners and players. We propose such an approach through an adaptation of Feenberg’s critical theory of technology, applying his concepts of instrumentalization and social rationality to construct an innovative theory of rationalized play as a process of modernity. This “ludification theory” provides a set of criteria for evaluating rationalized games using a two-level approach that considers both the ways in which a game is engaged in types of rational practice, as well as the social,

cultural, and political conditions within which a game is appropriated and contested by its players.

This article provides a detailed explanation of ludification theory and the accompanying notion of games as systems of social rationality. The discussion is followed by a case study of *World of Warcraft* (WoW), an immensely popular MMOG that currently claims over 10 million players worldwide (Blizzard Entertainment, Inc., 2008). The goal of this article is to provide a framework for uncovering the rational properties of MMOGs, and to situate digital games within the larger sociohistorical tendency toward rationalization that continues to shape modern play practices. Our intention here is not to argue that rationalized games are qualitatively “better” or “worse” than nonrationalized play forms, but rather to initiate debate around the impact and significance of rationalization on the parameters, practices, and experience of play.

GAMES AS SYSTEMS OF SOCIAL RATIONALITY

While Romantic notions of “pure play” and “play for play’s sake” continue to influence contemporary notions of leisure (Sutton-Smith, 1997), critical theorists have long highlighted the crucial role that play fulfills within advanced capitalism. On the one hand, leisure is integrated into the labor cycle, which requires and organizes periods of rest and recuperation between productive exertions (Marcuse, 1969). On the other hand, the increasing commodification of leisure within mass consumer culture blurs the lines between play and consumption (Bourdieu, 1991; Rifkin, 2000). A number of play theorists argue that the spheres of work and play, if ever they were separate, are now inextricably entangled (Huizinga, 1955; Lasch, 1979). This entanglement is primarily viewed in terms of the assimilation of play and leisure into the rational realms of production and consumption, but it is also understood in terms of a spreading infusion of playfulness into the postindustrial work process (Turner, 1974; Hans, 1981; de Certeau, 2002). Thus, although play and other leisure forms are often described within play theories as extra-economic, filling a primarily social, spiritual or cognitive function, their actual practice is increasingly understood to occur within a context of complex socioeconomic processes.

The relationship between production and leisure remains a key focus within contemporary discussions of the commodification and instrumentalization of play, particularly in recent scholarship on digital multiplayer gaming. For example, the monetization of virtual game economies (which first surfaced in the form of an informal, player-driven exchange of in-game items for real world currency, and has since extended to a variety of sanctioned and unsanctioned revenue models) is often described in labor terms (Grimes, 2006, 2008). Taylor de-

scribes MMOG players’ efforts to “imbue [their in-game character] with qualities, status, accomplishments” (2002, p. 232) as a type of labor and collaborative authorship. Others, including Postigo (2003), de Peuter and Dyer-Witthoford (2005), Kücklich (2005), and Coleman and Dyer-Witthoford (2007), have explored how practices such as modding and hacking come to operate as key sources of immaterial labor, often contributing directly to the digital game development cycle.

As the dominant organizing system of an increasing proportion of our everyday life experience, production easily becomes a prominent focal point in discussions of play and modernity (Gruneau, 1999). For as play activities become more “organized, even administered” (Marcuse, 1965, p. 32), they are increasingly structured by the same values, priorities, skills, and norms that drive the workday (Mills, 1956; Bourdieu, 1978). However, the focus on the relationship between work and play overlooks a key aspect of the rationalization process—namely, that it unfolds differently within different institutional settings (Henricks, 2006). Instead of seeing play as a casualty of economic encroachments, it may be more useful to study how games *themselves* come to display the same characteristics of rationalization as other institutions of social order and control.

In this respect, games today would be latecomers to modernizing processes that have already incorporated a wide range of generic human behaviors into the rationalization process through technology, markets, and the legal system. Play too now becomes increasingly recontextualized as a foundation of modern society through commodification and technologization. Rationalized play is thus not only congruent with the grand narrative of modernity, but also functions as a social practice that reproduces rationalization within yet another facet of everyday life. Here, we take a cue from Henricks, who argues:

[Play] exhibits social structures only somewhat dissimilar from those found in other parts of life. These structures not only restrict people’s personal freedom but also enable them to accomplish things they would be unable to do alone. . . . To play with others is to enter a realm of interconnection that is much more complicated than the play of individuals with the material world. (2006, pp. 8–9)

In their nonrationalized form, games do not operate as systems of social rationality—they are not institutionalized on a large scale, and therefore do not generate social order. This changes, however, with the incorporation of games into commerce and technology. The professionalization of sports represents a critical point in the transition from nonrationalized to rationalized games (see Lasch, 1979; Bourdieu, 1991; Gruneau, 1999). Standardization in organized sports and gaming clubs goes along with commercialized spectatorship in transforming players and

player moves into predictable and measurable units. Game play can now be evaluated in terms of the fixed criteria of strict formal rules in order to create a homogenous experience for every participant. That experience can then be commodified in accordance with broadcast rights, audience shares, and the demands of mass consumer culture.

Starting with the professionalization of sporting leagues, technical mediation (in the form of media technology, for example) and social rationalization open a game to the processes of commodification. In some cases a game played by an unpaid community of players might become the recruiting ground for a paid community of professionals performing for an audience of spectators. In others, the products of game play may acquire real-world exchange values. In each case, however, the mass commodification of a game will be preceded by its standardization and rationalization. As Mosco argues, commodification is greatly facilitated by the expansion of “opportunities to measure and monitor, package and repackage” (2004, p. 156)—opportunities that are afforded by technical mediation.

In spectator sports, however, the control of the conditions of play affects the players far more deeply than the audience. When the division between spectators and players breaks down, as it does in MMOGs, and the rules and boundaries of a game are technically mediated, the participants in the game are incorporated into its design. This significantly reduces the potential for the kind of spontaneous negotiation of rules and exceptions that is a possible (and indeed desirable) part of game play when a game is played on an individual basis, for instance, between friends on a local playground (Schwartzman, 1978; Hughes 1995; Sutton-Smith, 1997). Instead, the players’ actions in a technically mediated game are reduced to a predetermined set of possibilities. As games and play are transformed into an increasingly rationalized set of activities involving huge populations for extended periods, they institutionalize a form of social order. The mass of spectator-players is now organized by the technology of the game much as markets organize consumers, state bureaucracies organize citizens, and production technology organizes workers.

The transformation of games into sources of social order thus takes place through the incorporation of their rational aspects within both technological and commercial organizational strategies. Game play (and the player) becomes structured and rationalized by the game itself, which provides (and often enforces) the rules to which its players must subscribe. As this form of play is implemented on a wider and wider scale, throughout various types of games and leisure forms, its social significance increases. The players themselves begin to fulfill a crucial role in the game’s operation as a large-scale system. Part of what makes these games attractive to other players is their ability to offer a well-developed social dynamic

in a shared game play experience. In this way, players are transformed into a resource that keeps the game functioning as intended, and legitimizes the exchange value of the game as a “packaged” social experience. This process is typical of systems of social rationality, wherein even human beings begin to appear as bearers of technical elements available for manipulation by technical organizations (Feenberg, 2008).

The essential feature of rationalization is the capture of everyday activities by organizations and media. This includes ordinary games, which have always contained rational qualities (such as rules, points systems, standardized equipment, leagues, and associations). Behaviors such as these are present in many other activities as well. They exemplify on a small scale the rational practices of optimizing, exchange of equivalents, and classification and application of rules, but until modern times there were no organizations capable of structuring societies around such behaviors. That transformation occurs when the rational characteristics of everyday practices become the basis of technical, economic, and legal systems and organizations in modern societies. Organizations and media incorporate these characteristics into bureaucratic, commercial, and technical structures that multiply their range and influence.

In this theoretical context, systems of social rationality should be conceived as active agents. Similarly, however, their members can be more or less compliant in fulfilling functions within the structure they lay out. The logic of organizations and media is thus relatively independent of the persons they enroll, but correspondingly, those persons have a certain independence that shows up in actions that induce change, extract plunder, build alternatives surreptitiously in gaps in attention and control, and so on.

Despite the higher levels of rationalization enabled by technical mediation and commercialization, some unpredictable outcomes thus remain not only possible but also likely. No matter how highly rationalized the game, its players remain engaged in a struggle to appropriate and make sense of their play within the contexts of their everyday lives. Not all of their responses conform to the rationalizing intent inscribed in the official modalities of play, and player behaviors can often resist or even challenge the underlying social order. This includes technically specialized interventions, such as hacking and modding, as well as widespread player practices such as cheating, technological appropriations, subversive readings, interpersonal relationships, and the production of unofficial game “paratexts” (such as fan fiction, walkthroughs, etc.) (Consalvo, 2007). Where these challenges effectively restructure aspects of the game around player demands, we can speak of a “democratic rationalization” in opposition to the rationalization imposed by the official corporate owners (Feenberg, 1999).

In many ways, all game play ultimately depends on the participation and buy-in of the players, who voluntarily engage in the act of play and, through consensus and collaboration, formulate the parameters, fictions, and fantasies of the play experience. No matter how strictly enforced the rules of any game might become, the point of playing a game, as Geertz argues, is “that it provides a metasocial commentary,” a story the players “tell themselves about themselves” (1973). While the idea that play is something that is generated by a game’s players may at first glance appear at odds with our notion of games as rational systems, we propose that it is within this very tension—between freedom and constraint, between voluntarism and determinism—that play occurs as a form of social practice (Gruneau, 1999) and that games come to operate as systems of social order.

FROM RULES TO LUDIFICATION

The rationalization of play draws upon resources that emerge during the transition from informal play activities to organized games. Discussions of this transition appear throughout the foundational scholarship on play, which often distinguishes between play and games. Much of the early work in this area espouses what Sutton-Smith (1997) describes as a “play as progress” ideology, linking the rational features of games (such as formal rules and parameters) to functionalist understandings of play. For example, Huizinga argues that one of the key features of play is that it “demands order absolute and supreme. The least deviation from it ‘spoils the game,’ robs it of its character and makes it worthless” (1955, p. 10). Play brings a temporary, limited perfection into the imperfect confusion of everyday life, creating an “exceptional situation” that promotes the formation of social groups and culture.

It is within Caillois’s hierarchical classification of games that we find the clearest articulation (and celebration) of the transition from free play to formal (rule-bound) games, described in terms of a “rank order of progression” that moves along “a continuum between two opposite poles” (2001, p. 13). The first pole, termed *paidia*, describes forms of play that feature open-ended fantasy and role-play, free-form diversions, and unscripted amusements. At the opposite pole, labeled *ludus*, “this frolicsome and impulsive exuberance is almost entirely absorbed or disciplined by a complementary, and in some respects inverse, tendency . . . to bind it with arbitrary, imperative, and purposely tedious conventions” (p. 13). Caillois argues that as societies modernize, play is increasingly characterized by *ludus*, progressing “from turbulence to rules,” and given form through the “conventions, techniques and utensils” (p. 29) of rationalized games. As rules and games are institutionalized, he argues, play is transformed “into an instrument of fecund and decisive culture.”

However, subsequent theorists have challenged these early idealizations of organized games, rule structures and purposive play. They instead highlight the dialectical relationship that exists between game rules and game play, “between socially structured possibilities and human agency” (Gruneau, 1999, p. 27). For example, numerous sociologists studying sports and leisure propose that we approach play in terms of its representational function—as a cultural text (Geertz, 1973), as a meta-communicative framework (Bateson, 1973), or in terms of symbolic action or “rhetorics” (Sutton-Smith, 1997). Digital games scholarship has similarly attempted to address the dialectical dimension of game play, which is increasingly envisioned as a sort of continuous dialogue that occurs between a game’s system (program code, rules, graphical user interface [GUI]) and its players (Kirkpatrick, 2008). For instance, Salen and Zimmerman describe “meaningful play” as emerging “from the relationship between play action and system outcome; it is the process by which a player takes action within the designed system of a game and the system responds to the action” (2004, p. 34).

It is important to remember, however, that within traditional play theories and discussions of games—including those upon which much of the digital games scholarship to date has drawn in conceptualizing emerging forms of “digital play”—game play is seen as largely individual or limited to small groupings, and rather marginal to social order. For Caillois (2001) and Huizinga (1955), the larger social significance of games lies in the homologies between their structure and social forms, for example, between games of chance and the stock market, or games of skill and career paths. For Geertz (1973) and Sutton-Smith (1997), group play provides an important, albeit mostly symbolic, opportunity to reenact, transgress, and otherwise make sense of larger systems of social order (including power relations, social hierarchies, etc.). What is happening today, on the other hand, is rather different.

As described in the previous section, *it is not that social order recapitulates certain features of games, but rather that games have themselves become forms of social order*. As games become rationalized the rational features fundamental to all formal games assume an unprecedented prominence. Eventually, these games begin to generate their own form of social rationality, imposing all three types of rational practice on millions of players. From this standpoint it becomes clear that the multifaceted institutionalization of games in new processes of social rationalization is the key to the changing dialectics of play.

To explain this state of affairs, we propose that game play be understood in terms of a continuum in which the player moves from a general play mood to the specialized state of absorption required for the playing of specific games to, finally, the centralized orchestration of that passage on a mass scale around the technically instituted rules

and systems characteristic of rationalized games. In this latter capacity, the theory must take into account the basic rationalizing operations of these games, the power relations and sociocultural conditions that specify their rules and parameters, and the emergent and subversive play practices that arise from them. Our starting points for developing this theory are Bateson's reflexive theory of play and Walther's (2003) double-aspect theory of the relation between play and games.

Bateson argues that "Play is paradoxical because it is both within and outside our 'normal' social semantic space" (Walther, 2003, n.p.). From the everyday, normal standpoint, play has this paradoxical quality insofar as it builds imaginative structures out of ordinary things and situations, and introduces purposeful ambiguity into ordinary actions. As Bateson (1973) describes it, play is "a meta-communication that refers exclusively to itself, and not to any external source or receiver." Bateson gives the example of animals pretending to fight. They must actually bite each other and yet do so in such a way as to signify that the bite is not a "real" bite. This special sort of reflexivity is present in everyday playful activities of all sorts and is no doubt the psychic basis on which organized play and games are built. Playfulness in this sense is an identifiable activity but it does not have a definite locus. It is a type of situated or reactive play that is dependent upon the structures and themes provided by what is at the time interpreted to be non-play. Thus within the lifeworld, undifferentiated moments of playfulness occur alongside of and parasitic on the other communicative practices of everyday life, including of course "serious" activities, which in turn become defined as such only when positioned in relation to playfulness.³

Walther employs Spencer-Brown's (1969) theory of distinction, as well as Bateson's (1973) description of the paradox of play to identify two "transgressions" (we prefer "transformations") that allow the player to enter into the state of mind required for "buy-in" to a game (illustrated as the first and second divisions in Figure 1). The first represents the point at which the player crosses the boundary separating the undifferentiated communicative practices of everyday life from the specialized realm of play. The second occurs when the player moves from a general "play state" into the more focused game state required for effective participation in the action of a particular game in accordance with (or at the very least with an awareness of) its specific rules and criteria. This second transformation is also in line with Caillois's (2001) description of the shift from *paidia* to *ludus*.

According to Spencer-Brown, as Walther (2003, n.p.) describes his view, "a universe comes unto being when a space is separated, that is when a distinction is made." In play, this "space" starts out as a purely metaphorical separation of imaginatively conceived spheres, but

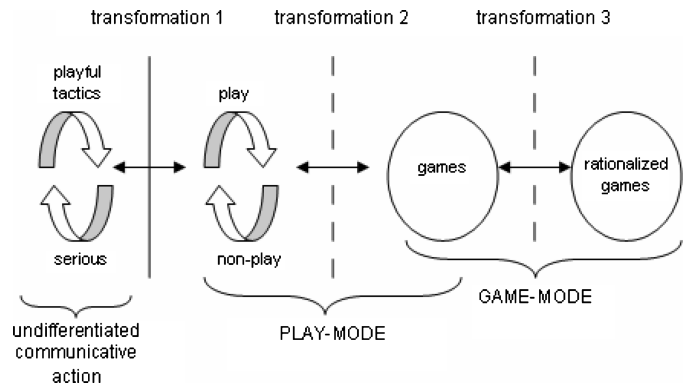


FIG. 1. The rationalization of play: a differentiated approach.

in the case of games it evolves into a real geographical locale. The "form of the distinction" includes both the differentiated space, which becomes the "marked side" of the space being delineated by the distinction—as well as the remainder, which becomes the "unmarked" side of the distinction.

First, play becomes the "marked" side of the distinction between play and the "unmarked" lifeworld. As the players enter into the play mood, they adopt a differentiated perspective on play and non-play. For Walther, reflexivity enters at this stage; however, we regard the reflexivity of the play mood as a specific modification of the type of reflexivity that characterizes playfulness in the lifeworld. The difference between that original playfulness and the play mood is the attempt of the players to give continuity in time and space to their play and the work they engage in to construct an imaginative universe. Once inside the realm of play, all activities that fall outside that universe are reconceptualized as "non-play."

Yet, even while this initial distinction differentiates certain forms of activity from the undifferentiated communicative practices of "non-play," play at this stage remains a highly open and mutable concept, characterized primarily by the boundedness that isolates it from the structures, concerns and consequences of "ordinary" social life. It is this boundedness that allows the player to focus attention on the (play) activities at hand. This changes, however, when play becomes channeled into games and a system of rules is introduced. Walther (2003, n.p.) describes a game as a continuation of the play mood in that it adopts the praxis of distinction that is established in play, "but its central 'law' is its unique ability to reduce the complexity of play by way of a set of well-defined, non-negotiable rules." This second transformation involves an increase in rationality in the ordinary sense of the term.

Figure 1 represents our adaptation of Walther's model, including the addition of playfulness in the lifeworld at one extreme and, at the other, the technological institution of the rational qualities characteristic of MMOGs and other

rationalized games. We have modified Walther's model to illustrate the process of rationalization as comprising three transformations. While the conditions necessary for each of these transformations to occur may manifest as features of the game systems or artifacts, they must first and foremost be understood as shifts in the relationship between the game and its players. All three transformations must occur in order for a game to begin operating as a system of social rationality. In reference to Caillois's term for rational play (*ludus*), as well as the field of ludology, we provisionally call this the theory of ludification.

The first transformation (illustrated in Figure 1) has been described already as the passage from everyday playfulness, with its momentary and unorganized modification of "serious" contents, to organized play. Play in this sense is not yet constrained by permanent rules and not fully separated from the world of non-play, "reality," which threatens to intrude from time to time. The second transformation is described at length within the play literature. Here, the play mood becomes rule-governed, and the ambiguity of free play is further reduced under the constraints of the game's fixed temporal and spatial conditions. While still characterized by the play mood, games are also simultaneously constituted by a game mood that describes a state of heightened reflexivity involving the player's relationships and interactions with the game's rules and boundaries. This includes the player's desire and attempts to win, to uncover the game's structure and hidden loopholes, to progress or advance through the levels of a game, or to strategize against a competitor. To play a game is thus a dual process, one that demands a delicate balance of playing and gaming. As Walther explains, "One must hold on to the initial distinction (otherwise one is swallowed by the other of play), and one needs constantly to accept the organization, the rule pattern, of the game" (2003, n.p.).

When games are technically mediated and commercialized on a large scale, as in the example of MMOGs or professional sports, they undergo a third transformation into rationalized games. At this stage, the rational properties of reflexivity, boundedness, and rule-governedness, which are found in all organized games, are intensified to an unprecedented extent. This intensification through technical mediation brings new qualities of precision to the game. The rules and parameters of the game system are programmed into the game code and become ever more tightly enforced and optimized. Play itself becomes subject to increasingly precise forms of measurement and calculation.

Even at this stage, the players possess "initiative" (Feenberg, 1999), which surfaces in a variety of ways as they engage with and appropriate the technology. The most obvious examples are hacking (Kirkpatrick, 2004) and modding (Postigo, 2003; Kücklich, 2005), but player initiative can manifest in more subtle ways as well. These

include the unsanctioned markets for game items that have cropped up around games such as *EverQuest* and *World of Warcraft* (Castronova, 2005), the collaborative role-playing and community building that occurs within certain servers or player groups (Taylor, 2006), player creativity and cultural bricolage (Poremba, 2003), and the exchange of game codes and walkthroughs over the Internet (Consalvo, 2007). It is here that one discovers the vestiges of nonrationalized play, operating both inside and outside the formal game structures, occupying the "margin of maneuver" that coexists alongside the regimented system of rationalized play (Feenberg, 1999).

Much of this activity can be described as playful in our sense of the term. Although the player retains the game mood necessary to sustain the experiential condition of playing a game, the excessively rigid structures of rationalized games invite a playful response characteristic of the undifferentiated communicative practices of the unmarked lifeworld. In this context, as Sutton-Smith describes, playfulness can be understood as a type of "metaplay" found in activities and attitudes "that play with the normal expectations of play itself," such as "reversal, exaggeration, playing with boundaries, [and] playing with space and time" (1997, p. 147). It is through the unexpected or "emergent" player activities arising out of playfulness that the "unrealized technical potential" (Feenberg, 1999, p. 97) of digital games technologies is gradually being uncovered.

Referring back to Figure 1, we thus propose that as a game moves toward the right through the intensification of the principles of social rationality, it develops properties that ultimately enable its transformation into a system of social rationality. The process can also operate in the opposite direction, as the activity moves back to a lower level of rationalization, in accordance with a decrease in the presence or intensity of the properties of rationalized games. We have provisionally identified these properties as reflexivity, boundedness, rule-governedness, precision, and playfulness (Table 1). In identifying these properties we are not attempting to define play or to describe games exhaustively. Rather, we propose these properties as key characteristics of the ludification process through which a rationalized game enacts a form of social order.

While all five of these properties must be present for a game to operate as a system of social rationality, each can be established structurally (i.e., by conventions, norms, terms of use contracts, etc.) or technologically in the design of the game system. The following section provides an integrated case study of both ludification (Table 1) and of the rationalization of play (Figure 1), using examples drawn from *World of Warcraft* (WoW), in order to illustrate how we might begin to understand ludification as a process that both enables new forms of social order, as well as creates new opportunities for user resistance and innovation within MMOG game play.

TABLE 1
The five properties of ludification

Reflexivity	As play becomes rationalized, it becomes increasingly self-referential and exclusionary of themes and activities from outside the constructed reality of the play activity or game. The system and structures of the game, along with the player's role, gain in primacy at the expense of an increasingly differentiated "outside" or "real" world.
Boundedness	Since play is a differentiated activity, a level of boundedness must always exist in order to distinguish play from the undifferentiated communicative practices of the lifeworld. As games become rationalized, however, the boundaries, in terms of the scope, space, and possibilities for play, become more limiting, well-defined, and self-contained.
Rule-governedness	When play is transformed into a game it becomes governed by a specified set of rules and parameters. As games become rationalized, their rule systems become more rigid and comprehensive as they are determined at the technical and institutional level.
Precision	The specification and standardization of a game's rules are accompanied by an increase in precision, which enables measurement and optimization of the game play, in terms of both efforts and results. Like rules, precision leads to a reduction in the scope of what is possible within a game, and transforms play into a quantifiable and predictable set of activities.
Playfulness	Playfulness describes the undifferentiated form of play that occurs within everyday communicative practices. Contrary to the imaginative freedom of play, playfulness is characterized by its situatedness within and dependence upon the game system to provide direction, themes, and content. Playfulness can be subversive or reactive, but always functions in direct interaction with the rules, temporality, sequence, and structures of the game.

CASE STUDY: LUDIFICATION IN *WORLD OF WARCRAFT*

Launched in the United States in 2004, WoW remains one of the most popular MMOGs in the history of the genre. Consistently ranked on best-seller lists and often credited for bringing MMOGs into the mainstream, WoW continues to attract widespread public attention. The game currently claims a population of over 10 million players worldwide (Blizzard Entertainment, Inc., 2008), generating annual revenues estimated to be in the hundreds of millions (Vella, 2008). Among digital games scholars, academic interest in WoW is accordingly quite high, and over the past 2 years a large amount of MMOG research has focused on the game and its population, design, and cultural impact. This research has produced numerous articles (for example, Williams et al., 2007; Bessi re et al., 2007; Humphreys, 2008), a special issue of *Games and Culture* journal (Krzywinska & Lowood, 2006), and at least one edited collection (Corneliussen & Rettberg, 2008).

While much has now been written about WoW players—in terms of their cultural practices, communities, social interactions and in-game behaviors—less attention has been paid to the game's underlying technological, social, and political structures. Yet more recent studies of MMOGs, and of WoW in particular, indicate that there is a clear need for sustained research in this area. As Taylor (2006b, p. 319) writes, "Rather than simply identifying 'emergent culture' as a prime property of MMOG life and

stopping there, we also need a better understanding of the complex nature of player-produced culture and *its relation to the technical game artifacts*" as well as an "understanding the role systems of stratification and forms of social control play in these game worlds." Thus, while our use of WoW as a case study builds upon a relatively broad corpus of research, our focus on the game's role as a system of social rationality represents an important departure.

Reflexivity

Like other digital games, WoW displays and invites a high level of reflexivity through the very nature of its interactive design. As Kirkpatrick notes, "In computer games critical engagement with the interface and the computer as a machine with comprehensible, technical rules of behaviour is the norm. . . . Games use technical knowledge and understanding of computer behaviour to work out when a solution applied to one game will probably work for another" (2008, p. 128) regardless of the specific aesthetic and narrative context of the game. In order to participate in WoW, the player must learn to maneuver in the game environment, discover the game control keys (which keys to press and when), develop some sense of the game's mechanics and the range of possible actions (at least at an introductory level), and figure out the leveling system and in-game currency. As the underlying structures of the game are revealed, the players' reflexive engagement

becomes increasingly sophisticated, involving activities such as fine tuning certain skills instead of others in order to construct a specific type of character, or rearranging the hot key setup to increase playability.

Reflexivity is heightened when the player experiences tension vis-à-vis the rules and technical features of the game. Examples include those early stages of game play when a player is first learning the rules, or when players are unable to make a desired action (such as attempting to climb an unclimbable cliffside), or when heavy traffic forces players to wait before they can connect with a server. In the absence of such tensions, the restrictive and rationalizing qualities of the game's design are experienced primarily as feedback in a cycle of interactivity, much as interactions in the "real" world are experienced as both constrained and enabled by physical laws. As Rehak argues, these interactions are themselves a pleasurable aspect of digital gaming, since "part of what users seek from computers is continual response to their own actions—a reflection of personal agency made available onscreen as surplus pleasure" (2003, p. 111).

The points and leveling systems assigned to player actions and game objects also extend reflexivity by drawing the player's attention to the game's underlying numerical structures. Like other digital games, WoW has a predetermined and highly specified leveling system that quantifies player actions and achievements (such as completing "Quests," clearing an "Instance Dungeon," or defeating your opponents on a "player-versus-player" [PvP] Battleground) by assigning them a value expressed in "Experience Points" (XP). All players start at level 1 (unless they have purchased a pre-leveled character) and must accrue a sufficient amount of XP before advancing to the next level, a system that is reproduced (with each level requiring greater amounts of XP to complete) until the player reaches level 70 (the maximum level attainable at the time of our study, recently raised to 80). In addition, each character's specific attributes, such as strength, stamina, and intellect, are expressed numerically, as are health and mana (the energy used for casting spells), which require constant replenishment. Meanwhile, the majority of in-game items, even Quest items, have an exchange value. Items (and even full characters) can be bought and sold for Gold (the WoW currency) or exchanged in a variety of ways, both through the game system and through unsanctioned trade on the "real-world" market (Castronova, 2005).

The game's numerical systems constantly communicate to the player, Stallabrass argues, an unambiguous "idea of progress [that] is always present in the game, shadowing and interpreting the action" (1996, p. 90). While players are always free to ignore the game's numerical structures, there are many rewards and benefits associated with "leveling up." With each new level attained, the player also gains access to new (increasingly challenging and

intricate) quests, items, abilities, and areas of the game world. The high visibility of the XP system and the privileging of progress within WoW provides players with a clearly articulated template for "proper" (if not mandatory) game play, one that reveals and highlights the very measurement criteria upon which the player's actions are evaluated.

Boundedness

While the game environment of WoW is expansive, collaborative, open-ended, and continuously evolving, it is also bounded by its design and program code. The game code provides the scope and limitations for the vast majority of in-game activities—it makes up the game's environment, supplies it with laws of physics, determines the range of actions that are possible (walk, run, sit, attack, cast a spell), for whom (e.g., only Paladins can use a "Divine Shield" spell), and at what frequency (e.g., Hearthstones that teleport the player to a preselected "home base" can't be used more than once an hour). Within WoW, the scope of what is and is not possible—in terms of player actions and interactions with the virtual environment—is not only discovered in the act of playing (as in nonrationalized games) but is technically enforced by the game engine. In maneuvering through a digital game, players interact with the database through a parser, which reads player actions as a series of "if-then" commands (Kirkpatrick, 2004). At the level of human-computer interaction, game play is thus reducible to a series of variables, selections drawn from an immense but nonetheless finite number of possible options, expressed in the rudimentary language of computer code.

Moves and choices that have not been encoded into the game program or otherwise afforded by the design (whether intentionally or not) are simply impossible except through technically specialized interactions such as hacking or modding. In the case of WoW, which was specifically built to enable high levels of player agency and independence, even technical intervention is to some extent allowed by design. As Taylor describes, the WoW game system was constructed with a flexible user interface, intended to allow "player-developers" to make modifications that "are not simply cosmetic but can provide core functionality to the game, even altering the nature of play itself" (2006, p. 326). In any case, since the majority of players do not have the technical expertise required to intervene at this level, most player actions fall firmly within the scope of what is provided by the Blizzard game engine.

This does not mean that every possible move or outcome has been imagined or predetermined by the game's designers. Players engage in a variety of unanticipated and even unsanctioned behaviors, from cheating and

“gold-farming” to buying and selling characters on the real-world market (Castronova, 2005). Players appropriate the game environment for a variety of social and creative purposes, from initiating and maintaining personal relationships, to using the game as a staging ground for the production of “machinima”⁴ (Lowood, 2006). Past research has also identified numerous examples of “emergent play” within WoW, including a number of incidents involving large numbers of players staging a collaborative protest by gathering together at a specific time and place in order to overload (and therefore crash) a server and communicate a point to Blizzard and to other players (Taylor, 2006c).

The game also contains occasional glitches and produces unintended outcomes, which add to the game’s “emergent” qualities. In 2007, for example, WoW was struck by an unplanned “pandemic” that emerged unexpectedly out of a spell intended to spread an infectious disease among a contained group of advanced-level players, within the specific context of an instance dungeon “boss battle” (the last monster of a level or quest, usually by far the most challenging) (Balicer, 2007; Lofgren & Fefferman, 2007). Over 4 million players were infected during the course of the “Corrupted Blood” pandemic, causing the kind of “social chaos that comes from a large-scale outbreak of a deadly disease” (Lofgren & Fefferman, 2007, p. 625). It is important to remember, however, that these types of events do nonetheless occur within a preestablished realm of possibility, bounded by the game’s technological affordances—even though some of these affordances may not yet have been discovered by either the players or the game’s designers before they erupt.

Another way in which WoW exhibits properties of boundedness is through its narrative and aesthetic features. Through a combination of rich graphics, sound architecture, and spatiality, WoW provides players with an extremely detailed and coherent game “world.” As computer animation techniques, three-dimensional (3D) modeling technologies, and sound engineering in digital games become more sophisticated and intricate, the game’s space and artificial environments are not only increasingly predetermined but also increasingly immersive, constructing a distinctly bounded play space, the limits of which are reinforced by the internal logic of the game. The affordances and limitations of the source code are thus not merely perceived as establishing permitted game play, but also as constituting the “physical” reality of the game world.

The naturalization of the game’s design and parameters is facilitated by the graphical user interface (GUI), which prevents most players from engaging directly with the infinite potential of the “game as code” (Kirkpatrick, 2004). The player is isolated from the code, which is the

underlying object of her/his actions. The control system, or “interface between player and operating system” (Stallabrass, 1996, p. 96), translates the player’s desired actions to the parser “behind the screen.” As a player learns the design and parameters of the source code, they become internalized as part of the “physical” reality of the game world. These parameters, in conjunction with the norms and conventions created by the player community, come to define what the game is, as well as what it is not.

Rule-Governedness

These first two properties of ludification (reflexivity and boundedness) are intertwined with the third property, *rule-governedness*. As described earlier, unlike the rule systems of nonrationalized games, technologically mediated rules are rigid and precise, and cannot be negotiated or challenged by the average, nonspecialist player. In WoW, many of the game rules and parameters are established, maintained, and communicated by the game’s database, and hence integrated into the technological design of the game itself. The “laws” of this system can thus be enforced quite explicitly, embedded within the very fabric of the game space (including its aesthetic, spatial, and environmental dimensions) and game design. Within WoW, however, technological mediation is just one of the ways that rules and community norms come to structure game play and player behavior; it operates in conjunction with formal and informal systems of surveillance, corporate law, group norms, and player expectations.

As is common practice among commercial MMOG operators, Blizzard requires WoW players to agree to an end-user license agreement (EULA) and terms of use (TOU) contract before entering into the game. Player activities and in-game communications are then monitored, both by the game’s automated systems and by Blizzard employees, to ensure continued compliance. In addition to making compliance to the game’s official “rules of conduct” a condition of service (meaning that a player’s account can be frozen or deleted if the player disobeys), these contracts demand that players waive a number of their rights while inside the game environment, including “rights to own the fruits of labor, rights to assemble, rights to free speech” (Castronova, 2003, p. 8). In this way, Herman, Coombe and Kaye (2006, p. 191) argue, WoW establishes its own “forms of governance and moral economies of practice” to which players must submit or risk expulsion. Furthermore, many of the terms outlined within the EULA and TOS seek to enlist players in legal relationships that extend well beyond the confines of the game. A key example of this is the sweeping intellectual property terms included in the EULA, which claim exclusive ownership rights over anything that players say or do while inside the game environment.

Within WoW, rules are also institutionalized at the social level by community norms and expectations. A large part of what makes playing an online game enjoyable is its ability to offer a well-developed social dynamic, and part of this involves the construction and negotiation of social norms. Some informal rules of play are derived out of the game's narrative and genre conventions (e.g., every character is either a member of the Alliance or part of the Horde, each of which comes with its own history and expectations), while others might stem from the "code of conduct" of an especially popular or high-profile Guild (groups of players that are formalized within the game design). Some emerge from the consensus of the larger player community, while others represent the perspectives and interpretations of a small number of particularly vocal players. At times community norms come to operate as systems of social control that work to discipline, exclude, or otherwise classify players and behaviors. For example, Taylor's (2006b) recent ethnographic study of WoW uncovered numerous examples of Guilds setting minimum age requirements, formally excluding players under the age of 18 years.

Precision

As described earlier, within WoW, game play is optimized and calculated through leveling systems and capitalist-based virtual economies that serve to measure the player's activities and evaluate the player's actions and progress. On one level, WoW's leveling systems draw upon conventions established within the tradition of tabletop role-playing games (such as "Dungeons and Dragons"), which use a special set of dice to determine the outcome of events and player actions. However, these systems are also by-products of digitization, which enables hitherto unimaginable levels of precision in the measurement, recording, and analysis of the online activities of any number of players. Digitization not only allows game rules and structures to become immutable virtual realities, but it also transforms player actions, in-game communications, and creative contributions into neatly standardized and easily retrievable data (Mosco, 2004). This enables an ongoing and fairly detailed surveillance of player activities and interactions.

Precise knowledge of individual players greatly facilitates the regulation of player behavior, as well as the enforcement of rules and other "terms of use." But more importantly, once players' in-game communications, contributions, and activities have been digitized and recorded, the data can then be sorted, mined, and made sense of for a variety of commercial purposes. Digitization, Mosco argues, "expands the commodification of content by extending opportunities to measure and monitor, package and

repackage entertainment and information" (2004, p. 156). Game designers use intricate tracking and data-mining systems to discover new patterns in behavior and player preferences, which can then be used to ameliorate or expand the game design (through patches or expansion sets). They can also compile the data in various forms to create highly detailed user trend reports, which can then be sold to external parties to be used in advertising campaigns or other marketing initiatives (Kline et al., 2003).

The principle of precision spills over into player practices as well. Not only do players experience the precise measurement of their powers and status by the game as described earlier, but they also participate in measuring themselves. A recent example, described by Taylor (2006b), is the growing use of mod interventions that enable a precise evaluation of player actions *by other players*. These player-produced mods not only facilitate a growing "focus on quantification" (p. 332) among the players who use them, but also enable players to engage in new forms of social coercion, evaluating each others' performance through the seemingly objective lens of the measurement tools. As Taylor writes, "through their rationalization and quantification of action, they also strongly inform (and potentially limit) what is seen as "good play" or what is viewed as reasonable" (p. 332).

Playfulness

The final property, playfulness, describes the players' relationship to and negotiation with the social rationality of the game. Source codes and databases establish what actions are possible within the WoW game environment, which greatly reduces opportunities for imaginative freedom. At the same time, the reflexive properties of the game invite the player to engage in self-referential forms of activity, such as discovering the limits and affordances of the game design. Because playfulness consists of a structurally embedded and reactive form of play, it occurs in dialogue with the game's underlying structures, playing with and occasionally against the system. This shift in the focus and contents of player activities is a key factor in the unanticipated game play (including player appropriation, subversion, and innovation) that continues to unfold within even highly structured and rationalized games. Playfulness brings about a higher level of initiative vis-à-vis the digital game system.

Through playfulness, the player contributes to, subverts, and reinterprets the rules and laws imposed by the technical system. In each of the previous sections (reflexivity, boundedness, rule-governedness, and precision), many of the player practices we described are also examples of playfulness. These range from basic trial-and-error explorations of the game mechanics, to the

transgressive actions of players who aggravated the “Corrupted Blood” pandemic by purposefully spreading infection, to the development of mods that uncover the underlying numerical logic of player actions.

The subversive potential of playfulness is obvious in game hacking and modding, but it also surfaces in quotidian player practices, from the collaborative development of social norms to the practice of coordinating a server crash as a form of protest. Playfulness can contribute to the technological design of digital games in unforeseen ways. Of course, player initiative can also be met with resistance—from other players, if the activity interferes with their own play, or from the game’s designers, if the activity interferes with design objectives or corporate priorities. But undirected and unexpected player initiatives can uncover the “unrealized technical potential” (Feenberg, 1999, p. 97) of digital game technologies. It is here that democratic rationalization (Feenberg, 1999) of this technological form becomes possible.

CONCLUSION

Although the political, cultural, economic, and technological features of MMOGs are all subject to ongoing attention and analysis within games studies, the literature to date has so far failed to adequately relate these processes to the widespread rationalization of play, leisure, and the lifeworld as a whole. We have sought to remedy this oversight by positioning games as systems of social rationality operating within the larger sociohistorical context of modernity, and by providing a framework (ludification) for a more comprehensive exploration of the processes through which game rules become technically mediated, play practices become institutionalized, and players become rationalized (and professionalized or commodified). Furthermore, a more comprehensive understanding of contemporary shifts in the role and function of play as it becomes a rationalizing process of modernity provides a unique entry point for discussions about the commodification and technical mediation of leisure that transcends the outdated work/play binary that informs so much of the literature to date.

In proposing that games can operate as systems of social rationality, we have attempted to construct a theory of play that takes into account the changing nature and function of games within contemporary capitalist societies. We have identified five properties of ludification, which explain how games, arising out of undifferentiated communicative practices, gradually evolve into an increasingly rationalized form of activity (Figure 1). The ludification theory shows how essential properties of games lend themselves to appropriation and transformation into systems of social rationality. The theory explains how play comes to operate as a source of institutional order, enacting the same

principles found within other more commonly recognized rationalizing processes such as technologization, bureaucratization, and commodification.

As seen in the case of WoW, technical mediation opens games up to further processes of rationalization, such as commodification. The congruence between various rationalized systems is a key component in understanding how play fits in with the larger project of modernity. In each case the technologization of the game invests properties identified in the ludification theory with new meaning as structures of social rationality. Due to recent developments within the realm of MMOGs, including the debates around the legality of EULAs and growing public concern about corporate usage of digitized personal information, an approach that considers how rationalization in one area of social life leads to increased compatibility with other rationalized spheres seems particularly timely and necessary.

To this end, we have proposed ludification theory as the basis for a critical study of rationalized play forms that includes but is certainly not limited to *World of Warcraft*. Future work in this area should focus on extending its application not only to other MMOGs, but to other forms of technically mediated multiplayer games as well. Of equal importance is the continued exploration of the property of playfulness, as well as the opportunities for democratic rationalization within all systems of social rationality (Feenberg, 2008). Ultimately, the study of games must always be aware of the fact that online digital play is much more than a technological divertissement. It also forms virtual communities in which rational systems of commerce, technology, and game play interact to produce a multilayered social experience.

NOTES

1. For more on the theory of social rationality, see Feenberg (2008).
2. We are inspired here by Thompson’s (2005) expansion of Feenberg’s instrumentalization theory to the study of commodification. Thompson grounds his reworking of Feenberg’s secondary instrumentalization within economic and critical theories, uncovering the four characteristics or processes fundamental to a system of commodification (alienation, exclusion, rivalry, and standardization).
3. The concept of playfulness is reminiscent of de Certeau’s (1984, p. 29) notion of “la perruque,” wherein the structure and seriousness of work and the open spontaneity of leisure are seen to “flow together,” repeating and reinforcing each other. While playfulness can operate either in accordance with or in subversion of the rules and structures of the overarching system, it always only operates in (parasitic) relation to the system.
4. “Machinima” consist of player-produced films made out of games, either through bricolage (game play is simply recorded and edited in such a way as to construct a new or derivative text) or by using the game environment as a virtual film set in which players act out scenes and scripts.

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