

(Re)Inventing the Internet

Critical Case Studies

Andrew Feenberg and Norm Friesen (Eds.)

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Edited by

Andrew Feenberg

Simon Fraser University, Burnaby, Canada

Norm Friesen

Thompson Rivers University, Kamloops, Canada



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PREFACE

The Internet, as Though Agency Mattered

The critique of technological determinism is something of an chapter of faith in studies of communication technologies today, thanks to two key developments dating from the early days of new media research. The first was a shift toward constructivist views of technology, borrowed from science and technology studies and cultural analyses of media in the work of Raymond Williams and others. The second was the turn toward subjectivist epistemologies and qualitative fieldwork methods that transformed communication and mass media research in the 1980s, and which encouraged a reorientation of media studies toward the “domestic” and “everyday life” contexts of media use. Since that time, media studies, cultural studies, and new media scholars have routinely disavowed the channel-centric, powerful-effects view of communication technology that pervaded so much of mass media research through the 20th century, in favour of culturally-situated, subjectively-experienced accounts of media development and use.

But if new media scholarship eschews powerful *technologies*, the field still clings to a widespread, if implicit, belief in powerful media *representations*, *content* and *institutions*. Producers and owners of media programs and systems (including new media) are assumed to wield globalized, hegemonic, and disproportionate power over consumers (even in their new guise as “users”). Although it rejects technological determinism, the field seems reluctant to part with structural/cultural determinism and the presumed “impacts” of media representations and institutions *on* individuals, society and culture. Too often, people’s engagement with media is still conceptualized in terms of reception and consumption, rather than expression, organization, relations, and interaction – what elsewhere I have described as *mediation*, in both the technological sense of devices that extend our abilities to communicate, and the relational sense of negotiation and intercession (Lievrouw, 2011).

Into this arena, Andrew Feenberg and his collaborators bring a welcome, and overdue, shift of focus. Their key insight is that most media researchers, including new media scholars, have misunderstood the characteristics of networked computing and telecommunications that make “the Internet” – actually a constellation of interlinked and emergent platforms, uses, devices, affordances, and social/cultural resources and relations – a fundamentally different context and scaffolding for human communication than was ever possible via conventional mass media systems. Consequently, media researchers have tended to underestimate or even disparage the avenues and opportunities for resistance, democratic participation, and emancipatory change available via new media, and to overstate the ability of powerful institutions to block or constrain the ways that people use and reconfigure the technologies.

Certainly, new media can be used simply as pipelines for content distribution and delivery, and as with mass media distribution channels, those pipelines may be just as easy to interrupt or shut down (at least until users figure out a work-around). However, the authors in this collection argue that the real power of the Internet, as demonstrated from the earliest email programs on the ARPANET to contemporary Twitter feeds, derives from the fact that computer networking, as Feenberg puts it in his introduction, “is in fact the first successful mediation of small group activity.”¹ As a communication medium, networked computing is extraordinarily well-suited to group processes and interaction, and indeed allows “local” group processes and network relations to expand to global scale. The facilitation of interpersonal and group communication, where people are *agents* and *actors* and not simply consumers of media products, is the source of the persistent appeal and power of new media.

Moreover, the material infrastructure of the Internet and related technologies is, as Feenberg says, “radically incomplete,” not yet approaching the kind of closure and stabilization that have marked communication technologies in the past. (Indeed, I would go further and argue that Internet design and architecture, predicated on “survivability,” redundancy, and openness to diverse devices and applications, actually *resist* this type of closure. The “recombinant” quality of Internet infrastructure is what allows us to keep calling new media “new” [Lievrouw & Livingstone, 2006]). This persistent lack of closure, and the incompleteness, emergence, or recombinant dynamics of new media technologies, in some sense invite people to tinker with existing features and platforms, and use them to devise new or non-obvious affordances and uses according to their own purposes and interests. Feenberg, of course, has usefully theorized this process, within his broader critical theory of technology, as *instrumentalization*: people seeking solutions to problems recognize potentially useful objects and affordances in the world, remove them from their original settings and purposes to highlight their new uses, and then reconfigure and fit them back into existing systems, standards, and repertoires of practice in new ways (Feenberg, 2005).

Together, the ability of Internet infrastructure to support and extend group interaction, and its “radical incompleteness,” have fostered a diversified, idiosyncratic, opportunistic and serendipitous arena for building relationships, interaction and what Feenberg calls “new forms of agency.” Actors can use technology to challenge established institutional power and prerogatives, and in the process reconfigure not only the prevailing social order, but the technical infrastructure that supports and subtends it. New forms of agency have opened the way for the new, mediated modes of sociality, reciprocity, participation, mobilization, and resistance that are highlighted in this book.

The chapters and cases collected here provide rich evidence that agency and action are key to understanding people’s engagement with new media. To mention just a few examples: Bakardjieva documents the “subactivism” of people with little time for institutional politics, but who nonetheless identify with one another and cultivate their “small world” interests and concerns interpersonally, online. Subactivism thus echoes the “unconventional action repertoires” and “prefigurative”

forms of political action described by theorists of new social movements (i.e., movement members “live” their politics through their lifestyles, identities, creative works, and relationships, rather than joining formal political organizations and campaigns). But Bakardjieva’s findings demonstrate the inseparability of such activities in online and offline modes of everyday life.

Hamilton and Feenberg make the case that effective online teaching, like effective face-to-face instruction, is fundamentally relational and not merely a matter of information delivery. Understood this way, online pedagogy has the potential to enrich and extend the traditional values of scholarship and teaching, and to resist the deskilling and reduction of higher education to David Noble’s feared “digital diploma mills.” Friesen, Feenberg and Smith call for a move away from framing surveillance in Foucauldian, “panoptic” terms that emphasize the unseen power embodied in remote databases, and toward a framework that recognizes people’s own power to understand, act on, and undermine the interests of surveilling interests and advance their own. This notion of surveilled persons as subjective, and active, agents and actors, rather than acted-upon “representations,” is broadly congruent with much recent work in surveillance studies that emphasizes “ethical surveillance” and people’s capabilities to recognize, resist, and even play with the information that they reveal about themselves and thus subvert institutional aims and power (Monahan, Murikami-Woods & Phillips, 2010; boyd, 2011).

This collection, then, is not just a set of empirical “tests” of the critical theory of technology. More importantly, it is another step in the movement in new media scholarship toward an understanding of communication technologies as inextricably entwined in everyday experience, and of mediated communication as a complex, contingent and continuous process that articulates the symbolic and the material, technology and experience, structure and action, constraint and agency.

NOTES

- ¹ The extensive literature on computer mediated communication [CMC], grounded in theories of interpersonal, small group, and organizational communication rather than mass communication research, richly demonstrates the power of this insight. (See, e.g., Thurlow, Lengel & Tomic, 2004.)

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Leah A. Lievrouw
Los Angeles, 2011

I. CODE AND COMMUNICATION

ANDREW FEENBERG

INTRODUCTION

Toward a Critical Theory of the Internet

Technologies normally stabilize after an initial period during which many differing configurations compete. Once stabilized, their social and political implications finally become clear. But despite decades of development, the Internet remains in flux as innovative usages continue to appear. The nature of the network is still in question. It is not a fully developed technology like the refrigerator or the ball point pen. Yet this has not prevented a huge outpouring of literature hyping the Internet or criticizing its impact. Some point to the empowering effects of online activity on recent electoral campaigns in the US and revolts in the Arab world to argue that the Internet is a democratizing force. Others claim that the Internet is just a virtual mall, a final extension of capitalist rationalization into every corner of our lives, a trend supported by an ever denser web of surveillance technologies threatening individual autonomy and democratic discourse. In fact this controversy is the best evidence that the Internet is not a finished work. The case cannot be closed while the debate continues with such fierce intensity.

This book offers an original approach to the controversy. Each of the five chapters acknowledge the intensified rationalization brought about by the Internet while also highlighting the innovative forms of community that emerge among the publics these technologies assemble.

Communities of medical patients, video game players, musicians and their audiences, and many other groups have emerged on the Internet with surprising consequences. This introduction will focus on the significance of such communities as sites of resistance. Although they appear marginal to politics in the usual sense, they are redefining the political in response to the omnipresence of technology. The correlation of technological rationalization and democratic social initiative provides a more complete picture of the Internet than either aspect taken by itself.

The critical theory of technology, applied in some measure in each of the chapters, emphasizes the political structuring of the world emerging under the impact of the Internet. Technology is neither a realm of rational consensus nor is it a mere tool of its owners and managers. We have learned from social studies of science and technology (STS) that technology assembles workers, users, even victims, who share in common a world it creates. Their participation in these technological worlds shapes their conception of their concerns and channels their activities. Yet this is not a deterministic thesis. Technology is not an independent variable but is “co-constructed” by the social forces it organizes and unleashes.

Critical theory of technology departs from mainstream STS in treating such technological worlds as terrains of struggle on which hegemonic forces express

themselves through specific design strategies in opposition to subordinate groups that are more or less successful in influencing the future form of the artifacts with which they are engaged. The Internet enables communication among these subordinate groups with significant effects. In the chapters that follow, these abstract methodological principles are applied to concrete cases involving surveillance, online education, video games, Internet activism, and citizenship.¹

HISTORICAL BACKGROUND

The earliest version of what has become the Internet went online in 1969. This system was called the ARPANET, after the Advanced Research Projects Agency of the defense department that specialized in “blue sky” projects, projects so wild and speculative no normal government agency would dare fund them. It is interesting to note that even at this early stage some of the engineers involved believed their work would have enormous beneficial impacts. They prophesied a global community organized by computer networks. One of these early enthusiasts, Vinton Cerf, waxed poetic in his “Requiem for the APRANET.” He wrote:

Like distant islands sundered by the sea,
we had no sense of one community.
We lived and worked apart and rarely knew
that others searched with us for knowledge, too...

But, could these new resources not be shared?
Let links be built; machines and men be paired!
Let distance be no barrier! They set
that goal: design and build the ARPANET!
(quoted in Abbate, 1994.)²

The Internet gradually went public in the 1980s and ‘90s, but even earlier social commentators were prophesying great things from computer mediated communication. In 1978 Murray Turoff and Roxanne Hiltz published a work of analysis and prediction entitled *The Network Nation* (1993). They foresaw widespread adoption of computer networking for telework and education. They believed networking would promote gender equality and speculated that electronic discussion and voting would revivify the public sphere in democratic societies.

They may have over-estimated the transformative power of their favorite technology, but their projections were modest compared to many that came afterwards. According to a whole new genre of Internet hype, networking was a change comparable in significance to the Industrial Revolution and would soon transform every aspect of our lives. Cities would be depopulated as people retreated to electronic cottages in the woods. Government as we know it would be replaced by continuous electronic plebiscites. Intelligent “agents” would learn our preferences and control the mechanical world around us without our having to lift a finger. Even sex would be transformed through remote access to virtual partners.

Naturally, the hype called forth its demystification. The historian of technology David Noble warned ominously that “visions of democratization and popular

empowerment via the net are dangerous delusions; whatever the gains, they are overwhelmingly overshadowed and more than nullified by the losses. As the computer screens brighten with promise for the few, the light at the end of the tunnel grows dimmer for the many” (Noble, consulted Nov. 11, 2006: 12).

Noble expressed the widespread skepticism about the Internet that appeared in the 1990s as it became a theme of popular discussion. Social critics point to a number of phenomena inimical to democracy. Some argue that the digital divide excludes the poor while enhancing the powers of the well-to-do. Others complain that online discussion merely reinforces preexisting prejudices because people segregate themselves on the Internet from those with whom they disagree. Still others argue that the Internet is so thoroughly colonized by business that it is little more than a vehicle for advertising. Democracy is threatened by new technologies of surveillance that employ the network to concentrate information from many sources, exposing deviations from the norm through tracking and data mining.

This threat is the subject of the chapter by Norm Friesen, Andrew Feenberg, Grace Chung and Shannon Lowe. The chapter explores the consequences of surveillance for personal identity and the resistance it evokes. The chapter notes that surveillance technology gives rise to temporary communities of the surveilled, who enact their unruly dissent before the camera. And as Wikileaks has shown, surveillance is a two way street and can occasionally be turned against the surveillers.

The most trenchant critiques of the Internet challenge its capacity to support human community. Without face-to-face contact, it is said, people cannot take each other seriously enough to form a community. How can moral roles bind us and real consequences flow from interactions that are no more durable than a flicker on the screen? As Albert Borgmann wrote, “plugged into the network of communications and computers, people seem to enjoy omniscience and omnipotence; severed from their network, they turn out to be insubstantial and disoriented. They no longer command their world as persons in their own right. Their conversation is without depth and wit; their attention is roving and vacuous; their sense of place is uncertain and fickle” (Borgmann, 1992: 108).³

In this Introduction I respond to such criticisms and argue that the Internet does have democratic implications. I do not exaggerate the significance of the Internet. It will not replace Congress with a universal electronic town hall nor will it overthrow dictatorships around the world. On the other hand, the contrary exaggeration seems to me to reflect a lack of perspective. It threatens to blind us to real possibilities that should be seized rather than dismissed. These possibilities have to do with online community, supported by the Internet, and given over, as the critics note, to endless talk. But discussion lies at the heart of a democratic polity. Any new scene on which it unfolds enhances the public sphere. In an increasingly rationalized society, where individuals’ activities are more and more strictly structured by business and government, the existence of this new form of community is particularly significant (Neyland and Woolgar, 2006).

Complaints about the Internet are similar to complaints about television broadcasting and in fact it seems that bad experience with the latter has shaped

negative expectations about the former. Recall that television promised a “global village” (McLuhan) in which new solidarities would arise from easy access to information about other peoples and their problems. It is true that useful information circulates on the evening news but arguably propaganda and advertising have far more influence.

Aldous Huxley published *Brave New World* in the early 1930s, only a few years after the first commercial radio broadcasts, but already his dystopian vision of a totally manipulated public captured this very real threat. Many social critics seem to have concluded that technical mediation as such leads to mass alienation. Can the Internet be squeezed into this same pattern? I do not believe so.

The difference between television and the Internet is a consequence of their different technical structures. In broadcasting a single source sends out messages to a silent mass audience. Computer networking restores the normal pattern of human communication in which listening and speaking roles alternate rather than being distributed exclusively to one or another interlocutor. Furthermore, networking is the first successful technical mediation of small group activity. The telephone brought together pairs of interlocutors and broadcasting addressed mass audiences. But until recently the huge range of human activities that go on in small groups was not technically mediated and therefore could only be carried out in face-to-face settings. The Internet enables reciprocal communication among small groups. The members of these groups both receive and emit information. This is an important advance that we tend to take for granted since it seems so obvious after 30 years of widespread online communication.

The critics underestimate this phenomenon and respond more to the exaggerated claims of Internet hype than to the reality of online experience, including even their own. For example, in a recent chapter in *The New Yorker*, Malcolm Gladwell compares the Internet unfavorably with sit ins in the civil rights movement (Gladwell, 2010). How much courage does it take, he asks, to sign an Internet petition? This is silly. It would make more sense to compare the Internet with the telephone trees and mimeograph machines we used to notify activists and print up leaflets back in the days of the sit ins rather than the political acts those means of communication were intended to serve.

Here is another case in point. Hubert Dreyfus focuses his critique of the Internet on a group called the Extropians who look forward to the day their brains can be downloaded into computers (Dreyfus, 2001). There would be no point in attacking this group if it were not significant, but I do not see what it can signify to those of us who use the Internet daily while remaining firmly committed to embodied existence. To confuse matters further, Dreyfus dodges the charge of Luddism at the end of his book by explaining his use of the Internet in his classes at Berkeley. Nowhere does he reflect on the social and political significance of online community. Instead, he actually dismisses online discussion as trivial because it is not carried on with sufficient expertise or commitment. But that is not so much a critique of the Internet as of democracy itself.

Missing in the critics’ account is any sense of the great victory represented by the conquest of this new territory for ordinary human communication. There is a

long history of communication technologies introduced for broadcasting or official usages that ended up as instruments of informal human interaction. The telephone, for example, was originally intended for government business. When women appropriated it to organize the social life of their families, engineers complained bitterly about the waste of their beautiful instrument (Fischer, 1988). Even more surprising, the telephone was at first imagined as a broadcasting technology. In the early days, several companies distributed live musical performances to subscribers. In France the Théâtrophone company thrived until 1920 broadcasting operas (Bertho, 1984: 80–81).

This pattern is repeated in the case of computer networking. The first successful domestic network was not the Internet but the French Minitel system. Concerned about the slowness of computerization in France, the government established a network based on technology similar to that of the Internet. Six million free Minitel terminals were distributed to telephone subscribers in the early 1980s. These terminals were designed to consult a national electronic phone directory, to display news and classified ads, to consult train schedules, examination results, and other official documents. But soon after the system was deployed hackers introduced instant messaging. It did not take long for this unexpected application to become the Minitel's single most important usage. Ironically most of the messaging was dedicated to the search for dates and sex. The cool new information medium was transformed into a hot electronic singles bar (Feenberg, 2010: chap. 5).

Like the Minitel network, the Internet was not originally designed to support human communication and it could have excluded the public entirely. Given its military origins, this might well have been the outcome. But the technology underlying the Internet is so powerful it could hardly be contained. This technology, called packet switching, is useful among other things for building a secure communication system. This is what originally interested the military. The telephone network is vulnerable because it depends on a central computer to connect up correspondents. A single bomb could take out the whole system by hitting this center, but packet switching makes it possible to route messages through many different computers and so the system does not depend on the survival of any one of its nodes. Strange as it seems today, radio communication among tank commanders was suggested as an early application of packet switching.

Military planners were more interested in survivability than control. For this reason their design was non-hierarchical and redundant, qualities that later turned out to privilege the free flow of information and innovation. Features of the original design persist and pose significant problems for business and repressive governments while also enabling both public spirited and socially stigmatized activities to go on unhindered. The military design of the Internet thus comes to the aid of ordinary users (Abbate, 1999).

The early ARPANET was intended to test the new technology with university based military researchers. After World War II, military planners were convinced that American power depended on scientific research, and they believed the scientists who told them that research depended on communication and collaboration. The

Pentagon hoped that university scientists would share computing resources and data over the Internet.

Soon after the ARPANET went online, at a time when it connected only a few universities, an engineer introduced an e-mail program. Like the early telephone company engineers, those responsible for the ARPANET project were at first leery of wasteful socializing but they soon came to appreciate its potential for building community and so they allowed the experiment in e-mail to continue. We have inherited the consequence of that decision.

To get an idea of its significance imagine how we would feel if institutions such as universities, government agencies, and corporations allowed only official communication on their property: no jokes, no personal remarks, no criticism. We would surely find such severe censorship totalitarian. The Internet could have been configured technically in just this way. The result would have been the enhancement of official communication in business and government with no corresponding enhancement of the informal communication in which daily life goes on, including the conversations of political significance that form the basis of the democratic public sphere.

This hypothetical example indicates the need for a different approach to understanding the Internet from that taken by its severest critics. They focus on the triviality of most of the communications but they fail to realize that without opening a channel for trivial speech, there can be no serious speech. We have no record of the conversations in those 18th and 19th century pubs and coffee houses idealized (perhaps rightly) as the birthplaces of the public sphere, but no doubt in their precincts much time was wasted. Rather than comparing the Internet unfavorably with edited cultural products like newspapers, it would make more sense to compare it with the social interactions that take place on the street. There the coexistence of the good, the bad and the trivial is normal, not an offense to taste or intellectual standards because we have no expectation of uniform quality. In what follows I will outline an approach that allows for the dross and also the gold in the flood of words on the Internet.

I intend to do this through a brief account of the public role of online community on the Internet. I will not discuss the myriad examples of democratic politics in the usual sense of the term. The list of activities in which the Internet plays a role gets longer every year, starting with the Zapatista movement in Mexico and continuing with the protests against the WTO and the IMF, and the world wide demonstrations against the War in Iraq. The Internet also plays an important role in electoral politics, first coming to attention with Howard Dean's campaign and finally paying off in the election of Barack Obama. The recent Arab revolts should be proof enough of the political potential of the Internet. In all these cases the Internet has broken the near monopoly of the business and government dominated official press and television networks by enabling activists to organize and to speak directly to millions of Internet users (McCaughey and Ayers, 2003).

These examples seem to me to provide strong evidence for my position, but they are not enough for Darin Barney, who argues that "these alternative and resistant practices still represent a tear in a salty sea of hegemonic encounters with the broad

scope of digital technology and its culture. To take the measure of the present conjuncture we need careful work that documents and even promotes tactical political uses of these technologies, but we also need to place these uses in the broader context of what remains a very powerful set of technologies configured to advance and secure what Jacques Rancière has described as the ‘unlimited power of wealth’” (Barney, 2011).

To answer objections such as this, a theoretical framework must give the political Internet substance. After all, as Barney suggests, political usages might be exceptional and the Internet defined by narcissistic self-advertisement and business. My main concern in what follows is to develop a coherent alternative to such critical assessments. To anticipate my conclusion, I argue that politics on the Internet is the tip of the iceberg, arising in the midst of a broader revival of agency in many different types of online communities, and that it deserves our full attention and, indeed, our support.

TECHNOLOGY IN FLUX

I want to begin by introducing some essential methodological considerations. As I noted at the beginning of this Introduction, it is a commonplace error to consider the Internet finished and complete before it has actually achieved its final shape. Critics repeatedly generalize from rapidly changing characteristics to timeless conclusions soon outdated by further changes. But how can we evaluate a technology that is still in process, that is radically incomplete? This problem has been addressed by constructivist approaches in technology studies (Pinch and Bijker, 1987).

The chief idea shared by these approaches is negative: the success of a technology is not fully explained by its technical achievements. There are always alternative paths of development and social forces determine which are pursued and which fall by the wayside. Behind each of the technical devices that surround us there lies a ghostly halo of alternatives that were eliminated at some stage and which we have forgotten or notice only in quaint illustrations of old books. What is called the principle of “underdetermination” teaches that technical considerations alone cannot explain why we are living with this particular survivor of the process of elimination rather than that one. Historical events, not technical superiority in some absolute sense, explains why, for example, we use electric rather than gas powered refrigerators, and why our cars run on gasoline rather than kilowatts.

To make matters still more complicated, the struggle between alternatives is not a straightforward competition to achieve the same goal. Approximately the same technology, with a slightly different design, can serve the interests and needs of very different social groups. Consider, for example, the significant social difference made by such a trivial technical change as the introduction of sidewalk ramps. The rights of the disabled are embodied in those ramps. Here is another example. The early bicycle came in two main varieties, a speedy type with a large front wheel and a slower, more stable version with wheels the same size. Neither was “better” than the other. The contest between them was decided by which value, speed or stability, was to be supreme in the world of bicycles. We know which won out.

Thereafter all later evolution of the bicycle benefited the successful line of development. The defeated alternative was left frozen in time like a dinosaur fossil and so appears obviously inferior today in a typical illusion of progress.

The ambiguity of the early bicycle is typical. It illustrates what constructivists call the “interpretive flexibility” of technologies. Until it is clear what a technology is for, its design cannot be standardized. Technologies are most ambiguous at the beginning of their development when several designs compete. Eventually one among these designs wins out and a standard emerges. The standard usually prevails for a long time, but it can be unseated and interpretive flexibility return if the conditions that favored it change. We are surrounded by such stabilized technologies, but the Internet is not yet among them. It is still in the full flush of its early development and so is radically indeterminate.

This constructivist approach represents technologies not as things but as processes in more or less rapid movement. The process pulls at first in several different directions but is finally stabilized in a single more or less durable form. Because our lives move quickly with respect to these stabilized forms, it appears that technical artifacts are finished and fixed rather than relatively temporary arrangements that may enter into flux again at a future date. We assume the functions they serve are the obvious ones similar technologies ought to serve rather than noticing the contingency of their functions on particular configurations of social forces that interpreted the problems in a certain way at the outset. Constructivism aims to overcome this illusion in order to restore a more accurate picture of the process of development.

To apply the constructivist approach to the Internet, we need to identify the various versions of it that currently coexist and from among which a selection will finally be made. Note that the closure of the Internet around one of these possible configurations does not preclude the survival of the others in subordinate roles. At its inception radio broadcasting was dominated by education and public programming and television was originally conceived for surveillance and education. Both technologies quickly fell under the control of business and are defined today as entertainment media. Other usages were not excluded although the technical and legal dimensions of these alternatives are largely determined by the requirements of entertainment (McChesney, 1999).

Critics of the Internet believe something similar has already happened, but they exaggerate the extent of business control so far achieved. A truly business oriented network like the Minitel offers possibilities unthinkable on the Internet. For example, the French system was designed to track the time individual users spent on services so as to charge them by the minute through their telephone bill. The network protocol employed by the French Telecom made this possible while also complicating the internationalization of the system. The Internet protocol is not able reliably to charge users for services, hence the importance of advertising, but it has other features which have enabled it to spread over the entire globe. Business is a latecomer to this global system and it is still struggling to impose its hegemony.

THREE MODELS

I have argued that the Internet is still in flux, wavering between alternative paths of development. I identify three possible paths for the Internet which I call “models” since they aspire to define the dominant features of the technology. Each of these models represents a possible configuration that may prevail in the future. They are: the *information* model, the *consumption* model, and the *community* model. As we will see only the community model bears the democratic potential of the Internet.

The Information Model

This model presided over the origins of the Internet and similar systems such as the Minitel network in France. It aims at improving the distribution of information, a function that the Internet fulfills and will undoubtedly continue to fulfill so long as it exists. As a social project computer networking was intended to realize sociological theories of the information age according to which knowledge has replaced industry as the most important source of wealth and power. The information model realizes this vision by offering wide access to information. This is what inspired attempts to spread the information model from professional into domestic settings in the 1980s in France and a decade later on the Internet. In fact it quickly became apparent that personal communication was far more attractive to users of these systems than any economically significant exchange of information. Thus the information model has little chance to prevail as an overall interpretation of the meaning of the Internet.

The consumption model

It is a curious and little known fact that the early Internet was virulently hostile to business. Attempts to sell goods and services on the system were severely repressed. An individual who scandalized the community by engaging in commercial activity would be attacked by hundreds, even thousands, of hostile emails. But once the decision was made in the early 1990s to allow commercial activity on the Internet, a tidal wave of corporate initiatives swept over the rather sedate virtual space occupied up to then by individual hobbyists and university faculty. The Internet was the technology behind the famous dotcom boom and even the later bust did not diminish the pace of business activity in cyberspace for long. Today, Internet-based markets are a factor in the prosperity of nations.

This new type of market inexpensively links up people and goods over a global territory. The most profitable Internet businesses resemble eBay in stocking little or no inventory, but in delivering a smooth connection between supply and demand. Although email remains the most used function of the Internet, e-business does not lag far behind.

The consumption model has enormous potential for growth because film and television have not yet been fully adapted for delivery over the Internet. We can expect a huge boost in consumption usages when every sort of recorded entertainment

is readily available. Already this prospect is pressing on the legislative agenda of the United States government. Entertainment companies and Internet service providers are anxious to obtain the legal right to convert the Internet into an enhanced version of television by privileging high speed delivery of entertainment over other functions served by the system.

This means the end of “network neutrality,” the current rule under which all types of communication are treated equally. If the companies prevail, the Internet may soon see far less communicative and public usages as bandwidth is monopolized by profit making enterprise. While so far this is primarily an American debate, its effects would be felt worldwide, as was the case with the Digital Millennium Copyright Act. Further development of the technology would undoubtedly follow along lines determined in the US for years to come. The triumph of the consumption model would transform both the dominant interpretation of the system and its technology.

The community model

The Internet as we know it today is dominated not by business but by users whose free communication prevails in cyberspace. The two main types of personal communication are individual email and various forms of group communication such as listservs, computer conferences and web forums. Initially, these were separate from homepages, which contained personal information. This has changed as communication and personal content are combined on social sites such as Myspace, Facebook, and Blogs, often referred to collectively as Web 2.0.⁴ Communities form around these spaces of virtual social interaction.

Community is the primary scene of human communication and personal development. It is in this context that people judge the world around them and discuss their judgments with others. Any technology that offers new possibilities for the formation of community is thus democratically significant.

But are online communities real communities, engaging their members seriously? The testimony of participants as well as extensive research confirms that the Internet is the scene of new forms of sociability that strongly resemble face-to-face community. For example, surveys conducted in several countries by Japanese researchers reveal that the ethical assumptions guiding Internet users resemble their everyday ethical behaviors (Nara and Iseda, 2004). Not technology but character determines behavior online. And character is precisely what community requires, i.e. the ability to commit to a group of fellow human beings. The behaviors and symbols that sustain and support the imagined unity of community are routinely reproduced on the Internet. I cannot pursue this argument further here but there is much more to say in defense of the idea of online community (Feenberg and Bakardjieva, 2004).

The essence of the community model is reciprocity. Each participant is both reader or viewer and publisher. To maintain this structure, the community model requires the continued neutrality of the network so that non-professional, unprofitable and politically controversial communication will not be marginalized. It must be

possible to introduce innovative designs for new forms of association without passing through bureaucratic or commercial gatekeepers. The involvement of open source developers and other unpaid volunteers is essential and cannot be expected to survive a commercial take-over of cyberspace. Embedding a strict regime of intellectual property in the technology of the system would surely be incompatible with free communicative interaction.

The conditions of community are both social and technical. Should the community model prevail, commercial, entertainment and informational applications would certainly find their place, but they could not dominate the evolution of the system with their special technical requirements. Indeed, so far business seems to be adapting to the requirements of community: the commercial takeover of certain community sites turns them into platforms for advertising without necessarily disturbing their communicative content.

The relations between these three models are complex, characterized by elements of conflict as well as innovative combinations of features drawn from each. Two chapters of this book, on online education and video games, illustrate the complexity that results from their interaction.

The chapter by Hamilton and Feenberg describes the development of online education since its invention in the early 1980s. Only online discussion was possible then and so a pedagogy developed based on dialogue and collaboration. Later, university administrations were attracted by the still unfulfilled promise of automated learning on the Internet. The collapse of that project has left a confusing situation in which online education means very different things to different people. Millions of students use online sites and forums today. Many of them are adult learners who would not be able to study in a traditional university setting. The communicative potential of online education represents a great improvement over the one way model of traditional distance learning. For on-campus students, online education offers opportunities for discussion as a supplement to lectures held in a conventional classroom setting. This too seems an improvement over the traditional lecture course. Nevertheless, there is a risk that because it is a new and poorly understood technology, online education will provide a cover for the reduction of education to the mechanical delivery of materials. The struggle over the future of the Internet is paralleled by this controversy over how best to employ it in education, either to constitute educational communities or to distribute information or, most likely, some combination of the two models.

The video game industry offers another example of the complex interactions that characterize the Internet today. The industry is now larger than Hollywood and engages millions of subscribers in online multiplayer games. The players' gaming activities are structured by the game code, but online communities organize them in informal relationships that the industry does not control. The "ludification theory" presented in the chapter by Grimes and Feenberg explains how these communities form within and in reaction to the rationalized structures of game technology. Once activated, the community struggles to reconfigure aspects of the game, mobilizing code and items from the game in new ways and contexts. Markets appear in goods won during play as players auction them off for money. Games are

modified by players skilled at hacking. Companies may protest these unauthorized activities but in the end they usually give in and attempt to co-opt what they cannot control. Interaction between game designers and players and among the players themselves creates an environment unlike the mass audiences created by television broadcasting.

THE POLITICAL INTERNET

Commentators noted early that online communities form around a shared interest or concern. In this they differ from geographically based communities in which a far more mixed population is related by place. Is this good or bad? Disadvantaged publics can pool their forces online and have a greater impact. This has made it possible for ordinary Americans to raise huge sums of money for political candidates who might have been swamped at the polls by adversaries with the support of a few wealthy contributors or party organizations. On the other hand, public debate involves disagreement and it is said that debate is sidetracked by the homogeneity of Internet groups. Yet it is by no means certain that people engage in livelier exchanges off-line. In any case, those interested in politics rarely confine all their political conversation to the Internet. Everyone has many face-to-face contacts in which the opportunity for disagreement arises. This is not a persuasive reason to condemn the Internet and all its works.

These familiar debates overlook a more important issue. The most innovative democratic implications of the Internet are only beginning to emerge, and they have less to do with traditional politics than with new forms of agency that will redefine and enlarge the sphere of politics. What we commonly identify as politics on the Internet is merely an instance of this broader phenomenon. To understand this new politics we will need to reconsider how we think about technology once more.

Until recently, the main emphasis in discussions of technology has been on efficiency, but American philosophers of technology argue that this is insufficient. Langdon Winner was among the first to argue that “artifacts have politics” and to suggest that technology imposes a quasi-constitutional regime in laying out the conditions of everyday life (Winner, 1986: 47ff). Lawrence Lessig similarly proposes that “code is law” (Lessig, 2011). But while technology has such legislative power, it also shares the defect of much legislation in favoring some interests at the expense of others. This is why it would be desirable to establish a more democratic technological regime, enabling the representation of a broad array of interests.

But politics differs from technology in many ways. Political representation in democratic republics has always been organized primarily around geographical units. The common interests of those who live together provide a basis for shared decisions and the choice of representatives. Where disagreements arise, they can be overcome through discussion and voting in a community forum or election of some sort.

Representation is the principal means of community self-assertion in modern democracies. It is through their representatives that groups pursue their interests in

the political sphere. We call this exercise of power “agency,” meaning the capacity to act. Representatives in traditional politics exert agency on behalf of a community, acting more or less under its control.

But advanced technological societies assemble collectives of geographically scattered individuals around technical mediations of one sort or another. Educational activities, work, entertainment, even illness create a shared world in which the individuals circulate just as much as they do in their local community. New networks emerge that are mediated by shared relations to technology and these networks overlay the geographical communities and compete with them in significance in the lives of citizens. To belong to such a network is to have specific interests that flow from participation in the opportunities it opens up and the problems it causes. I call these “participant interests.” They may be represented better or worse depending on the design and organization of the network, the possibilities it offers for its members to recognize their shared belonging, and the body of knowledge that presides over it (Feenberg, 1999: chap. 6).

The Internet has the power to put those involved in these technically mediated networks in contact with each other. What is most innovative and politically significant about the Internet is its capacity to support collective reflection on participant interests. This is the central theme of Bakardjieva’s contribution to this book. She explains the emergence of new forms of community among Internet users in response to a wide array of civic problems and frustrations. Bakardjieva calls this “subactivism,” a kind of pre-politics that opens spaces for agency in relation to institutions such as the medical system, government agencies, and schools. The boundaries between the personal and the political, the “small world” of everyday life and the larger society are shifting.

The representation of technically mediated communities is complicated by the role of experts in the creation and operation of technical networks (Feenberg, 1995: chap. 5). Experts represent the community constituted by a technical network in the sense that they implement some of the participant interests of its members. But expertise is based on technical knowledge which, unlike the wisdom sought in political representatives, is cumulative and must be acquired through extensive training. Like technologies, technical disciplines are underdetermined and realize specific social interests in technically rational forms. These bodies of technical knowledge transmitted to successive generations of experts contain the outcome of past struggles over design. Current designs are responsive to this technical inheritance and to the agency of current participants bringing pressure to bear on those in control of technology.

Where technology is involved the enormous cost and the long time delays in generating a cadre of experts forbid abrupt and drastic changes. As new groups emerge, they must impress their concerns on a body of experts, convince them to modify existing designs, and eventually install their concerns in the training of the next generation of experts. The participant interests of members of technically mediated communities are thus represented differently from political interests of geographically based communities.

In her chapter, Milberry discusses this problem as it has been addressed by the new “tech activism.” The emergence of a cohort of self-taught radical experts on the technology of the Internet opens up new possibilities. Milberry examines how and why these tech activists appropriated wiki technology, using it as a space and tool for democratic communication in cyberspace. In turn, this has enabled the realization of new communicative practices offline, establishing a dialectical relation between technological experts and the social world they serve. Democratic practice online prefigures a more just society in which democratic interventions into the development and use of technology are consciously organized.

The chapters of this book show how online communities have begun to use the Internet to coordinate their demands for a fuller representation of participant interests. Despite discouraging developments in other domains, agency in the technical sphere is on the rise. New forms of online politics cannot replace traditional geographically based representation, but their existence does mean that activity in the public sphere can now extend to embrace technical issues formerly considered neutral and given over to experts to decide without consultation. This creates a social and technical environment in which agency in the traditional domains of politics has also begun to recover from the passivity induced by a steady diet of broadcasting.

The research challenges presented by this new situation are daunting. Politics is no longer the exclusive affair of traditionally constituted political groups debating the traditional issues. The range of issues and groups is constantly widening in the most unpredictable ways. New groups emerge through struggles to constitute an identity as they simultaneously work to redescribe and reinvent the “world” in which they live (Callon, et al., 2009). Internet researchers must be alert to similar phenomena in the technically mediated environment they study.

The examples described in the chapters of this book suggest a significant change in our world. The return of agency may appear non-political but what is democracy if not the activity of individuals in determining their own collective life? And to the extent that so much of life is now mediated by technology, more and more of it becomes available for these new forms of community control. That is, if the community model is able to sustain itself. This is the ultimate challenge for online community: to preserve the conditions of community on the Internet. A democratic Internet? That depends on the capacity of ordinary users to defend its democratic potential in the coming years.

NOTES

- ¹ For a review of the relation between media theory and STS, see Boczkowski and Lievrouw (2008).
- ² Fortunately, Cerf is a better engineer than poet!
- ³ But for his later view, see Borgmann, (2004).
- ⁴ It is worth noting that Web 2.0, insofar as there really is such a thing, did not introduce community to the Internet. It consists of the concretization and combination of communicative resources already present in separate programs in the online environment.

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II. PLAY AND SCHOOL ONLINE

M. GRIMES AND ANDREW FEENBERG

RATIONALIZING PLAY

A Critical Theory of Digital Gaming

INTRODUCTION

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 by PricewaterhouseCoopers (2008), 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 estimates that approximately 217 million people worldwide played online games in 2007—a number that continues to multiply as broadband Internet access spreads across the globe (Castronova, 2005). 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 is still in the preliminary stages. With few exceptions (Kirkpatrick, 2008), existing work in this area (including Postigo, 2003; de Peuter & Dyer-Witthof, 2005; Grimes, 2006) has focused predominantly on the expansion of production processes into digital play (such as labour, commercialization, etc.), reproducing the same work/play binary that has long characterized critical scholarship of play and leisure. 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 massively multiplayer online games (MMOGs)—is a particularly suitable candidate for a broader application of critical analysis. Games, as Feenberg (1995) argues, “[E]xemplify formally rational systems” (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 non-strategic 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). 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 which 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 system media which, on a large scale at least, is unique to modernity.

For the purpose of studying social rationality, Feenberg’s (1999) 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 (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 socio-culturally 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 (1992) 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 complex *lifeworld* experienced by those they enrol” (p. 311). 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 levelling 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). MMOG players invest a significant amount of time collaborating to produce cultural content and experiences, as well as 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 paper 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*, a popular MMOG that currently claims over 12 million players worldwide ("World of Warcraft," 2010) The goal of this chapter is to provide a framework for uncovering the rational properties of MMOGs, and to situate digital games within the larger socio-historical 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 non-rationalized 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 fulfils within advanced capitalism. On the one hand, leisure is integrated to the labour 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). Bourdieu and numerous other theorists argue that the spheres of work and play, if ever they were separate, are now inextricably entangled. 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 post-industrial work process (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 socio-economic 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 labour terms (Grimes, 2006). Taylor describes MMOG players' efforts to inscribe their avatars with personalities, reputations and achievements as a type of labour and collaborative authorship. Others, including Postigo (2003), and Kücklich (2005), have explored how practices such as modding and hacking come to operate as key sources of immaterial labour, oftentimes 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, 1983). 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 (Bourdieu, 1991). 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 behaviours 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 (2006), 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. (p. 8–9)

In their non-rationalized 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 non-rationalized to rationalized games. Standardization in organized sports and gaming clubs goes along with commercialized spectatorship in transforming players and player moves into predictable and measurable units. Gameplay 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 gameplay may acquire real-world exchange values. In each case, however, the mass commodification of a game will be preceded by its standardization and rationalization.

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 possible (and indeed desirable) part of gameplay when a game is played on an individual basis, for instance, between friends on a local playground. Instead, the players' actions in a technically mediated game are reduced to a pre-determined 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. Gameplay (and the player) becomes structured and rationalized by the game itself, which provides (and oftentimes 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 fulfil 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 gameplay 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.

The essential feature of rationalization is the capture of everyday activities by organizations and media. This includes ordinary play, which has always contained rational qualities (such as rules, points systems, standardized equipment, leagues and associations). Behaviours 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 behaviours. 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 enrol, but correspondingly, those persons have a certain independence which 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 behaviours 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 meta-texts such as fan fiction, walkthroughs, etc. 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.

In many ways, all gameplay 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 (1973) argues, is "that it provides a

metasocial commentary,” a story the players “tell themselves about themselves” (p. 448). 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), 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 espoused 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 (1955) 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” (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’ (2001) 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” (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, labelled *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 rules and gameplay, “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 (e.g. Geertz), as a meta-communicative framework (e.g. Bateson), or in terms of symbolic action or “rhetorics” (e.g. Sutton-Smith). Digital games scholarship has similarly attempted to address the dialectical dimension of gameplay, 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. For instance, Salen and Zimmerman (2004) 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” (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”—gameplay is seen as largely individual or limited to small groupings, and rather marginal to social order. For Caillois and Huizinga, 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 and Sutton-Smith, group play provides an important, albeit mostly symbolic, opportunity to re-enact, 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 gameplay 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 socio-cultural 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 (1973) reflexive theory of play and Walther’s 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). 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 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.

Walther employs Spencer-Brown's (1969) theory of distinction, as well as Bateson's 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' description of the shift from *paidia* to *ludus*.

According to Spencer-Brown, as Walther 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 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 which 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 channelled into games and a system of rules is introduced. Walther 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 (below) 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’ term for rational play (*ludus*), as well as the field of ludology, we shall provisionally call this the theory of *ludification*.

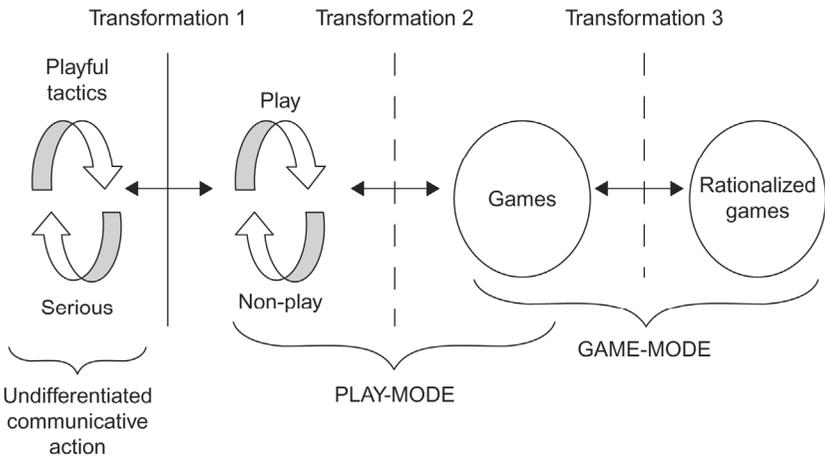


Figure 1. The rationalization of play: a differentiated approach.

The first transformation (illustrated in Figure 1) has been described above 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 which 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.”

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* which surfaces in a variety of ways as they engage with and appropriate the technology. The most obvious examples are hacking and modding, 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*, the collaborative role-playing and community-building that occurs within certain servers or player groups, players’ creative appropriations and remixing of game content, and the exchange of game codes and walkthroughs over the Internet. It is here that one discovers the vestiges of non-rationalized play, operating both inside and outside of the formal game structures, occupying the *margin of manoeuver* that co-exists alongside the regimented system of rationalized play.

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” (p. 147). It is through the unexpected or emergent player activities arising out of playfulness that the unrealized technical potential of digital games 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.

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 is accompanied by an increase in precision, which enables measurement and optimization of the gameplay, 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.

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 gameplay.

CASE STUDY: LUDIFICATION IN *WORLD OF WARCRAFT*

Launched in the US 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 two years a large amount of MMOG research has focused on the game and its population, design and cultural impact. This research has produced numerous chapters (e.g. Taylor, 2006b; 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 behaviours—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 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” (p. 319). 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 (2008) 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. (p. 128)

This occurs regardless of the specific aesthetic and narrative context of the game. In order to participate in WoW, the player must learn to manoeuvre 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 levelling 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 set-up 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 gameplay 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 (2003) 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" (p. 111).

The points and levelling 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 pre-determined and highly specified levelling 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-levelled 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 current level cap which will soon be 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.

The game's numerical systems constantly communicate to the player, Stallabrass (1996) argues, an unambiguous "idea of progress [that] is always present in the game, shadowing and interpreting the action" (p. 90). While players are always free to ignore the game's numerical structures, there are many rewards and benefits associated with "levelling 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) gameplay, one which reveals and highlights the very measurement criteria upon which the player's action 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 pre-selected ‘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 non-rationalized games) but is technically enforced by the game engine. In manoeuvring 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, gameplay 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 (2006a) 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” (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 behaviours, 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. 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). 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 pre-established 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 *gameworld*. As computer animation techniques, 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 playspace, 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 gameplay, but also as constituting the ‘physical’ reality of the gameworld.

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 gameworld. 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 above, unlike the rule systems of non-rationalized games, technologically mediated rules are rigid and precise, and cannot be negotiated or challenged by the average, non-specialist 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 gamespace (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 gameplay and player behaviour; 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 they disobey), these contracts demand that players waive a number of their rights while inside the game environment, including rights to freedom of speech, moral rights and authorship rights. In this way, Herman et al (2006) argue, WoW establishes its own "forms of governance and moral economies of practice" (p. 191) 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 behaviours. 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 above, within WoW, gameplay 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 table-top 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 byproducts 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, it also transforms player actions, in-game communications and creative contributions into neatly standardized and

easily retrievable data. This enables an ongoing and fairly detailed surveillance of player activities and interactions.

Precise knowledge of individual players' greatly facilitates the regulation of player behaviour, 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 (2004) argues, "[E]xpands the commodification of content by extending opportunities to measure and monitor, package and repackage entertainment and information" (p. 156). Game designers use intricate tracking and data mining systems to discover new patterns in behaviour 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.

The principle of precision spills over into player practices as well. Not only do players experience the precise measurement of their own powers and status by the game as described above, they also participate in measuring. 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 gameplay (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 of digital game technologies. It is here that democratic rationalization of this technological form becomes possible.

CONCLUSION

Whereas 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 socio-historical 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 not only on extending its application 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. 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 gameplay interact to produce a multilayered social experience.

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