Building Policy that Crosses Virtual Borders: A Case Study of A Virtual Labor Strike with Real World Ramifications

Author 1: Andrea Tapia,
College of Information Sciences and Technology, Penn State, atapia@ist.psu.edu

Author 2: Bridget Blodgett,
College of Information Sciences and Technology, Penn State, bward@ist.psu.edu

ABSTRACT

Within this paper, the authors present an initial analysis of a protest case study in Second Life and the policy, legal and regulatory issues it involves. In particular, the authors elaborate on the current understanding of legal frameworks within virtual worlds and build on the concept of inter-real harm first introduced by Warren and Palmer. Three critical events within the Second Life case: Media Storm, Organization, and Strike! are examined to see how the actions of the protesters and authorities meet the definition of inter-real harm and support the need for a new framework for understanding virtual worlds. Virtualizing protest changes the repertoire of contention that protesters and authorities operate under and introduces new complications and unconsidered consequences that are unique to virtual worlds. Inter-real harm addresses issues raised by some of these complications and its implementation requires a re-examination of law policy dealing with virtual worlds.

INTRODUCTION

In this paper, we present some initial analyses of a case study of the policy, legal and regulatory issues surrounding a successful labor strike, which took place within a virtual environment. This case highlights the way the digital and real world boundaries are blurred and how this challenges common understandings of virtual world regulation.

Although several prominent legal and criminological scholars have concerned themselves with law and regulation of virtual worlds, much of this work has focused on fraud, financial crimes, and on sexual (child) predatory crimes, all of which concern existing law (see Abrahams 2007 2008, de Zwart, 2009, Duranske, 2008, Gray, & Nikolakos, 2007, Lastowka, & Hunter, 2004, Wall, & Williams, 2007). The great majority of this work has focused on the questions of how to adapt offline laws to virtual environments, and whether to regulate the virtual at all.

A new classification of behaviors blurs the boundaries between actions in virtual and offline spaces. In their recent work, Warren and Palmer (2010) coined the term, "inter-real harm" to describe the unique potential for virtual environments to create harm in both virtual and offline worlds. Inter-real harm is contrasted on a spectrum between purely in-world, digital harm, which they characterize as too trivial to warrant formal action, and criminal harm, to which existing criminal law already applies. They state, "Within these extremes, a grey area of inter-real harms bridges the virtual and the real. Inter-real harms differ from conventional cybercrimes due to the peculiarly immersive character of 3dve [3D Virtual Environment] technologies." (Warren and Palmer 2010 p.4)

The potential regulations engendered by this boundary-spanning behavior are very interesting. Our case study was a labor strike against IBM fought in a virtual world, Second Life. During 2007, contract negotiations between IBM and Rappresentanza Sindacale Unitaria (RSU)

1

broke down. RSU decided to stage the first virtual strike, with the help of Union Network International (UNI) Global Union.

Data was collected for this study through text analysis of websites, forums and blogs pertaining to the strike. In addition, interviews were conducted with labor strike organizers. This case is interesting in the ways that it both bridges the digital and real world's legal, criminal, and regulatory properties by combining both real and virtual world concerns about accessibility, accountability, and employee contracts.

Within the remainder of this paper, we will examine some relevant concepts in the field of protest and virtual worlds. We will also examine existing literature about regulation and law within virtual worlds and how Warren and Palmer's concept of inter-real harm fills in gaps in the legal framework. We will then discuss the case of a labor strike in Second Life and examine how three critical points highlight the interplay between protesters and authority organizations and how virtual worlds broaden our understanding of regulation. Finally, we will discuss the implications of these changes for protest organizers and authority figures given that virtual worlds remain tool that has been added to the repertoire of contention for both groups. There is a focus on how this new tool adds support to the need for a new legal definition of harm which includes virtual worlds.

CONTEXT: Research in Virtual Worlds

A virtual world is a computer-based environment that allows a user to interact with other users and the general environment in a persistent setting that continues to change and evolve without any specific user involvement (Ives and Junglas 2008; Kumar 2008). Virtual worlds have evolved to be complex software that mimics the offline world. They often have similar physical laws, like gravity. They also have large populations that develop social structures and norms that members of the society are expected to follow. Players within virtual worlds represent themselves through a small character that is visible to others in the world, their avatar. It is through these avatars that the players speak and interact with one another and the larger environment. There have been expectations that virtual world users will reach estimated 80 million players by 2011 (Kuchera 2007).

Virtual worlds epitomize a new realm of self-representation. It is understood that these worlds engage their users in a level of emersion that allows them to participate in a type of reality that approximates the offline world in complexity and interactivity. This immersion allows these individuals to make connections between the offline and online worlds. They can then use this connection to transfer social processes, beliefs, and habits into the virtual world. This transference brings along with it all the complications and social struggles such systems have in the offline world.

Virtual worlds can often act as a mirror to be held up to the offline world. This mirror provides a complex, but limited, view of human behavior that can be examined to find the underlying structure (Whang and Chang 2003; Yee, Bailenson et al. 2007). Virtual worlds provide several advantages to overcome methodological and ethical limitations in social research. First, virtual worlds allow for large numbers of experiments and participants, incur no harm to humans, and make longitudinal and panel studies possible. Second, virtual worlds open up new possibilities for gathering social data because they provide non-intrusive methods for gathering a vast trove of data about social and economic interactions (Bainbridge 2007). Third, virtual worlds provide environments and tools that facilitate the creation of online laboratories that can automatically recruit potentially thousands of research subjects at minimal cost. Fourth, virtual worlds offer a persuasive sense of personal, social, and environmental presence for participants (Heeter 1992; Witmer and Singer 1998).

2

Despite the ubiquity of protests within virtual worlds, this type of collective action has received little attention from the scientific sphere. Theorists frequently fall back on theories and frameworks that were developed for offline social protest to explain uniquely online phenomena (McCaughey and Ayers 2003). While many social movement scholars have addressed the development of the Internet and its role in some of the more prominent actions of this and last century, there remains a primary focus in the field on non-computer mediated communication and activities. Often when technology and the Internet are addressed they are viewed as simply another communication medium that will be adopted, but with marginal impacts on the theories concerning collective action.

RELEVANT LITERATURE

Power, Politics and Regulation of Social Protest

Protests are an important mechanism to achieve social change. In the past, protests were often used to address perceived social problems, injustices, and failed public policies such as the civil rights movement (McAdam 1983), the labor movement (Wilton and Cranford 2002), and the peace movement (Meyer and Whittier 1994). The opinions of a population are expressed through collective action. As the history of the United States shows, collective action accounts for large changes to the social structure of society and the outline of governing laws and bodies.

The increasing diversity and interconnectedness of our world has created more points of social contact where different viewpoints and ideologies come into conflict. These crossings are areas ripe for the rise of contentious politics. As Tarrow (1998) describes, "Contentious politics occurs when ordinary people, often in league with more influential citizens, join forces in confrontations with elites, authorities, and opponents" (pg. 2). The give and take between groups that engage in contentious politics accounts for the current shape of our government and political sphere. Groups engage in a constant game of action and reaction, shaping their goals and activities to the latest methods employed by their opponents. These actions help to form a repertoire of contention, or the collection of all actions that are "culturally inscribed and socially communicated" (pg. 20) that social movement groups may draw from to frame their goals, causes, and actions (Tarrow 1998). Actions within the repertoire are known by both the movement and their opponents and have acceptable limits and structures that can be used to define the action and to oppose it.

After leadership initiated changes, protests are most frequently changed by triggers initiated by the policy the protest is addressing or the actions of policing (policy enforcing) agencies. These interplays of power relationships can often trigger dramatic changes in protest groups (Koopmans 1993). Often, repression by counter groups and policing agencies will force protest groups into one of several strategies: innovation, increased participation of members and recruitment, and increased militancy (Koopmans 1993). The actions of the policy makers regarding protests has been shown to have dramatic effects on the number of protests (Khawaja 1994). Khawaja (1994) found that protests actually increased when it appeared that the state and policing agencies were purposefully repressing protests. However, when the opponents seems vulnerable on these issues, the number of protests decreased since fewer individuals were willing to provide resources for a protest on a topic that was not seen as central (Khawaja 1994).

Traditional Repertoires of Contention—Policy-Makers and Police

3

A Repertoire of Contention is the learned social conventions of how to enable or enact a social protest. The repertoire is drawn on to decide the most effective form of collective action that will enable the group to meet its goals (Tilly 1986; Tilly 1995; Tarrow 1998). It is also drawn on by the authorities and opponents to suppress or contain social protests. Repertoires are often specific to a culture or locale where they have been found to work successfully (Tilly 1986; Tarrow 1998). However, they also remain modular and once knowledge of a repertoire has been spread it is possible to enact them in a different situation, expanding the "conflict toolbox" of a distant group (Tarrow 1998; Haunss 2007).

Tarrow (1998) has identified three types of repertoires: conventional, disruptive, and violent. Conventional methods are familiar to many individuals within America and include tactics such as mailing campaigns, advertising, awareness raising, flyering, lobbying, and fundraising (Tarrow 1993). Disruptive tactics are slightly more complicated and seek to draw awareness to the protest by creating some type of disruption within the regular system of operation. This form of tactics are not illegal but are often viewed in a negative light. The disruptive classification includes: mass mailing, sit-ins, selective destruction of property, etc. The final type, violent, is often considered illegal to perform and many states have legislation banning or limiting use of these tactics. They may include: bombing, severe obstruction of buildings, writing threats or causing public panic, etc.

However, even within this classification of repertoires there is an inherent definition based upon how authoritative forces react to this tactic. The need for diffusion and innovation within repertoires is spurred on by the dialectic give and take between protesters and authorities (Koopmans 1995). As protesters develop new tactics within their repertoire, they become more effective against authorities (Tarrow 1998; McAdam, Tarrow et al. 2001). After some time, authorities will develop or learn new ways of repressing the protest which brings the cycle back to balance. Authorities have their own repertoires of repression that seek to counter or otherwise negate the actions of protest groups. Koopmans (1997) splits the forms of repression into two types: institutional and situational. Institutional repression are tactics which seek to legislate or prosecute potential actions out of legality, this serves to not only remove some actions from a group's repertoire but also diminishes their desire to protest (Lichbach 1987). Situational repression focuses on violent actions taken by the military or police during the course of a protest itself. This form of repression often serves to motivate more individuals to join or otherwise ally themselves with the protesting group (Costanza-Chock 2003). A third type, not discussed by Koopmans, could be termed cooperation or non-participation. In this instance, the authority forces seek to minimize the damage or impact a protest can have by providing them with information and seeking to enable a peaceful and cooperative effort (McPhail and McCarthy 2005).

Regulation, Law and Policy in Virtual Worlds

One of the complicating points in the existing legal interpretations regarding virtual worlds lies in the questions surrounding ownership of digital goods and works. Assalone (2009) highlights this difficulty, finding that ownership rights may be the most important legal issue facing virtual worlds and that setting any legal precedent is complicated since the virtual world's developer often claims complete ownership of the platform. Day (2009) expands upon this interpretation and shows how attempts to legislate or otherwise regulate many claims are thwarted by the lack of a constitutional "Bill of Players' Rights" and that even those rights granted to players can be curbed through ownership clauses within player contracts. In addition, there are questions about the validity of any potential legal claims made within a virtual world in a criminal justice system based upon being able to establish proof of harm (Brenner 2008).

Many legal scholars have attempted to answer the question of how these issues should be addressed through examining how the legal questions of virtual worlds need to be answered. Day (2009) draws from the concepts of corporate personhood to argue that avatars could be considered similar to a "shell company". Others argue that such a construction ignores the existing rights of the corporation which produces and administers the virtual world (Lastowka and Hunter 2004). However, there is the argument espoused by Sinclair (2009) that virtual worlds act as a "quasi-municipality" which provides corporations with some rights of execution but also shows that the players within may have some access to the protections guaranteed under the Bill of Rights. Kerr (2008) believes that there is no need for any additional forms of regulation and control since any "real world" harm that is caused within a virtual world is already addressed by existing laws and any in-world harm are part of the rules of the game. Throughout the questions raised by these scholars there is an understanding that those crimes which create some type of real world harm are already covered under existing cybercrime laws (Brenner 2008; Kerr 2008).

Most importantly, none of these legal questions have addressed the issue of the legality of protest within a virtual world. In particular, protest falls into a grey area that is not quite addressed by the assurances of some protection under the US Constitution (Sinclair 2009). Nor does the work of Kerr (2008) explicitly cover how the constitutional issues of the right to free speech and ability to gather will be handled in a virtual world protest. In these cases, the protests are legal under the US Constitution but the companies which produce the virtual world may be unwilling or unable to handle such an event.

Inter-Real Harm: Approaching policies for regulating online social protests

A new classification of behaviors blurs the boundaries between virtual and offline spaces. In their recent work, Warren and Palmer (2010) coin the term, "inter-real harm" to describe the unique potential for virtual environments to create harm in both virtual and offline worlds. Inter-real harm is contrasted on a spectrum between purely in-world, digital harm, which they characterize as too trivial to warrant formal action, and criminal harm, to which existing criminal law already applies. They state, "Within these extremes, a grey area of inter-real harms bridges the virtual and the real. Inter-real harms differ from conventional cybercrimes due to the peculiarly immersive character of 3dve [3D Virtual Environment] technologies." (2010, p.4)

Within their definition, Inter-Real Harm would need to have some form of real world consequences that can be measured and substantiated in a formal complaint. The harm must be to the degree that it warrants "formal intervention beyond the TOS, EULA, and site management complaint processes." (2010, p. 4) The examples, which Warren and Palmer give for such actions, which exceed the in-game legislative abilities but do not warrant offline criminal proceedings include: virtual rape, assault, sexual harassment, threats, fraud, and destruction of property (Warren and Palmer 2010). These first four examples involve digital violence that serves to cause offline shock and emotional or psychological damage to the player. These damages exceed the realistic ability of the in-game systems. The last two examples are of damage to digital goods which exceed a small scale. In these cases, the items are unrecoverable or the loss is to such a large degree that in-game solutions are not adequate but many offline laws will not cover the loss.

Although many interpretations within the Warren and Palmer article remain within traditional legal definitions of harm, the actions of a protesting group could be included in such a list. Considering that most virtual world developers choose to respond reactively to issues creating a substantive legal understanding of protest in virtual worlds remains difficult. Given the prevalence of protest within virtual worlds, developers using Warren and Palmers framework

may take a proactive stance that covers many different types of actions and helps to create a well rounded response before, during, and after events. Inter-real harm fills a gap that currently exists in the understanding of how policy and regulation of actions occurs in virtual worlds. It helps developers to create a plan of response and covers players' liability and protection. Finally, it also provides a framework for offline legal forces to integrate online gray areas of harm into their existing understanding.

METHODS

This study employs a case study methodology since it excels at placing a problem of interest within its contextual setting. Cases are frequently complex and social in nature. These two factors make it difficult to separate a problem from the context in which it occurred (Yin 2003). It is by looking at them contextually that the richness of the problem can be the best understood (Yin 2003).

This study used many sources for this research including, news websites, forums, web logs and journals, general web sites, as well as interviews with protest organizers. The documents were drawn from 48 web pages about Second Life. Five interviews that have been conducted during the course of this work will be used to supplement or provide further quotations where appropriate. The text-based documents were collected from an initial web search based on terms related to the case protest and any links within the documents were saved to find additional data sources. From these saved documents a list of known participants was collected. This list was then parsed for available contact information.

This study used a mix of coding approaches combing deductive and inductive coding, often called analytic induction. Preliminary codes were developed from the research questions and general interview guide. These codes were used deductively in the first round of analysis. After this, an open and selective coding was carried out on each interview and saved page, resulting in a set of themes and categories that emerge out of the data. This is an inductive approach to coding that allows patterns within the data set to come forward so that they may be compared not only across the data gathered but to the theoretically derived codes as well.

Case Introduction: Labor Strike in Second Life

During 2007, IBM and Rappresentanza Sindacale Unitaria (RSU) were in union contract negotiations. RSU asked for a "small salary increase" of 60 Euros per year, along with "health and pension investments, informative rights, etc.". IBM responded by offering a 6 Euros increase and canceling the workers' "productive results benefit", a yearly bonus of 1000 Euros. RSU decided to stage the first virtual strike, with the help of Union Network International Global Union (UNI Global Union).

UNI Global Union asked the Second Life community, as well as any union workers, to join in the strike. On their website, they offered a comprehensive tutorial which covered the basics of Second Life. The instructions also informed people about obtaining and equipping a custom "Strike Kit" created for the occasion. In addition to these text instructions, UNI Global Union ran training courses at their house inside Second Life.

The protest took place on September 27, 2007 from 4 am – 4 pm EST. Protest staffers counted 1,853 participants from over 30 different countries. The protest spanned 7 IBM locations within Second Life, primarily IBM Italia and the IBM Business Centre. During the strike, IBM's in-SL workers did their jobs unperturbed, standing around providing standard information when legitimately asked. When asked about the strike, staffers simply replied, "No comment." or

said nothing at all. At one point, parts of IBM's Business Centre had to be shut down to lock out protesting avatars.

On October 24, UNI Global Union reported that Andrea Pontremoli, CEO of IBM Italy had resigned. On November 5, after threat of an offline strike, UNI Global Union reported that a new contract between RSU and IBM Italy had been signed, reinstating the 1000 Euro bonus for 3 years. IBM also agreed to make payments into a national health insurance fund and to continue negotiations regarding industrial and business strategies in Italy and the improvement of internal communication policies.

DATA

Within the case of the labor protest in Second Life, there are three critical points of action between the protesters and the authorities. During each of these points, there are clear actions taken by the protesters as they attempt to navigate the new medium of virtual worlds for protest and add it to their existing repertoire of contention. Each point allows for potential responses by the authorities, either Second Life or IBM, to repress or respond to the innovation. In both instances, the need is shown for an understanding regarding how virtual worlds complicate or alter existing processes and highlight the lack of regulation.

Critical Event Point 1 – Media Storm

Protesters Action

In the first stage of the protest, the organizers focused on creating a media storm around the idea of having the first virtual world strike. They needed to raise public awareness. There was a strong focus by the organizers on getting different bloggers around the world to pick up the news story. Given that the original group of protesters was rather small, creating a media storm was an important goal in their overall plan.

One organizer stressed the worries that the group had going into the event. The creation of a media focus on the group's goals was important to the overall success. As they said:

> *What I'm thinking about right now is how did we communicate to the press at that time, like more before the event, or during, or after it happened. I think it was, It's very difficult to determine because there was a huge media impact and I think that was the strongest part of the campaign. (Interview: March 2009)*

Keeping in constant communication with the media was a pressing need in order for the concept of a virtual world strike to spread. The organizers spent significantly more time making sure that it was well organized and attended by getting the word out early and maintaining anticipation for the event through continual updates.

The organizers also focused on creating media bites that would be attractive to technology and labor bloggers. The organizers stressed the novelty of the protest:

> *They [bloggers] just liked the fact that it was in SL and that there was this huge employer IBM so if you just forget about UNI's channels of communications the media was the, far bigger than anything that we'd ever expect. (Interview May 2009)*

Although UNI Global Union had developed significant contacts and resources on their own and did rely "*on people forwarding messages regarding the strike onto others*", they found that the impact that the blogging groups had on actually reaching out to different groups around the world was significantly greater. Once this was realized, there was a focus on making and utilizing this important tool for spreading information and recruiting new participants.

Authority Reaction

IBM and Linden Labs, the owners of Second Life, were aware of the initial announcements made by the protest organizers. During this period, both companies remained relatively quiet. Neither company released their own statements or utilized their personal news agencies. However, IBM did release internal statements highlighting their policies regarding Second Life use during work hours and confirming that they had plans in place to handle the protests.

This message was repeated again in the media when reporters approached IBM managers for a comment:

> *A spokeswoman for IBM Australia declined to comment on the impending industrial action saying IBM had a policy of not discussing internal staffing details. (http://www.smh.com.au/cgi-bin/common/popupEmailArticle.pl?path=/articles/2007/09/19/1189881553044.html)*

They also did not ban workers from blogging these internal announcements and many were posted on either employees' work or personal blogs. However, this lack of a clear company response meant that mixed messages were often passed along to the press. As one protest organizers and IBM employee stated:

> *"The high offices of the company are worried, because this action will turn on the lights on the project of creation of a global union alliance, that is engaging the unions from over 16 countries worldwide, including the new IT boundary: India," the statement said. (http://www.theregister.co.uk/2007/08/24/ibm_italy_strike/)*

Even though many of the messages passed along by IBM were reassuring employees that the company would handle any protest, the tone within the company made for a very different picture.

Many bloggers continued to believe that IBM would not allow the protest to occur and would either negotiate with the group or shut the protest down. One blogger held both of these points of view, making an educated guess in their first post before basing their second upon information coming from IBM employees:

> *I wonder if this will be negotiated quickly to avoid it happening... This is a 'first' that IBM probably doesn't want. (http://www.your2ndplace.com/node/465)*

> *When I first wrote about Italian IBMers to strike this month, I fully expected that this would become a non-issue - I expected IBM would address the issue quickly to deal with what could be a true first within a virtual world. […] Obviously, we would expect it to happen in a public area - probably not on IBM 'property' where people can be conveniently ejected. (http://www.your2ndplace.com/node/519)*

These two theories were the most popular among the blog groups and often helped to spread the protest organizers' message.

Analysis

Using Second Life as a new platform for protest complicated things due to the fact that this was a totally new innovation within the repertoire of contention between IBM and its unions. IBM, as a multinational corporation, is used to dealing with unions on a much smaller scale, negotiating with the unions that represent each nation of workers. The methods of response, which IBM had developed for these forms of protest, were not usable within a virtual world protest.

The protest group was unified and represented IBM workers and union interests around the world. Previously, IBM could rely upon the smaller scale of union responses to gather little attention. The introduction of virtual worlds as a site of protest presented additional problems due to the fact that IBM strongly associated its brand with Second Life. This provided the protesters with an excellent target which would not only be effective in creating a disruption but that would also bring the attention of a much larger audience to the issue being protested.

In addition to these two issues, the lack of regulation regarding the legality of protesting in a space that falls under none or multiple jurisdictions made the outcome of the protest unclear. This lack of clarity was expressed as a form of novelty and drew media attention to the activity. Since virtual worlds did not clearly fit into any existing understanding as a site of protest they became an unknown. And has been shown within social movements' literature, novelty is a strong pull to the media (McCarthy, McPhail et al. 1996; Smith, McCarthy et al. 2001). Having existing regulations that clearly cover actions within virtual worlds would not have been as novel because it would be easy to know how the protest would play out.

By thinking about virtual worlds as the digital equivalent of physical spaces, the need for regulation within these spaces becomes more apparent. Without thinking about these spaces as if they were physical, there is a period of almost lawlessness where any type of action could occur or any type of law could be enforced. With the current style of thinking, regulation is thought about as if it were being implemented for the first time. When this is the case, there is an opening for many actions, such as the imposition of unfair user policies or impactful and reputation damaging protest.

Critical Event Point 2 – Getting Organized

Protesters Action

After spreading the word that they were planning a protest in Second Life, UNI Global Union established the Strike International Taskforce. This taskforce was responsible for going through each step of the proposed protest and addressing technical, legal, logistical, and security issues. The point of the taskforce was to establish a working organizational plan for how to enact an entirely new event within Second Life.

Although UNI Global Union was experienced with enacting protests in the offline world, and was familiar with using online technology to enable communication, they had never attempted to have a protest online. As one organizer stated this took a fair amount of planning:

I really was there to make it happen and to think of the strategy to make it happen because we had never seen such a huge event being planned before so we just went through all of the stages how we'd communicate about it. (Interview May 2009)

Since the planning for the protest was not completed when announcements were first made all the organization needed to occur in a short time period. Organizing this event required not only planning out how to contact everyone but also had to take into account training people in how to use the software, checking the legality with Linden Labs, as well as, in each country protesters would connect from, and creating all the items needed for the protest.

The technical difficulties of establishing an entirely new type of protest were particularly troublesome for the organizers. Throughout the planning they needed to account for the many different technical problems that people may encounter. In particular the organizers needed to conquer the fear that many potential participants faced when contemplating moving into a new technology:

And then you'd have barriers such as the actual digital barrier. People not being comfortable to use a computer other than to write an email or use word. So there were people who would reply and say we will sign your petition but we don't feel comfortable going into SL even though you're offering this training. (Interview March 2009)

One of the ways that the organizers attempted to overcome these barriers was through providing training to new Second Life users. Guiding them through the basics of using a virtual world and making sure they were prepared to protest. Others included providing individuals who would staff the protest and help new protesters during the event, as well as creating a "Union Island" where all the information about the protest and materials needed for it would be centralized.

Authority Reaction

IBM avoided direct comment on the strike but continued to release some information internally. In addition, IBM made several moves regarding their presence in Second Life which bloggers saw as being related to the developing news about the protest. IBM employees continued to discuss that IBM was not telling its employees to not participate but that it discouraged them from doing so during work hours.

Many IBM employees took the reaction by the company as both an ok to participate but with a definite caveat to do so discreetly. As one organizer stated while talking about potential protest participants:

"It's hard to predict how many IBM employees will join as most of them have given us their private email addresses to join the strike. A few of them have given IBM addresses, which has just allowed us to confirm the participation of IBM workers in a number of different countries." (http://www.escapistmagazine.com/news/view/77044-Italian-IBM-Union-Stages-Strike-in-Second-Life)

Although IBM did not threaten any of its employees, many chose to remain cautious when dealing with this new development. As the Alliance@IBM, the union for US based IBM workers, made public on their website, caution needed to be taken in such instances:

All US IBM Employees participating: Use your own computer on your own time, to join in the virtual strike. (http://www.endicottalliance.org/newsupdate.htm)

One of the statements that interested many bloggers during this period was made by IBM regarding the staffing of their Second Life islands:

Big Blue has been cheerfully reiterating its commitment to the metaverse as the platform of the future by crewing its Second Life based Business Center with full time attendants. (http://futurismic.com/2007/08/23/ibm-faces-virtual-strike-in-second-life/)

Although IBM did not directly state that they were increasing staffing in response to the protest, the comments did come shortly after the announcement by UNI Global Union. To those in the blogging community, this seemed like a direct response to the protesters actions. Creating full time staff at the Business Center meant that there was always an IBM representative on site and that they would receive early notification regarding what was happening on their land.

Some employees within IBM were willing to discuss how they felt the company should responds to the protest. One employee posted to an IBM blog:

"The strict approach would be to exercise full property rights and eject or ban anyone that is not considered beneficial to supporting your business," said Grant. Grant added that in the case of the Italian labour union, he would treat it like a real world protest. If

they were willing to have a non-harassing protest of a set duration I would cooperate with them in having it done." (http://www.vnunet.com/articles/print/2199057)

This statement gained popular support within the blogging community. To many bloggers it seemed like an obvious step for IBM to take, which would minimize the damage done by the protest and hopefully diffuse some of the attention that the protest was receiving.

Analysis

Second Life presented some of the largest regulation and policy challenges during this second event. Although both UNI Global Union and IBM had existing repertoires that detailed how to respond to a labor strike, virtualization changed their expectations enough that they needed to reconsider their process. Usually, IBM has only limited control over individual's access to their properties and must expend significant capital in order to increase their control. Within Second Life, an island owner has total control over their space and needs to only invest a small amount of time to control access. For the protest organizers, there is typically a large capital investment spent purchasing signs, banners, t-shirts, and in paying for use permits. For them, most of these items could be constructed at little to no cost and duplicated rapidly. There are also no fees to use the Second Life platform, so there was no cost for obtaining permits.

However, these benefits were offset by additional costs caused by the lack of regulation within virtual worlds. For the protest organizers this manifested in the formation of the Strike International Taskforce which spent many man-hours working on determining which regulations and laws may apply. Since the individuals for this protest would be coming from around the world, they needed to consider not only the laws of the USA but also those of any nation from which attendees were joining. They saw this as a way of making sure that the protest would be as legal as possible and that no individual could be harmed due to their participation in the event.

For IBM, the extra costs manifested themselves in the needs of hiring more individuals to staff their Second Life facilities and in the indecision and rumors which were spread about the company. Due to the media storm that surrounded the protest, IBM was forced to spend more man hours responding and distributing internal information about how they would handle the event. In addition, IBM knew that it had to act carefully when gauging their response to the protesters. While the virtual world enabled new types of control over IBM's space, the company knew that they would be establishing precedent, not only for how they would handle protests in the future but how many other companies may handle similar situations. Since there was no existing regulation, IBM was forced to consider what the optimal but fair outcome for this particular event would be, while still considering potential future impacts.

By establishing a set of laws or regulations which dealt with potentially harmful actions in a virtual world, such as the inter-real harm law, there would be a clear and objective set of rules which both protesters and authorities could reference. The protest organizers would not have had to establish a taskforce and devote so much time to identifying different national laws that may apply and IBM would not have needed to consider the potential impacts of establishing precedent.

Critical Event Point 3 – Strike!

Protesters Action

The final, key point was the strike itself. Locations and meeting times were published 24 hours in advance of the strike. Locations were published as SLurls, links that would take you to a location within Second Life, on UNI Global Union's website. Their intent was to retain the surprise over IBM as well as offer many different ways of participating.

The methods that the protest organizers took during the day of the protest varied. In some instances, they went to more extreme measures in order to make sure that their voices were being heard by IBM. As one protester explained:

I was snooping around in one of the, I think it was the business centre, got into this meeting and tried to talk to the people but they just ignored me and kept talking about this meeting. And I put that big flying fish above my head and they realized what was happening so they closed off the whole area and ejected me. So my avatar was outside this invisible wall to their meeting center. But I kept clicking on the map and I managed to get back in again and when I got back in again I broadcast my location and started to teleport other people in. (Interview May 2009)

The lack of response by IBM forced the protesters to make sure that their voices were being heard by the company. In this instance, one protester was able to shut down the meeting that several IBM employees were having within Second Life. Much like in offline protests, the picketing group could not simply be ignored but forced their issues and presence.

However, the ability to force presence also worked against the protesting group. Throughout the course of the protest, they experienced several instances of counter protests which meant to distract and interrupt the main event:

I don't remember seeing that many of them [counter protestors]. That would have banners above their head or holding something that would say "I had a peanut for lunch" kind of thing. And we would just kindly approach them and say "you're not holding the right sign. Would you like one of mine?" (Interview March 2009)

Even though the protesters did not own the land upon which they were protesting, they still took actions to make sure there was a clear message being broadcast. Counter protesters could easily have been just as disruptive to the protest group, as the group was to IBM, but in many instances this direct and cooperative approach minimized the difficulties the protesters encountered.

Authority Reaction

IBM remained reactive even at this final point. They only responded to the protest when it became a disruption to their activities within Second Life, such as in the meeting described above. However, they did pay attention to what happened during the protest in order to better understand the event and plan for such actions in the future.

IBM employees were reminded of their legal standing and warned internally and by their individual union groups that they needed to take caution. In particular, one IBM guideline was highlighted as important:

legal note for IBM employees Usage of SL is permitted by IBM following the Virtual Worlds Guidelines for IBM employees […] You can join the SL protest during normal working hours ONLY if your national union declares an official union initiative (it's also regulated by national law, please check it). (http://www.your2ndplace.com/node/612)

This is the first time that any type of communication about participating in the protest during work hours was shared with the larger blog community. In particular, there is a much clearer stress on the corporate and national regulations that control and oversee union activities.

IBM did respond internally after the conclusion of the protest to acknowledge that they learned from the situation. One protest organizer and IBM employee commented:

IBM was really impressed from this experience so I think they are thinking for sure how to react in the future. (Interview March 2009)

Even though IBM treated this protest reactively, only responding to disruptive tactics and not sharing much information with the media, they still sought to learn all they could about the protest. As this organizer acknowledges, this information was valuable to IBM as a tool to moderate their response to any future virtual world protests.

Analysis

The novelty of protesting in a virtual world caused different problems for both the protest organizers and authorities. For the organizers, they knew they were limited in how they could respond to being locked out of the space or dealing with counter protesting groups. Unlike the offline world, all voices get heard in a virtual world. There is no way to drown out competing voices. In addition, being locked out of the property did not leave them with a close but external space on which to protest, like a sidewalk, due to how land works in Second Life. For IBM, the virtual world meant that they did not know exactly what to expect from the protesters. One such example was an individual being able to "break into" a locked space and teleport other protesters. There is no equivalent to this action in the offline world.

The lack of regulation meant that there were no guarantees of access to public property and free speech for the protest organizers. While the offline world protesters may make use of spaces such as sidewalks or other public places near their site of protest, Second Life has no equivalent. All land in Second Life is private land. Linden Labs as the owners of Second Life could restrict individuals' ability to gather or enact free speech by simply not posting conversations that contain key words or limiting how many people can gather in a space. Both of these complicated the planning and execution of the protest for the protest organizers. To IBM, the lack of regulation meant that many actions which could be illegal in the offline world are possible in the virtual. So while protesters breaking into a headquarters and interrupting meetings could be illegal in an offline protest, there is little recourse if this happens in the virtual.

Laws and regulations guiding actions in virtual worlds like protest would help to limit many of these actions. With a bill of rights, like in the US Constitution, players would have some recourse to make sure their voices were heard. Authorities in such situations would have a better idea of what to expect of a protest. The equivalent of breaking and entering would make sure that spaces that are made private on a publically accessible piece of land would have some backing if an individual manages to enter them by taking advantage of flaws in the programming software.

DISCISSION

Protests within virtual worlds remain a difficult issue for both protest organizers and authorities. Like the introduction of many other forms of technology, virtual worlds have an unsettling affect on the balance of power. Unlike these previous forms of technology, virtual worlds offer a significantly different type of change by creating a third space for interaction that exists outside of the offline world.

The repertoires of contention that both protesters and authorities rely upon is dramatically altered when the interactions are virtualized. These changes offer benefits and disadvantages to both groups, but they must be negotiated during their use in order to make the most of potential benefits while limiting risks or damages. This period of negotiation creates a shift in the power between protesters and the authorities which greatly effects the decisions they make about their response to the protest, one another, and their tool choice. For protestors we see four major changes affecting this choice: legality of actions, technological savvy of participants, geographic distribution, and legal rights.

The legality of actions within the virtual world must be considered. Protest organizers usually do not need to deal with laws or regulations across local, national, and international borders. In this case, the protest organizers needed to understand the laws of the many different countries. They also needed to understand the policies of Linden Labs regarding such a large demonstration. Linden Labs may be negatively affected by such a large gathering, through technology stress of handing that many people or they may face complaints from their paying customers. These customers may feel that it is Linden Lab's responsibility to make sure that such events do not affect them. The protest organizers are forced to make sure that their actions do not violate the Terms of Service (ToS) and End User License Agreement (EULA) established by Linden Labs.

The population of individuals that protest organizers rely upon to man their events can create another complication. While there may be some technological adepts within the group, not every individual will have the same level of skill and knowledge about computer systems, let alone a specific technology like a virtual world. This means that in addition to prepping protesters, they must also take steps to train their followers in the technology so that they may make an impact during the protest. This could range from the training sessions which UNI Global Union developed for the Second Life protest, to detailed guides which walk protesters through the process. In some instances, it also means that important figures who wish to support the protest and join the group back out of the protest due to being uncomfortable using the technology or unable to run the software.

Virtual worlds allow protest organizers to draw upon the help and support of a much larger group who are geographically distributed around the world. In offline protests, distributed groups are often moved to a single geographic region, or smaller protests are scheduled in several regions. The nature of virtual worlds as persistent and shared spaces means that creating such specific and tailored protests is more difficult, since all protesters are using the same world and time continues to pass relative to the location of the server. While it's possible to create many smaller protests, they do lose some impact since they are all occurring at what is effectively the same spot. However, organizers cannot simply pick a specific time for everyone to appear in the world due to the fact that for some that may be during work hours while for others it may during the early morning or very late at night. This means that protest organizers must consider the scheduling of protests in a more flexible fashion.

One of the changes to the repertoire that protest organizers must also consider is the differences in space and the rights that are related to it. Within many nations, protesters rely upon some form of human rights. This may include rights such as the right to assembly, free speech, press, etc. Since virtual worlds are essentially digital private property, the existence of such rights is not guaranteed. Within virtual worlds, it is possible limit or remove the ability to communicate. This may occur to one individual, as a form of punishment, or to everyone on the virtual world, as a preventative measure. In many cases, this manifests as a filtering of profanity or sexually explicit terms and material. However, if a virtual world developer wished to forestall a protest, they could build in the ability to remove discussions or simply turn off communication for everyone. Avatars have no rights to gather within virtual worlds and may be disconnected from the world on a temporary or permanent basis, called banning, or could face other consequences, like being unable to find any space on which to protest. Protest organizers have to carefully consider what rights they are assuming they have access to within the virtual world and plan accordingly in order to compensate for changes during the protest or by vetting their plans with the virtual world developer in advance.

For the control organizations, the move to virtualization is no less powerful an impetus for change. Control organizations must contend with significant changes which make their traditional, offline tools useless, impotent, or inappropriate. The organizations cannot limit themselves to just a few changes since they must consider the many different aspects where change may occur in virtual worlds.

Virtual worlds are seen as a new and interesting type of technology. They contain aspects of interaction which mirror the offline world. However, they also enable new types of interaction which are more entertaining or novel than those that often occur in offline spaces. This means that any types of action in virtual worlds will be more likely to attract attention than similar actions in the offline world. Previously, authorities were able to use many methods minimize the amount of attention from the media, other companies, or governments. This can be seen in the case studied within this paper, where IBM and news media did not seem concerned about an offline picket by the Italian IT workers. A small protest being done by a small Italian union would not concern the audience to which the media caters.

In addition, many companies in the offline world anticipant limited numbers of protesters simply due to the costs associated with attending a protest. To have a large number of people requires transportation, time, facilities, food, etc. Often these costs are too high for many groups to have large protests. These aspects are removed or limited within a virtual world. With the potential costs of creating a protest in a virtual world reduced, protest organizers can mobilize a much larger group. Also it is likely that the participants will come from a much broader geographical area in the offline world, creating a world-wide protest out of what may otherwise be considered a local affair.

The tools that authorities have relied upon to respond to protests are changed in the virtualization process. While it is possible in the offline world to be proactive about a protest and engage with the protesting group, this is much harder in a virtual world. Given the fact that virtual world protests are often dealt with in a case by case basis, it means that innovations in dealing with a protest must be created or rediscovered with each new protest. Within the case discussed in this paper, this meant that IBM was forced to take a reactive approach to the protest. They did not respond to the actions or publications of the protest group until it was clear what was going to happen, how disruptive it would be, and how badly it may harm IBM's reputation. For this protest, such a response did not hurt IBM since they needed to be repressive only once, locking the protesters out of an internal meeting.

However, the nature of many virtual worlds gives the authorities several new powers over protesters. For the developers of virtual worlds, they have an automatic advantage over setting which actions they will allow or disallow. Developers write the Terms of Service and End User License Agreements which all users of the virtual world must agree to before they are able to log in and use the software. These includes things like being the sole arbiter of what does or does not violate these contracts and dictating what types of responses or complaints users may make if they disagree with a judgment. For authorities, like IBM who purchase space within a virtual world, they have significantly more control over who may access the space and to what uses it may be put, simply due to the fact that such permissions are built into the software. Additionally, for those controls which are beyond their capabilities, companies like IBM are able to claim some form of support from the developers of the virtual world. Within Second Life, individual user accounts are free, while purchasing land requires an upgraded, expensive account. Because they are paying customers, these authorities have the potential for support from the developers.

These control organizations must also contend with other complicating factors, such as developing a precedent with the actions they choose to take. How they chose to react to a protest, or series of protests, may be looked to as the example to follow. Within the social movements literature, it is well known that how authorities respond to a protest strongly influences the type and frequency of future protests. A strong, repressive action tends to encourage protesters to become more extreme in their approaches and actually can increase the frequency with which protests occur. Alternatively, dealing with protests in more friendly manner, or possibly assisting them, can often cause protests to become less frequent and more peaceful (Carroll 1992; della Porta and Diani 2007).

One concept that may be important to both protest organizers and authorities in adapting to the virtualization of protest is that inter-real harm. Inter-real harm focuses on harms which go beyond the ability of the internal regulation to manage, but do not cause the damage required for criminal harm. This type of harm covers a unique grey area that has arisen due to the use of virtual worlds and addresses many of the crimes which go unpunished or under-punished.

One of the easiest ways to determine harm within a virtual world is the loss of income. In the context of this case there are several instances where it could be possible to apply the concept of inter-real harm to the damages incurred by IBM during the protest. The disruptive tactics of the protesters when they forced the shutdown of a meeting effectively meant that IBM lost the time that those employees had scheduled and must pay them for additional time when the meeting is rescheduled. Additionally, IBM could argue that the protest caused them to experience a loss of service which reduced their overall earnings for a time and caused them to lose the money they invest in Second Life for access, which would exceed the ability of internal regulation to manage but may not qualify as criminal harm.

There is potential for claims of threatening speech and assault which occurred during the Second Life protest. In particular, the instance where the meeting was shut down by the protesters, the sudden appearance of a number of loud, angry avatars within a confined room could cause the workers to feel panicked and fearful for their safety within that space. While the individuals behind the keyboard are safe physically, the strong emotional reaction may justify these charges under an inter-real heading. In other instances of more radical or violent protests, or protests within virtual worlds where avatars are able to damage one another the chances of these damaging emotions occurring is much higher.

If inter-real harm was applied, laws would need to be updated to account for a redefinition of scope to include harms which previously fell below the threshold of criminal harm. In some instances, it is possible that crimes which previously may have passed the threshold for criminal harm could be moved to the realm of inter-real harm in order to create a consistency in regulating virtual worlds. There would also need to be a more expansive definition of what constitutes a harm and how is harm proven within a court of law. Most criminal harm looks for some form of physical damages. However, within a digital realm physical damage is impossible. In the cases of emotional damage, there would need to be a better understand of how to measure emotional harm. This definition would need to be included in the existing criminal law in order to ensure that cases are judged and weighted fairly.

Inter-real harm as a concept has great potential for expanding justice within the criminal system. However, there needs to be an understanding of the impact that such a change may have on the legal systems where it is implemented and within the virtual worlds. While there are crimes occurring now which could benefit from this concept, it will take a while before the concept of inter-real harm is incorporated.

CONCLUSIONS

Once we understand how the lack of regulation, policy, and law in virtual worlds complicates the nature of groups' interaction, it becomes possible to expand our understanding of the law and begin to contemplate the need for a new type of inter-real law. While most analyses of law within virtual worlds focus on criminal law there are many potential changes to our law system as a whole. In particular, civil and contract laws would need to be re-examined to ensure that individuals participating in virtual worlds are being treated fairly as both citizens of the world and consumers of a product.

One of the major changes that would take place is within contract law. Our current legal understanding of contract law and jurisdiction would need to be expanded to make sure that the contracts that users of virtual worlds sign ensure the ability to pursue any incidents of harm in a

court of law. In particular, many terms of service and end user license agreements limit the avenues for or types of compensation which users can seek for grievances and. At least one legal case (Bragg v. Linden Research Inc. 487 F Supp. 2d 593(E.D. Penn 2007)) has found that these contracts are not enforceable in all instances, and cannot be used to determine legal jurisdiction. There are still many instances that fall outside of this precedent which need to be addressed.

The legal definition of personhood will also need to be examined to better include the relationship that exists between the offline person and their online avatar. In particular, this relationship is important when it relates to the ability for participants to exercise their rights within a virtual world. As Sinclair (2009) discusses there is some legal support for the concept that avatars have some intrinsic rights which must be supported even in digital constructs like a virtual world. A recent lawsuit brought against Linden Labs aims at this same topic looking at the rights of consumers to own digital property within virtual worlds.

Companies will need to carefully consider their interactions with virtual worlds if the concept of inter-real law were to be implemented. The developers of virtual worlds would need to examine their existing user contracts. Companies which buy into virtual worlds would need to examine how property works within that world, what are the rights granted to citizens, what are the rights granted to paying customers, and consider how they approach not only interactions within the world but potential actions outside of it. Many companies will also need to examine how their employees use and interact with virtual worlds both within their personal lives and within the work setting in order to establish employee policies that are descriptive and consistent with the values of the company while remaining even handed about employees' rights.

National policy makers and the government must consider how virtual worlds are connected to the offline world that they govern. Virtual worlds exist as digital software running on a server located in a physical spot. Users from around the world can access that virtual world and participate within it building a separate society and nation within the digital realm. National policy makers and government must start to consider what it means to have a digital space that mirrors the offline world but transcends the physical boundaries around which we base most policy. They need to consider the layers of policy under which many virtual world users are already operating. Conversations have arisen within the United States government regarding the taxation of virtual income. However, these discussions often ignore the differences that exist between virtual worlds. When looking at the terms of service and end user license agreement, many developers claim ownership of everything, meaning when users generate digital currency within the game they do not own any of it. National policy makers need to be aware of differences such as this when drafting laws about virtual worlds in order to avoid creating redundant or unenforceable policy.

Offline enforcement agencies have some additional considerations to take into account if the concept of inter-real harm is incorporated into our existing law system. In particular, this concept will raise the expected level of technical knowledge expected of the police force. They must understand the types of harm or unique complaints that individuals will have related to the virtual worlds they use. Much like the expansion of cyber crime laws, this will require additional educational training or task groups that specialize in this form of crime. Most importantly this type of crime will require rethinking the seriousness of virtual worlds as a tool for criminal activity. To many, virtual worlds remain a game or toy. But many virtual worlds are grounded in offline spaces and have legal, as well as, financial ties to them. Enforcement agencies will need to be trained to take the problems and citizens of these worlds with a serious focus.

As virtual worlds continue to grow in popularity, this type of collective action will also become more common. In particular, as the diversity of the audience for virtual worlds increases there will likely be more collective action against the worlds and their inherent political nature.

Leaders of offline organizations may turn to virtual worlds to recruit new followers, indoctrinate and train adherents, support their organization operationally and financially, and finally to stage protests, demonstrations and perhaps attacks. Companies that host these worlds will need to become aware not only of what their audience is but also how that audience will mobilize and the likely outcomes of their mobilization. The makers and enforcers of law will also need to develop new understandings as virtual world technologies enable behavior that may be labeled as deviant, anti-social and criminal both within virtual worlds and those that cross the virtual threshold. It is essential that we scientists build on the decades of solid research exploring mobilization and protest action in an offline setting and note the changes and implications of moving those behaviors into a virtual setting.

References

Abrahams, N. (2007). "Media laws for virtual worlds." University of New South Wales Law Journal **30**(1): 295–306

Assalone, D. (2009). "Law in the virtual world: should the surreal world of online communities be brought back to earth by real world laws." Villanova Sports & Entertainment Law Journal **16**(1): 163-197.

Bainbridge, W. (2007). "The Scientific Research Potential of Virtual Worlds." Science **317**: 472-476.

Brenner, S. W. (2008). "Fantasy crime: The role of criminal law in virtual worlds." Vanderbilt Journal of Entertainment and Technology Law **11**(1): 1–97.

Carroll, W. (1992). Organizing Dissent: Contemporary Social Movements in Theory and Practice. Toronto, Garamond Press.

Costanza-Chock, S. (2003). Mapping the Repertoire of Electronic Contention. Representing Resistance: Media, Civil Disobedience and the Global Justice Movement. A. Opel and D. Pompper. NJ, Greenwood.

Day, T. (2009). "Avatar Rights in a Constitutionless World." Hastings Communication and Entertainment Law Journal **32**(137).

della Porta, D. and M. Diani (2007). Social Movements: An Introduction. Malden, MA, Blackwell Publishing.

Haunss, S. (2007). Challenging Legitimacy: Repertoires of Contention, Political Claims-Making, and Collective Action Frames. LEGITIMACY IN AN AGE OF GLOBAL POLITICS. A. Hurrelmann, S. Schneider and J. Steffek. Houndmills, Basingstoke**:** 156-172.

Heeter, C. (1992). Being There: The Subjective Experience of Presence, Presence: Teleoperators and Virtual Environments. Cambridge, MA, MIT Press.

Ives, B. and I. Junglas (2008). "APC Forum: Business Implications of Virtual Worlds and Serious Gaming." MIS Quarterly Executive **7**: 151-156.

Kerr, O. (2008). "Law in a Networked World: Criminal Law in Virtual Worlds." The University of Chicago Legal Forum **2008**(415).

Khawaja, M. (1994). "Resource Mobilization, Hardship, and Popular Collective Action in the West Bank." Social Forces **73**: 191-220.

Koopmanns, R. (1997). "Dynamics of Repression and Mobilization: The German Extreme Right in the 1990s." Mobilization **2**(2): 149-165.

Koopmans, R. (1993). "The Dynamics of Protest Waves: West Germany, 1965 to 1989." American Sociological Review **58**: 637-658.

Koopmans, R. (1995). The Dynamics of Protest Waves. New Social Movements in Western Europe: A Comparative Analysis. H. Kriesi, R. Koopmans, W. Duyvendak and M. Giugni. Minneapolis, University of Minneapolis Press**:** 111-142.

Kuchera, B. (2007). "Report: MMORPGs Revenues to Explode Over Next Few Years." Retrieved November 20, 2008, from http://arstechnica.com/news.ars/post/20070912-report-mmorpgs-revenues-to-explode-over-next-few-years.html.

Kumar, S. (2008). Second Life and the New Generation of Virtual Worlds. J. Chhugani, C. Kim, D. Kimet al. **41:** 46-53.

Lastowka, G. F. and D. Hunter (2004). "Virtual crimes." New York Law School Law Review **49**(1): 293–316

Lichbach, M. (1987). "Deterrence or Escalation? The Puzzle of Aggregate Studies of Repression and Dissent." The Journal of Conflict Resolution **31**(2): 266-297

McAdam, D. (1983). "Tactical Innovation and the Pace of Insurgency." American Sociological Review **48**: 735-754.

McAdam, D., S. Tarrow, et al. (2001). Dynamics of Contention. New York, NY, Cambridget University Press.

McCarthy, J., C. McPhail, et al. (1996). "Images of Protest: Dimensions of Selection Bias in Media Coverage of Washington Demonstrations, 1982 and 1991." American Sociological Review **61**(3): 478-499

McCaughey, M. and M. Ayers, Eds. (2003). Cyberactivism: Online Activism in Theory and Practice. New York, NY, Routledge.

McPhail, C. and J. D. McCarthy (2005). Protest mobilization, protest repression, and their interaction. Repression and Mobilization. C. Davenport, H. Johnston and C. Mueller. Minneapolis, University of Minnesota Press.

Meyer, D. and N. Whittier (1994). "Social Movement Spillover." Social Problems **41**: 277-298.

Sinclair, P. (2009). "Freedom of Speech in the Virtual World." Albany Law Journal of Science & Technology **19**(231).

Smith, J., J. McCarthy, et al. (2001). "From Protest to Agenda Building: Description Bias in Media Coverage of Protest Events in Washington, D.C." Social Forces **79**(4): 1397-1423.

Tarrow, S. (1993). "Cycles of Collective Action: Between Moments of Madness and the Repertoire of Contention." Social Science History **17**(2): 281-307.

Tarrow, S. (1998). Power in Movements. New York, NY, Cambridge University Press.

Tilly, C. (1986). The Contentious French. Cambridge, MA, Harvard University Press.

Tilly, C. (1995). Contentious Repertoires in Great Britian. Durham, NC, Duke University Press.

Warren, I. and D. Palmer (2010). Crime risks of three-dimensional virtual environments. Trends & Issues in Crime and Criminal Justice. A. Tomison, Australian Institute of Criminology**:** 1-6.

Whang, L. and G. Chang (2003). Lifestyles of Virtual World Residents, Living in the On-line Game Lineage. International Conference on Cyberworlds, Singapore.

Wilton, R. D. and C. Cranford (2002). "Towards an Understanding of the Spatiality of Social Movements: Labor Organizing at a Private University in Los Angeles." Social Problems **49**(3): 374–394.

Witmer, B. G. and M. J. Singer (1998). "Measuring Presence in Virtual Environments: A Presence Questionnaire." Presence: Teleoperators and Virtual Environments **7**(3): 225-240.

Yee, N., J. Bailenson, et al. (2007). "The Unbearable Likeness of Being Digital: The Persistence of Nonverbal Social Norms in Online Virtual Environments." CyberPsychology & Behavior **10**: 115 -121.

Yin, R. K. (2003). Case Study Research: Design and Methods. Thousand Oaks, CA, Sage Publications Inc.