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AN EXPLORATION OF SOCIAL MOVEMENTS IN VIRTUAL WORLDS

by

Brad McKenna

A thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy
in Information Systems,

The University of Auckland, 2013.
ABSTRACT

Virtual worlds have the potential to change the way in which organizations and social groups organize. Virtual worlds are large scale IT artifacts that enable millions of people to interact with one another through avatars in online three-dimensional worlds. Users of virtual worlds create an avatar which offers the affordances of a ‘real’ body, and enter a highly immersive world where they can interact visually, verbally, and textually with other avatars. Virtual worlds are transformation technologies, which enable globally distributed work, project management, online learning, and real-time simulations.

One important social phenomenon which has moved into the virtual world is the social movement. Historically, humans have employed many tactics to raise awareness for their cause or to lobby for social change. Social movements are large, informal groups of people that aim to pursue common goals and bring about social, cultural or political change through collective action. Examples of social movements are the American civil rights movement, the feminist movement, and the charismatic movement within established Christian churches.

This study is focused on social movements which occur within virtual worlds. Previous studies of social movements have examined how movements connect “through” the Internet; however, virtual worlds also allow people to connect “within” the Internet, which provides a new set of issues for social movements. Therefore this research aims to understand how social movements are impacted by virtual worlds, and how virtual worlds impact social movements.

The social movement studied in this thesis is a lesbian, gay, bisexual, and transgendered (LGBT) group which has over six thousand members in World of Warcraft (WoW). The movement has been profiled in a number of gay and lesbian magazines and in a prominent WoW blog website. LGBT is a global social movement with members from many countries. LGBT holds many regular activities inside WoW such as an annual virtual pride parade with floats, model competitions, dance parties, group photographs, and events for Valentine’s Day.

The research method used was netnography, a form of ethnography used to study online communities. Netnography adapts ethnographic procedures to use computer mediated communications as a source of data and is used to gain an understanding of online cultural phenomenon.
This thesis contributes an in-depth understanding of social movements in virtual worlds. The thesis is comprised of an introduction and conclusion, two literature review chapters, and five original articles. The first article describes the research method that was used in this study (netnography). The second article examines WoW using Chaos Theory to discover what it means to be a player within this virtual world. The third article explores issues faced by social movements in virtual worlds based on literature from virtual communities, virtual worlds, and social movements. The fourth article explores the key organizational differences between real world and virtual world social movements using New Social Movement Theory. The fifth explores how the technological artifact (the virtual world) and the social world (the social movement) co-evolve using actor-network theory and a biography of artifacts approach.
ACKNOWLEDGEMENTS

A doctoral thesis cannot come together without the support and guidance of your supervisors, and the friends and family around you.

First and foremost I would like to thank my supervisor, Professor Michael Myers. In our first meeting, Michael told me “it’s your PhD, you need to manage it.” I think this was excellent advice. A PhD is like an apprenticeship to prepare the student to become an independent researcher, and I can firmly say that thanks to Michael, I am now ready to start my academic career. Michael always gave excellent feedback on my work, and I owe him a big thank you for helping to get my work ready for journal submission. I also need to give a big thank you to my co-supervisor, Dr. Lesley Gardner, who was always the first person to read my work. Lesley always read it from a critical standpoint, and provided excellent advice on how to write good academic papers. Not only that, but I have worked with Lesley for many years, and probably would not be able to finish my studies without those random chats in her office. Together, I think I had the perfect supervision team.

Attending conferences is part of an academic career, and I was fortunate enough to attend a conference in each year of my PhD. Without my supervisors, I would not have been able to attend conferences in Peru, USA, and China. It was during some of these conferences, that I met some amazing people who have become great friends and colleagues. Thank you to David Sundaram, Anson Li, and Fernando Beltran who believed enough in my work to submit it to the ICIS Doctoral Consortium. This gave me the opportunity to visit Shanghai and present my work to an international audience.

A sincere thank you must also go to my parents. Even though they have no idea what a doctoral thesis actually is, they were always ready to provide support when needed. Without them I would not be the person that I am today. And of course thanks to my brothers Richard and Greg who own a fantastic restaurant where I could get a good feed, and to their lovely wives Carmen and Sarah. Also thanks to my little bro Jarrod who I can talk about geeky things with!

To my friends outside university, who also really have no idea what academic life is really like (even though some of them like to think they know). Thanks, for being there when I needed to just escape from it all. Especially to Shane who accompanied me on holidays to Rarotonga, New York, and Florida while I was writing this thesis. I really travel way too
much!! And to Katherine, my surrogate sister, who is just now embarking on her own PhD, good luck!!

In the final year of my doctoral studies the “lunch time crew” was established and became a welcome release from writing, with lunch sometimes lasting for hours. So a big thanks to Koti, Gloria, Jonathan, and Mary (and the occasional others) who listened to my problems and provided their advice while we filled our stomachs! Also to Michelle when she came to campus and “forced” me to buy cupcakes!

During this doctoral thesis I was also a lecturer and tutor for various courses in the department. Firstly I need thank Jo for giving me a job, which of course gave me some income. I also have to thank my colleagues who taught alongside me, Chin Boo Soon, David White, Koti, Khushbu, Ron, Claris, Tomi, Johan (Bro-Han), Hameed, Foad and the rest! You made teaching and dealing with sometimes up to 200 students such a breeze. Of course I will be sad to hand over the course I have been teaching for three and a half years, but I know it will be left in good hands.

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I would not have been able to even start this PhD if the University of Auckland had not awarded me a doctoral scholarship, so I must say thank you to the anonymous scholarship committee who reviewed my application.

Lastly I need to thank all the other staff in the Department of Information Systems and Operations Management. You have been great colleagues and friends over the years and I will surely miss all of you as I embark on the next stage of my life in the UK.
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**Chapter 4: Using Netnography to study Virtual Worlds: Problems and Potential Solutions. To be submitted to European Journal of Information Systems (EJIS).**

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**Chapter 5: Chaotic Worlds: An Analysis of World of Warcraft. Proceedings of the Sixteenth Americas Conference on Information Systems (AMCIS), Lima, Peru, pp.1-7.**

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LIST OF ORIGINAL ARTICLES

This thesis consists of an introduction and conclusion, two literature review chapters, and five original articles. The original publications are listed below along with a description of the author’s contribution.

Article I


Abstract: Netnography is a form of ethnography that is adapted to the study of virtual worlds and online communities. This paper discusses the problems that may arise when netnography is used to study virtual worlds. The problems that can arise include gaining access to a virtual field site, figuring out how to document the researcher’s fieldwork experience, and deciding how to analyze very large datasets. Based on our own virtual fieldwork experience, we suggest some potential solutions to these problems.

Keywords: Virtual Worlds, Netnography, Ethnography, Images, Leximancer

As first author, Brad McKenna has taken the lead in writing this article with editing done by the co-authors.

Article II


Abstract: Virtual worlds provide new forms of collaboration and social interaction. The World of Warcraft (WoW) is one such virtual world. It is the most popular example of what is called a Massively Multiplayer Online Role Playing Game (MMORPG). In this paper, we analyze players’ outcomes with WoW using Chaos Theory. Our paper suggests that players are highly sensitive to initial conditions which are impacted by style of play and the social structure of groups.

As first author, Brad McKenna has taken the lead in writing this article with editing done by the co-authors.
Article III


Abstract: Virtual worlds are online three-dimensional worlds that are often constructed to look much like the real world. As more people begin to use these virtual worlds, virtual communities are emerging enabling various social activities and social interactions to be conducted online. Based on a literature review of social movements, virtual communities and virtual worlds, this paper suggests a framework to guide IS research into this new and exciting area.

As first author, Brad McKenna has taken the lead in writing this article with editing done by the co-authors.

Article IV


Abstract: Virtual worlds provide new forms of social interaction. They offer alternative spaces where social functions can be carried out in online three-dimensional virtual environments. In this paper we explore how collective action on a global scale is enabled by these virtual worlds. We used qualitative research to examine the organization of one social movement in World of Warcraft (WoW), the most widely used massively multiplayer online role playing game in the world. Using New Social Movement Theory, our paper suggests that there are a number of differences between real world and virtual world social movements, namely in their (a) locality, (b) issues, (c) periods of activity, (d) hierarchies, and (e) membership.

As first author, Brad McKenna has taken the lead in writing this article with editing done by the co-authors.
Article V


Abstract: Virtual worlds enable new forms of social interaction. They offer alternative spaces where people can meet in online three-dimensional virtual environments. One social phenomenon which has moved into the virtual world is the social movement. Social movements are an important means of bringing about social, cultural and political change through collective action. Using netnography, a modified version of ethnography, we studied one social movement that operates within the largest virtual world created so far. Through our fieldwork we discovered that, although the designers of virtual worlds are almost like gods in that they set the rules within which the members of the virtual world live, the social movement itself was able to adapt and change. This article therefore explores not just the evolution of the IT artifact (the virtual world), but also its co-evolution with the social phenomena (a social movement).

An abridged version of this article was published at ICIS 2012 in Orlando, Florida:


As first author, Brad McKenna has taken the lead in writing this article with editing done by the co-authors.
1. INTRODUCTION

Virtual worlds, are computer-generated virtual spaces (Nardon and Aten 2012) where millions of people can interact with each other via avatars (Castronova 2005c; Shen and Eder 2009; Suh et al. 2011). They enable people to be someone else or to take on multiple personalities at the same time (Castronova 2001). Virtual worlds are transformation technologies (Wasko et al. 2011), which enable globally distributed work, project management, online learning, and real-time simulations (Schultze and Orlikowski 2010). Virtual worlds are nonphysical spaces, where individuals, groups, and organizations can interact (Saunders et al. 2011), assume an embodied persona (Schultze 2010) and engage in socializing, competitive quests, and economic transactions with other globally distributed players (Schultze and Rennecker 2007). In 2011 it was estimated that the total number of global people was around 1.4 billion across all virtual worlds (KZero 2011).

Increasing computer power and the growing penetration of broadband Internet have allowed for the steady growth of virtual worlds (Suh et al. 2011). Current research has shown that by the end of 2011, 80 per cent of active Internet users and Fortune 500 enterprises participated in some form of virtual world. Many organizations, most notably Toyota, IBM, American Apparel, and Reuters (Wasko et al. 2011) are already investing strategically in 3D Internet technologies which enable virtual worlds (Messinger et al. 2009), and many organizations are using virtual worlds for training programs (Landers and Callan 2012). Virtual worlds have become increasingly prominent spaces for spending free time for social interaction, particularly for the younger generations. Virtual worlds also provide collaborative mechanisms to overcome geographic barriers (Davis et al. 2009). Physical spaces in virtual worlds do not exist, but the virtual space that exists is very real in the users’ minds (Saunders et al. 2011), and often appears to look much like the real world (Castronova 2007; Moore et al. 2007).

Among the most well-known virtual worlds today is Second Life (SL), a 3D virtual world where users can socialize, collaborate, and conduct business using voice and text chat through personal avatars. Another kind of virtual world is known as Massively Multiplayer Online Games (MMOG), the most well-known being World of Warcraft (WoW) (Bainbridge 2010a; Schultze and Rennecker 2007). MMOGs are attracting scholarly attention as an important social phenomenon (Assmann et al. 2010; Castronova 2006; Goh and Wasko 2012). Games such as WoW offer alternative worlds where social functions, learning, and the
development of social skills can be practiced in a virtual environment (Davidson and Goldberg 2009). Virtual worlds such as SL and WoW have implications for education, business, social sciences, and society as a whole (Messinger et al. 2009).

Virtual worlds have changed the way in which organizations communicate and conduct business (Schultze and Orlikowski 2010; Schultze and Rennecker 2007). Users of virtual worlds create an avatar which offer the affordances of “real” bodies (Schultze 2010), and enter a highly immersive world where they can interact visually, verbally, and textually with other avatars. Virtual world users find the avatar experience far more appealing than using Facebook and Twitter, where you can only read what others are doing (Nah et al. 2011; Wasko et al. 2011). The virtual world itself is like an ecosystem, with social activities happening in this highly immersive world. This ecosystem is often altered by the designers (Nardi 2010; Roquilly 2011), which means that users (or avatars) “living” within this ecosystem must act within the technological configurations imposed on them by those designers.

Virtual worlds have already been used by researchers in a wide range of disciplines. Taylor et al. (2013) investigated SL as a tool to facilitate weight management in young people. Grant et al. (2013) examined whether learners of foreign languages felt less anxious when learning in 3D virtual world class rooms. Kolotkin et al. (2012) explored the nature of relationship satisfaction for those who have relationships in real life and in virtual worlds. Bengtsson (2011) presented the Swedish embassy in SL as a source of nation branding online. Lofgren and Fefferman (2007) described the spread of infectious diseases in WoW, while Kafai et al. (2007) conducted a virtual disease experiment involving children. Bradley and Froomkin (2004) argue that games and virtual worlds can be used as laboratories for testing new regulations and laws before they are applied to the real world. Bainbridge (2010a) argues that virtual worlds can become laboratories where experiments in humanity can test new norms, values, and institutions which might later be transferred to the real world. Virtual worlds also have the potential to be proving grounds for real world social innovations, subcultures, and social movements (Bainbridge 2009). There is also some evidence that virtual worlds can serve as platforms for new cultural movements such as facilitating the consolidation of religious ideologies (Bainbridge and Bainbridge 2007), as well as substituting for social activities in the real world (Williams 2006).
1.1. Motivation

Virtual worlds are gaining research interest by Information Systems (IS) scholars with top IS journals publishing special issues on virtual worlds and their influences on business or society, for example *MIS Quarterly* in 2011 and the *Journal of the Association of Information Systems* in 2012. In line with the call to theorize the IT artifact by Orlikowski and Iacono (2001), we see a need to further theorize about virtual worlds, and in particular how they impact the people who use them.

An important social phenomenon which has moved into the virtual world is the social movement (Blodgett and Tapia 2010; Blodgett and Tapia 2011). Historically, humans have employed many tactics to raise awareness for their cause (Goodwin and Jasper 2003) or to lobby for social change. People have banded together in social movements with the aim of pursuing common goals and achieving social or political change.

Throughout history, humans have employed many tactics to complain about things they have disliked. In modern history people may have banded together with others to pursue common goals and achieve social or political change. This collection of people is called a social movement. Social movements are an important means of bringing out cultural and political changes through collective action (Staggenborg 2011). Some movements have responded to threats or violence, while many seek opportunities to claim new rights. Some movements seek political and economic liberation, while others fight for lifestyle changes. Some social movements create formal organizations, others use informal networks, while some others use more spontaneous actions such as riots (Goodwin and Jasper 2003).

Studying social movements gives people new understandings of human diversity, human action, and more generally, social interactions. Social movements also provide knowledge about politics, as movements are often a main source of political conflict and change (Goodwin and Jasper 2003). Another reason for studying social movements is because some researchers consider that we live in a “movement society” (Meyer and Tarrow 1998), or even a “movement world” as social movements become more ubiquitous in the world today (Snow et al. 2003). Nowadays, social protest is no longer sporadic but has become a continuous element in modern life. Social protest is employed more often, and by more diverse communities, which represent a wider range of claims than ever before. Social movements are also becoming a large part of conventional politics (Meyer and Tarrow 1998).
Social movement literature has, in recent times, begun to investigate how social movements have used the Internet. The Internet has played an important role in initiating and steering activism (Postmes and Brunsting 2002) and as movements take advantage of the Internet’s capabilities in growing numbers, more social protest will take place online (Leizerov 2000). Brunsting and Postmes (2002) argue that the Internet affects the nature of collective action and has enabled mobilizing people who may have previously been inactive. The Internet also allows for the planning of truly global movements (Blickstein and Hanson 2001). Salter (2003) found that because of its global reach, the Internet can be of value to social movements as it acts as a foundational medium for civil society. The Internet enables social movement groups to communicate, generate information, and is a cheap and effective means for distributing this information, and allows for immediate response and feedback.

This study is focused on social movements which occur within virtual worlds. Previous studies of social movements have examined how movements connect “through” the Internet; however, virtual worlds also allow people to connect “within” the Internet (Wasko et al. 2011), which provides a new set of issues for social movements. This enables a more engaging experience when compared with two dimensional environments (Nah et al. 2011). In the virtual world, there have been virtual protests in SL (Blodgett and Tapia 2010; Robinson 2008), in WoW (Abalieno 2005), and various other virtual worlds (Blodgett 2009; Blodgett and Tapia 2011; Castronova 2003a), and most recently in Habbo Hotel. These examples substantiate the need to study how social movements are using virtual worlds.

Virtual worlds have enabled intense human interaction, and have become powerful social platforms which enable millions of users worldwide to gather, produce massive economies of their own, while giving rise to virtual communities and complex social relationships (de Andrade 2009). It is clear that the Internet has changed the way in which social movements mobilize, recruit new members, organize their strategies and campaigns, and affected movement outcomes. We still need more understanding of how collective identity processes work when social movements are online (Blodgett 2009; Clark and Themudo 2003). In particular, Blodgett (2009) emphasizes that greater synthesis is needed between social movements, game research, and computer-mediated communication as there is no clear understanding of what the technology means for social movements.

As new forms of technology-mediated social interaction are emerging (Boostrom 2008), we believe research into social movements in virtual worlds is timely. Virtual worlds have
become the focus of attention for social researchers both in gaming and non-gaming virtual worlds on the premise that social behavior is easier to observe in computerised environments, and is comparable to behavior in the real world. Virtual worlds can be used to examine theories of sociology, culture, psychology, and human interaction (Bainbridge 2007). An increasing number of people will use virtual environments, so they should be studied as important phenomena in their own right (Castronova 2005c; Castronova 2006), while virtual world games can teach us about human society as well as human behavior, innovations, and deviance (Mortensen 2008b). This leads us to define our research problem and research objective.

*Research Problem:* There is little understanding of what virtual worlds mean for social movements.

*Research Objective:* To explore how social movements are impacted by virtual worlds.

To achieve this, we will study a social movement in WoW. The next section will discuss the scope of this study.

**1.2. Scope of this Study**

This study is bounded by the domains of virtual worlds, and social movements. Firstly, this section will define virtual worlds, and present the virtual world used in this study, WoW. Second, this section will present the social movement analyzed throughout this research. The social movement is a Lesbian Gay Bisexual and Transgender (LGBT) movement, therefore this section will also briefly discuss a history of the gay rights movement. However, we acknowledge that the gay rights movement is very broad and diverse, therefore we present only a brief background to give the reader some context to understand the remainder of this thesis.

This study is situated with the domain of virtual worlds. It is therefore necessary for us to define what is a virtual world. There is currently no commonly agreed upon definition of what is a “virtual world” (Bell 2008), with definitions being provided by many researchers (Bartle 2004; Bloomfield 2007; Castronova 2005c; Schroeder 2008). However, for the purposes of this research we will use the definition provided by Bell (2008), who defines virtual worlds as “a synchronous, persistent network of people, represented by avatars, facilitated by networked computers” (p. 2). Virtual worlds consist of synchronous shared communications, in an environment which continues to exist once the user logs off and
cannot be paused. They consist of large networks of people communicating and interacting with one another where users are represented via avatars. In order to create these virtual worlds, it is necessary for them to be facilitated by a network of computers.

Virtual worlds can be further divided into two further categories. The first category is virtual worlds which are commonly used for social and/or business activities, hereafter referred to as social virtual worlds. Examples include SL and Active Worlds. The second category is virtual worlds which are used for gaming purposes, hereafter referred to as gaming virtual worlds. This can further be sub-categorized by the games genre. The following are a common list of gaming virtual world categorizations:

- Massively Multiplayer Online Game (MMOG)
- Massively Multiplayer Online Role-Playing Game (MMORPG)
- Massively Multiplayer Online First-Person Shooter (MMOFPS)
- Massively Multiplayer Online Sports Game (MMOSG)
- Massively Multiplayer Online Racing (MMOR)

The terminology “massively multi-player” indicates that there are a large number of players, sometimes numbering in the thousands, who are simultaneously logged into the game and can interact with each other through their avatars.

This study will be positioned in WoW, the most popular MMORPG (Ducheneaut et al. 2006b; Meredith et al. 2009) which in 2010 reached over 12 million players globally (Blizzard 2010b). Players create a character (an avatar) and can interact with thousands of other players in the same world to adventure together or fight against others. A player in WoW assumes the role of a hero as they explore this virtual world. Players can form friendships, create alliances, and compete against enemies (Blizzard 2010a).

WoW was selected over SL as a field site for several reasons. Users have failed to embrace SL (Bateman et al. 2013), and research has shown that 13 million registered avatars did not return to SL after their first visit (Clark 2008). SL has even been referred to as being “dead” (Livingstone 2011). In contrast to this, WoW has a large user base and it is easy to identify active participants. Castronova suggests why we should care about online games and virtual worlds. For one, it is not just somebody’s silly game if the game is being played by tens of millions of people worldwide (Castronova 2007). Millions of people have invested their time and energy into using these virtual worlds, creating characters, and meeting new people.
Some scholars have been dismissive of virtual worlds as irrelevant to both real life and scholarship (Beck and Wade 2004; Castronova 2005c) because these social arenas have tended to be used for gaming only. However, Schultze and Rennecker (2007) argue that virtual world games represent a legitimate arena for IS research. Virtual worlds are of interest to IS researchers for both their business and social aspects (Messinger et al. 2009). MMORPGs also provide an interesting research stream. Games such as WoW offer alternative worlds where social functions, learning, and the development of social skills can be practiced in a virtual environment (Davidson and Goldberg 2009). Until recently, very few IS scholars have examined MMORPGs. In this study, we also explore how the game is being used in ways the designers of the game did not originally intend for, i.e. for social movement activities.

Assmann et al. (2010) argue that these games offer new and promising opportunities for IS research into virtual organizations and teams. Moreover, Yee (2006) argues that games can become indistinguishable from work, but metaphors of swords and dragon slaying obscure and distract us from the work that is being done within these virtual worlds. In some virtual worlds, such as WoW, players can choose among “careers” including tailoring, engineering, blacksmithing, fishing, and cooking. Players may spend many hours a week performing these activities, which parallel those of real world professions (Schultze and Rennecker 2007). In our initial explorations of WoW, we discovered that social movements were using WoW. For example we found many religious movements, including make-believe religions which only exist in WoW. Cabiria (2008) explored how virtual worlds can act as safe havens for gays and lesbians, and other marginalized people where they can develop positive coping skills, and explore their identities. Blodgett et al. (2007) examined gay and lesbian issues in virtual worlds, and propose that further research is required to further understand the diversity of users in virtual worlds.

Further extending the studies of Cabiria (2008) and Blodgett et al. (2007), the social movement used for this study is a LGBT movement. Contemporary LGBT movements can trace their origins to Amsterdam, Copenhagen, Paris, and Los Angeles where movement members renewed their efforts after World War II to create gay-friendly spaces in post-war reconstruction (Adam et al. 1999). The gay rights movement formed out of the rise of the New Left in the 1960s and 1970s. The New Left grew out of the Civil Rights movement which was struggling to advance African Americans in the United States. Out of this emerged
environmental and feminist movements, and a new critique of gender and sexual repression which came in the form of gay liberation and lesbian feminism (Adam et al. 1999).

Many would say that the modern gay rights movement in the United States began in June 1969 when the New York City police raided a gay bar called the Stonewall Inn, which resulted in violent resistance. From that night, the lives of many gay men and lesbians, and the attitude towards them from the larger culture in which they lived began to change (Clendinen and Nagourney 1999). At around the same time in Britain, the Gay Liberation Front (GLF) was formed which increased gay visibility as many people “came out of the closet” (Plummer 1999).

Gay rights movements are thought of as identity movements and thus are different to other types of social movements, and therefore are less influenced by national politics and are similar across countries (Duyvendak 1995). As gays and lesbians suffer from discrimination everywhere, the topics that local movements have dealt with are similar. For example, fighting discrimination and establishing public spaces of their own (Adam et al. 1999). Many countries around the world celebrate gay pride, often with dance parties, public shows, and a pride parade. The rainbow flag has become the symbol for the global gay rights movement, and is often hung outside establishments to indicate they are either gay owned or gay friendly (Higgs 1999; Sibalis 1999; Wright 1999).

In its most recent report, the International Lesbian, Gay, Bisexual, Trans and Intersex Association (ILGA), released data on countries where homosexual acts are currently legal or illegal. Countries where homosexual acts are legal (114 countries) are listed in Table 1.1.

<table>
<thead>
<tr>
<th>Africa</th>
<th>Benin, Burkina Faso, Cape Verde, Central African Republic, Congo, Chad, Côte d’Ivoire, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Gabon, Guinea-Bissau, Lesotho, Madagascar, Mali, Niger, Rwanda, South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>Bahrain, Cambodia, China, East Timor, most parts of Indonesia, Israel, Japan, Jordan, Kazakhstan, Kyrgyzstan, Laos, Mongolia, Nepal, North Korea, Philippines, South Korea, Taiwan, Tajikistan, Thailand, Vietnam, as well as the West Bank in the Occupied Palestinian Territory</td>
</tr>
<tr>
<td>Europe</td>
<td>Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, Vatican City</td>
</tr>
<tr>
<td>Region</td>
<td>Countries</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>Argentina, Bahamas, Bolivia, Brazil, Costa Rica, Chile, Colombia, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, Venezuela</td>
</tr>
<tr>
<td>North America</td>
<td>Canada, the United States</td>
</tr>
<tr>
<td>Oceania</td>
<td>Australia, Fiji, Marshall Islands, Micronesia, New Zealand, Vanuatu and the New Zealand associates of Niue, and Tokelau</td>
</tr>
</tbody>
</table>

**Table 1.1 Countries where homosexual acts are legal (Itaborahy and Zhu 2013)**

In contrast to this, the list of countries where homosexual acts are still illegal (76 countries) are listed in Table 1.2.

<table>
<thead>
<tr>
<th>Region</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Algeria, Angola, Botswana, Burundi, Cameroon, Comoros, Egypt, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Kenya, Liberia, Libya, Malawi, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, São Tomé and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Sudan, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe</td>
</tr>
<tr>
<td>Asia</td>
<td>Afghanistan, Bangladesh, Bhutan, Brunei, Iran, Kuwait, Lebanon, Malaysia, Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia, Singapore, Sri Lanka, Syria, Turkmenistan, United Arab Emirates, Uzbekistan, Yemen.</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>Antigua and Barbuda, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St Kitts &amp; Nevis, St Lucia, St Vincent &amp; the Grenadines, Trinidad and Tobago</td>
</tr>
<tr>
<td>Oceania</td>
<td>Kiribati, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu</td>
</tr>
</tbody>
</table>

**Legal Status Unknown**

<table>
<thead>
<tr>
<th>Region</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>Iraq, India</td>
</tr>
</tbody>
</table>

**Homosexual acts punishable with death penalty**

<table>
<thead>
<tr>
<th>Region</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Mauritania, Sudan as well as 12 northern states in Nigeria and the southern parts of Somalia</td>
</tr>
<tr>
<td>Asia</td>
<td>Iran, Saudi Arabia, Yemen</td>
</tr>
</tbody>
</table>

**Table 1.2 Countries where homosexual acts are illegal (Itaborahy and Zhu 2013)**

In recent times, the gay rights movement has focused its attention on marriage equality legislation with many countries passing same-sex marriage legislation (Desilver 2013). Countries where same-sex marriage is legal are listed in Table 1.3. On July 17 2013, the Marriage (Same Sex Couples) Act 2013 gained royal assent in the United Kingdom (UK Parliament 2013).
Table 1.3 Countries where same-sex marriage is legal (Desilver 2013)

<table>
<thead>
<tr>
<th>Argentina</th>
<th>Belgium</th>
<th>Brazil</th>
<th>Canada</th>
<th>Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>Iceland</td>
<td>Netherlands</td>
<td>New Zealand</td>
<td>Norway</td>
</tr>
<tr>
<td>Portugal</td>
<td>South Africa</td>
<td>Spain</td>
<td>Sweden</td>
<td>Uruguay</td>
</tr>
<tr>
<td>Mexico (some jurisdictions)</td>
<td>United States of America (some jurisdictions)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The LGBT movement in WoW aims to create awareness for LGBT issues, both in game and out. LGBT has over 6,200 members (players) in WoW and has over 15,000 avatars/characters (it is possible for one player to add multiple characters). LGBT consists of one main group and several smaller groups. The movement has been profiled in a number of gay and lesbian magazines and in a prominent WoW blog website. LGBT is a global social movement with members from many countries. LGBT also maintains a website with discussion forums. LGBT holds many regular activities inside WoW such as an annual pride parade with floats, model competitions, dance parties, group photographs, and events for Valentine’s Day. These events are generally organized by the leaders of LGBT, often with input from members via the discussion forum. They also organize members’ meetings in the real world, and have had meetings in Australia, Canada, and the United States. LGBT also has a sister group on the same server. LGBT allows heterosexuals to join, as long as they do not discriminate. In fact, there are many heterosexual members who prefer to play WoW as members of LGBT to show their support to the gay community, or to family members who may identify with this movement.

The first sections of this introductory chapter have introduced the reader to the concept of virtual worlds and social movements. It has presented our research problem and objective. It has also defined the boundaries in which this research is set. As this thesis consists of five original articles, the next section of this introductory chapter will present the research approach used in this study followed through a conceptual framework which connects all five articles together to explain our immersive and participatory exploration of the LGBT movement in WoW. It will also present the research questions for each original article, the underlying philosophical assumptions of this research, and the theoretical perspectives applied to this study.

1.3. Research Approach

The purpose of this section is to present the research approach used in this study. First this section will explain how this study is an exploratory study. Next it will discuss the philosophical stance taken in this study, and provide a brief background of interpretive
research. The role that the researcher took in this research will then be discussed, followed by a brief description of the netnographic methodology used in this study. Finally this section will explain the unit of analysis and the role of theory in this study.

1.3.1. Defining Exploration

When little is known about a phenomenon, exploratory research is useful, particularly in the early stages of research (Myers 2013). The title of this thesis is “an exploration of social movements in virtual worlds,” therefore it is necessary to define what is meant by the term exploration. The Oxford dictionary provides two definitions. First, it is defined as ‘the action of exploring an unfamiliar area’ and second, ‘thorough examination of a subject.’ (Oxford Dictionary 2013).

Virtual worlds are a recent phenomenon, with little understanding from the IS community. This thesis explores one virtual world, which in essence can be thought of as a technological ecosystem, not unlike physical world ecosystems. Therefore, we propose that to understand an ecosystem, be it real or virtual, some level of exploration must be involved. In this thesis, we will explore the technological ecosystem of WoW. This virtual ecosystem consists of mountains, trees, creatures, and other people, which are produced by game designers and programmers.

The second definition of exploration involves the thorough exploration of a subject. This thesis has explored LGBT’s use of WoW over the period of three years. We began the study knowing very little about this virtual environment, what it means to be a player in this massively multiplayer world, and how players interact within the virtual world. We entered WoW and began to become familiar with its intricacies. Ethnographic methods enable a researcher to fully explore a phenomenon. In this example, our phenomenon was social movements taking place in a virtual world game. Due to the nature of ethnography, we were able to spend a long amount of time exploring this virtual world. Not only did we explore the virtual ecosystem, we also explored social interactions within it. We followed LGBT over a 3 year period and investigated the dynamics of a virtual world social movement.

1.3.2. Interpretive Research

In any research project it is important for the research to define their underlying philosophical assumptions which guide the research (Myers 1997). This section will outline the philosophical stance of this research. According to Myers (1997), qualitative research can be
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positivist, critical, or interpretive. Positivist studies assume that reality is objectively given, and can be described by properties which can be measured and are independent of the researcher. Positivist studies tend to test theory, and often contain formal propositions or hypotheses (Orlikowski and Baroudi 1991). Critical researchers assume that social reality is historically constituted, and the main task of critical research is that of social critique, where conditions which are restrictive or alienating to the status quo are brought to light. Critical research aims to eliminate the causes of alienation and domination (Myers 1997).

The philosophical stance of this study is interpretive. Interpretive studies assume that reality is accessed through social constructions such as language, consciousness and shared meanings (Myers 1997). The underlying assumption of interpretive research is that it is informed by hermeneutics and phenomenology (Boland 1985). Interpretive studies generally attempt to understand phenomena through the meanings that people assign to them (Myers 1997). Interpretive research does not predefine dependent and independent variables, but focuses on the full complexity of human sense-making as the situation emerges (Kaplan and Maxwell 1994). Interpretive methods of research in IS are "aimed at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context" (Walsham 1993 p. 4-5).

Hermeneutics is the underlying principle of interpretive research which focuses on meanings and human understandings (Myers 2013). A fundamental question to hermeneutics is: “what is the meaning of this text?” Therefore the primary concern in hermeneutics is to make sense of an object of study, which culminates with an interpretation of the meaning of a text (Radnitzky 1970).

There are a set of concepts which hermeneutics provides to help the interpretation of a text. This first concept is historicity. This implies that our interpretation of a text is based on historical context (Myers 2004). Furthermore, it suggests that an interpretive researcher needs to be aware of the historical context of the phenomenon being studied. The context needs to be made explicit, and should aid in sense-making for the story (Myers 2013).

The second concept is the hermeneutic circle which refers to the relationship between the understanding of the whole text, and the understanding of its parts (Gadamer 1976). The hermeneutic circle suggests there is a circle of understanding “from the whole to the part and back to the whole” (Gadamer 1976 p. 117). This suggests that we come to understand a
complex whole, by understanding the meanings of its parts and their interrelationships (Myers 2013).

The third concept is prejudice, which suggests that “prejudice”, pre-judgement, or prior knowledge is important to our understanding. This implies that we cannot begin to understand a text unless we understand the language in which it is written. Researchers should be aware of the social conventions, rules of grammar, and vocabulary to have an understanding of what should be said or not said (Myers 2013). Even though most of our prior knowledge might be tacit or taken for granted, it is still a prerequisite for our understanding (Myers 2004).

The fourth concept is autonomization and distanciation. The process of autonomization means that once speech is inscribed into text, it has an autonomous, objective existence which is now independent of the author. Once something is in the public domain, or has been published, it is often difficult to take it back (Myers 2013). Distanciation refers to the distance that occurs between time and space from when the text was spoken or inscribed, to the readers of the text. It is never possible to fully understand the author’s true meanings of the texts. The goal of hermeneutics is to make the interpretation of the text “our own” (Myers 2013).

The final concept is appropriation and engagement. The process of appropriation implies that we only come to understand the meaning of a text if we make it our own (Myers 2013). Appropriation is essential for understanding to take place (Myers 2004). Meanings emerge from the researcher being engaged with the text, and as this engagement unfolds both the reader and the meaning of the text are changed. The process of critical engagement with the text is crucial (Myers 2013).

The next section will discuss the role of the researcher within this interpretive exploration.

1.3.3. The Role of the Researcher

One of the difficult tasks of interpretive research is the task of accessing other people’s interpretations, filtering them, and reporting on these interpretations to others, sometimes even back to the research participants (Walsham 1995). Therefore, an interpretive researcher must decide on their own role in this complex human process. Walsham (1995) considers two roles; that of the outside observer and that of the involved researcher. However, both of these roles consider the subjectivity of the researcher. Walsham (1995) suggests that the choice of
either role be consciously made by the researcher, dependent on the advantages and disadvantages of each role. Walsham (2006) has changed his opinion slightly on this and now considers the role of the researcher as more of a spectrum, which may change over time.

With reference to the outside observer, research participants tend to view the researcher as an outsider, and not a participant. An advantage of this approach is that the researcher is not seen as having a personal stake in the interpretations and outcomes which may emerge from the research, and thus participants may be more frank in their interactions with the researcher. A disadvantage to this approach is that a researcher may miss out on various activities and may not get a direct sense of the phenomenon from the inside. Researchers may also be cut off from certain data which participants deem too confidential or sensitive to be shared (Walsham 1995).

In the opposite role, the researcher becomes involved by becoming a member of the group or organization under investigation for some period of time. The advantage of this approach is that the researcher will get an inside view, and may not be cut off from confidential or sensitive data. However, the disadvantage is that the researcher will be perceived as having a direct personal stake in the views and activities, and thus participants may become more guarded in their expressed interpretations. Participant observers should also be clear about their research motives for ethical reasons; however, they will still not be regarded as normal participants, and thus not total insiders. Also, reporting on interpretations can become difficult with the dangers of over-modesty or self-aggrandizement (Walsham 1995).

Ethnographic research, with its participant-observation approach, tends to fall within the involved researcher side of the spectrum. However, we took the spectrum approach recommended by Walsham (2006). While still at the involved researcher side, this research is not at the hard end of this spectrum. This allows us to balance the advantages and disadvantages of either approach. By moving slightly towards the outside observer side of the spectrum, we did not have the problem of participants being less open and honest with us as researchers. This approach also allowed us to not become too closely socialized with the views of the participants which gave us the ability to have a fresh outlook on the phenomenon.

This exploration of LGBT in WoW applies the interpretive approach for analyzing and using qualitative data obtained during the longitudinal immersion and participant-observation of LGBT. This allows for an in-depth understanding of the phenomenon, which provides the
foundations for this exploratory study of the interactions between the social movement and
the technological ecosystem in which LGBT is “living”. The interpretive stance has the
assumption that reality is socially constructed and cannot be studied in isolation of the social
actors involved in its construction. Therefore this study will focus on these actors (users and
technology) as a source of evidence about the phenomenon. The in-depth understanding in
this study is formed by our subjective interactions with LGBT within WoW.

The next section will present a brief background to the methodological approach used to
explore LGBT in WoW.

1.3.4. Methodology

This research looks at LGBT in WoW and uses a qualitative research method called
netnography, which is a form of ethnography for studying online communities (Kozinets
2010; Myers 2013). The collection of data in netnographic studies involves participant
observation and interaction with community members (Myers 2013). Netnographic
researchers must be active in some part of the community and not be invisible to the people
under investigation, but they should not lead the community (Kozinets 2010). Netnography
adapts ethnographic procedures to use computer mediated communications as a source of
data and is used to gain an ethnographic understanding of online cultural and communal
phenomenon (Kozinets 1998; Kozinets 2010).

Kozinets (2010) says there are four critical differences between traditional ethnographic
techniques and their adaption to online environments. The first is alteration, as the nature of
interactions has been altered from face-to-face interactions to computer-mediated
communications. Second is anonymity, because users of online environments have the option
of remaining anonymous. Third is accessibility, as almost anyone can access the online
forums. Fourth is archiving, which refers to the persistency of data on online
communications, even after the user has logged off. Together, these four concepts lay the
foundations for adapting traditional ethnographic face-to-face interactions to online
computer-mediated communications.

Another difference between netnography and traditional ethnography is that the researcher
can end up with huge amounts of data, even more so that with traditional ethnographic
studies (Myers 1999). This is because conversations, events, and almost anything that
happens online is logged and can be recorded. Online studies make the collection of data very
easy, since in many cases the users of virtual worlds are in effect automatically recording
many of their own words and actions themselves. For example, if someone posts a comment in a discussion forum, the comments are already typed up and transcribed by the user and are freely available to anyone else who reads them online. Article I will address how we solved the issue of large datasets using two data analysis software tools, NVivo and Leximancer.

Netnography follows a similar process to traditional ethnography. The first stage is to define the research questions and social sites and topics to investigate. Stage two involves selecting and identifying an online community. During the third stage, the researcher will engage and immerse themselves in the online community using participant-observation and various data collection methods. This is followed by stage four where the data is analyzed and the findings are interpreted. The final stage of a netnographic study is to write, present, and report on the research findings and theoretical or practical implications (Kozinets 2010).

Article I gives more information about the netnographic approach applied to Articles II, IV, and V. It introduces the nature and applicability of this emerging method for conducting research on and within virtual worlds. Netnography is a form of ethnography that is adapted to the study of virtual worlds and online communities. Article I provides some unique aspects of studying virtual worlds, followed by a description of the netnographic method. Following this, the article presents a modified version of netnography, more suitable for exploratory studies, and illustrates this with examples of our interactions with LGBT. The article also discusses using images as a data source, and using Leximancer as a qualitative data analysis tool.

1.3.5. Unit of Analysis

Qualitative researchers must define the boundaries of their research, known as the unit of analysis (Miles and Huberman 1994), which can also be thought of as the focus of the study. The unit of analysis in this study is the collective rather than the individual. Social movements by their very nature are a collective group of individuals which form based on their collective identity. This study does not examine an individual member of a social movement, or why a member chooses to become part of a social movement. We are examining the social movement as a whole, and how the movement is impacted by the technology they are acting within. However, for interest, appendix 1 contains a coded list of reasons why some LGBT members chose to join. This data was collected from the LGBT website from 320 members stating the reasons why they joined LGBT.
1.3.6. The use of Theory

A key question for researchers in any tradition, regardless of underlying philosophical assumptions, concerns the role of theory in their research. Eisenhardt (1989) discusses the use of theory in interpretive studies (Walsham 1995):

- As an initial guide to design and data collection
- As part of an iterative process of data collection and analysis
- As a final product of the research

Using theory in the early stages of interpretive research is to create an initial theoretical framework taking into account previous knowledge, in order to approach the early empirical work. The second use of theory is desirable for interpretive studies to preserve a degree of openness in the data and to allow for initial assumptions or theories to be modified. This results in iteration between data collection and analysis, where initial theories may be explored, expanded, revised, or abandoned. The final use of theory is for research to produce concepts, a conceptual framework, propositions or a mid-range theory (Walsham 1995).

Theories in interpretive research are used differently than in positivist research. Interpretive researchers do not aim at “falsifying” theories, but tend to use theories as a “sensitizing device” which allows the researcher to view the world in a particular way. In Information Systems, interpretive researchers tend to use social theories such as structuration theory or actor-network theory rather than generalizing to philosophically abstract categories (Klein and Myers 1999a).

The usage of theory in this research has taken the approach of Klein and Myers (1999a) by using theory as a sensitizing device. This research has employed multiple theoretical perspectives, which depending on the theory, have fallen into the first two categories of theory usage by Eisenhardt (1989). In Article II, Chaos Theory was used to describe the way they game is played. In this study, Chaos Theory was used as an initial guide to designing the study and data collection. Data was collected based on the theoretical constructs well known in Chaos Theory. Article III was similar in that it used the ideas of New Social Movement Theory (NSM) to describe the aspects of social movements. Similarly to Walsham and Sahay (1999), our theoretical perspective evolved over time. In article IV the theoretical perspective used NSM as a backdrop; however we considered other theoretical combinations of structuration theory (Giddens 1984; Orlikowski 2000), social informatics (Kling 2000; Kling
et al. 2005), and sociomateriality (Orlikowski and Scott 2008), before finally settling on actor-network theory (Callon 1986b; Latour 1987). The key choice of theory relates to the best match or fit with the research problem under investigation (Myers 2013).

The following section will present the conceptual framework and will elaborate on these theoretical selections in more detail.

1.4. The Conceptual Framework

The purpose of this section is to present the conceptual framework, and subsequent research questions. According to Miles and Huberman (1994), conceptual frameworks serve the purpose of outlining the main things to be studied. The conceptual framework in this study serves the purpose of placing the original articles presented in this thesis into a ‘bigger picture’ to explain how this study was an exploration of social movements in virtual worlds. It also explains the research questions applied to this study, and the theoretical basis used for each stage of the research.

The conceptual framework for this study is illustrated in Figure 1.1, which consists of three main stages. Each stage generated a research question, used different theoretical lenses and data collection methods, and builds upon the research presented within the preceding stage.

The first stage, virtual arena, is the top-most stage and allows for the exploration of the technological ecosystem, in this case the virtual world WoW. The second stage, social phenomenon, allows for the understanding of a particular social phenomenon which is under investigation within the context of the previous stage. Finally the third stage, specific example addresses examples of the social phenomenon within the context of the previous two stages. In the next sections of this thesis, the framework will be deconstructed to explain each of its stages.
1.4.1. Stage 1: Exploring the Virtual Arena

An explorer must define the boundaries of what they want to explore. This research began with the simple premise that we wanted to explore virtual worlds, of which WoW was selected. The first phase of this research was to explore the technological ecosystem of WoW. If an IT researcher wants to understand a particular artifact, they must spend time using that artifact. First they need to gain access to use it. Once access is gained, it is necessary to begin using it in order to fully understand all of its intricacies, and how people use it. Once it was decided that WoW was the virtual world to be under investigation in this study, the lead researcher downloaded and installed it on his computer. He began to play the game every day, and after several months was familiar with how the game is played and the social interactions within it.

Initially we entered the virtual world with no preconceived ideas or hypotheses. The purpose of this stage was simply to explore WoW. After some time interacting with the general player population we eventually arrived at a research question which centered broadly around player experiences. The research question in this stage became:

Research Question 1: how can we explain differences in player experiences?

To answer this research question, and to gain a theoretical understanding of how players use WoW, Chaos Theory was applied which was able to assist in the understanding of MMORPG
environments. Chaos Theory was selected for this study because it can aid in understanding how player experiences differ over time, and from player to player. Chaos Theory originated in mathematics and can be defined as “the qualitative study of unstable aperiodic behavior in deterministic non-linear dynamical systems” (Kellert 1993). Chaos involves the study of phenomena exhibiting a sensitive dependence on initial conditions. Therefore, if any parameter in a system is slightly changed, very different results can occur (Pickover 1994). Chaos can also be thought of as how something changes over time (Williams 1997).

The existence of chaotic systems is now well established in mathematics, ecology, meteorology, and similar non-social science fields (Gregersen and Sailer 1993). In their paper, Gregersen and Sailer (1993) argue that some social behavior is unpredictable and hence inherently chaotic. Existing social entities, such as groups, institutions, or organizations with identical initial states and identical environments, may exhibit completely different behaviors even though their behavior is governed by the exact same set of rules or laws.

There are a few examples of Chaos Theory used in IS. Dhillon and Ward (2002) used Chaos Theory to discover patterns in complex quantitative and qualitative evidence for the nature of IS. McBride (2005) reviewed organizational literature relating to Chaos Theory and formulated a number of key concepts which should be incorporated into an interpretive framework for the analysis of chaotic systems. This stage of the research applies the framework of McBride (2005) to an analysis of the chaotic nature of WoW using two examples: questing and raids. The first example, questing, will show how Chaos Theory can apply to solo players in WoW. The second example, raiding, is where multiple players must interact together in order to achieve a common goal.

Figure 1.2 illustrates the goal of this stage, and the approach taken to explore the virtual arena. During this stage of the research, empirical data was used to prove the existence of a ‘chaotic world’ within WoW. One of the researchers began playing WoW for a few hours per day. The researcher completed a large number of quests and a couple of raids with multiple characters. Extensive field notes were recorded during play time. This involved screen captures (WoW provides the ability to record the game in movie files) and note taking. During this stage, the researcher achieved one level 55 character, and one level 64 character and a number of lower level characters. Both of these characters were members of guilds. The researcher also spent considerable time reading and researching WoW through
wowwiki.com and thottbot.com and gaining experience through YouTube clips of raids to assist understanding of complex raids scenarios (Youtube.com 2008). Considerable time was also spent discussing play tactics offline with other WoW players. The field work for this stage lasted for six months. The total play time for this study was 330 hours.

The key finding in this stage was; despite the rules of WoW, and the limitations of its programming, the introduction of human players into the game extends the limits of the game and introduces a range of play experiences. Social behavior is often hard to predict and hence virtual worlds such as WoW may be inherently chaotic. We were able to demonstrate the blending of a technical ecosystem with social dynamics of players, which often provides unpredictable or unimaginable outcomes. During this stage, the researchers became very familiar with WoW. The findings of this stage are presented in Article I. We became aware that the limits of the game can become extended by introducing social behavior into the game. This further motivated us to explore what other aspects of the game may be extended beyond what the designers intended.

1.4.2. Stage 2: Understanding Social Phenomenon

During stage 1, we became aware of social activities taking place in WoW. One of those social phenomena was social movements. WoW is designed as a game to kill monsters and fight against your enemies. However we observed that the game is being used in other ways. We became aware of several social movements which were operating within WoW. For
example we found a Christian social movement whose members meet in-game and pray together with their avatars before they go and kill monsters. There are other make-believe religious movements which exist only within WoW.

Before we explore this specific social movement, we first have to conceptually understand the phenomenon of social movements in virtual worlds. We began to explore conceptually the issues in the study of virtual world social movements as there has been little research in this area. Previous research has claimed that social phenomena in the virtual world can be used as a proxy to studying social phenomena in the real world. However, virtual worlds have some important characteristics which make them quite different to the real world. Therefore, further understanding of how virtual world technologies, avatars, and the unique nature of virtual worlds impacts social phenomena is in need of attention from the IS community. To address these issues, we presented a research framework designed to provide a roadmap for the IS community in conducting research into the area of virtual world social movements.

Figure 1.3 illustrates the goal of this stage, and the approach taken to explore the concept of virtual world social movements. To gain a conceptual understanding of the phenomenon, we chose a literature review approach to explore the concepts of the phenomenon under examination. To do this we explored three main issues of social movements: mobilization and recruitment of individuals (Edwards and McCarthy 2003; Jenkins 1981; McCarthy and Zald 1977; Staggenborg 2011; Tilly 1978); social movement organization (Pichardo 1997; Scott 1990; Tarrow 1994); strategies and campaigns (Goodwin and Jasper 2003; Staggenborg 2011; Tilly and Wood 2009). We then compared these against three characteristics of virtual worlds: re-worlding, re-embodiment, and multiperspectivity (Kozinets and Kedzior 2009). The research question in this stage became:

*Research Question 2*: What are the key issues when studying virtual world social movements?
Our key contribution of this stage is the development of a conceptual framework to understand social movements in virtual worlds. The framework consists of a number of key elements of new social movements and presents some issues in studying virtual world social movements. Based on a literature review of social movements, virtual communities, and virtual worlds, we propose a framework to guide IS research into this new and exciting area. To gain a complete understanding, we extended our conceptual framework to other genres of virtual worlds for a more comprehensive exploration of this phenomenon in all types of virtual worlds. The conceptual framework is presented in Article II.

**1.4.3. Stage 3: Specific Examples**

After we explored the virtual arena (stage 1), and conceptually understood the social phenomenon (stage 2), we explored specific examples of the conceptual framework presented in stage 2 within the virtual arena presented in stage 1. First we set out to explore the organizational differences between real world and virtual world social movements. Our research question became:

*Research Question 3:* How do virtual worlds affect the organization of social movements?

To explore this research question theoretically, we examined the available social movement theories. A brief description of these theoretical perspectives will follow, and are further
elaborated in section 2.2 of this thesis. There have been many theories proposed to understand social movements, namely:

- Collective behavior theory (Smelser 1962);
- Relative deprivation theory (Davies 1962);
- Mass society theory (Kornhauser 1959);
- Research mobilization and political process theories (McCarthy and Zald 1977);
- Collective action frames (Snow and Benford 1988);
- New Social Movement Theory (Buechler 1995; Pichardo 1997)

The first three are classical theories, and are no longer used in social movement research. Resource mobilization and political process theories are more focused on the mobilization of resources to support a social movement. The availability of resources and opportunities for collective action are considered more important than grievances which cause social movement formation (Klandermans and Tarrow 1988). Political process theory approach perceives movements as primarily political, where movement actors make demands of the state and ask for changes in laws and policies (Goodwin and Jasper 2003).

Collective action frames are used as a method of capturing the importance of ideas and meanings in stimulating protest (Benford and Snow 2000), and are used as interpretations of issues and events that inspire and legitimate collective action (Staggenborg 2011). Collective action frames offer a strategic interpretation of issues with the intention of mobilizing people into action (Snow and Benford 1988).

Initial interactions with LGBT quickly confirmed that resource mobilization, political process, and collective action frames were inappropriate theories to sensitize our interpretive research. LGBT is not fighting for the availability of resources nor are they a political movement. LGBT is also not using framing techniques to frame their injustices. Instead their aim is to better service the LGBT community. Gay rights movements are thought of as identity movements and thus are different to other types of social movements, and therefore are less influenced by national politics (Duyvendak 1995). This leads us to New Social Movement Theory (NSM) because of its fit (Myers 2013) with the nature of LGBT.

We will briefly cover some background of NSM. For a more detailed explanation see section 2.2.6 of this thesis. NSMs break from earlier industrial era movements that focused on the redistribution of wealth, and now focus on concerns for forms of alternative lifestyles.
(Habermas 2008; Pichardo 1997). They promote direct democracy, self-help groups, and collaborative styles of social organization (Pichardo 1997). LGBT had no grievances over wealth; rather they are interested in creating awareness for their cause. NSM tactics tend to remain outside of normal political channels and use disruptive tactics to influence public opinion. They also employ pre-planned and highly dramatic forms of demonstration, often with costumes and other symbolic representations (Tarrow 1994). LGBT has annual pride parades, and attendees often use alternative methods of representation such as lighting and sparkling effects (spells).

NSMs emphasize action in the cultural sphere or civil society as the arena for collective action (Cohen 1985; Melucci 1989), while stressing the importance of strategies which promote self-determination and autonomy (Rucht 1988). Rather than conflicts over material resources, NSMs tend to emphasize post-materialist values of collective action (Inglehart 1990), while their grievances and ideologies are socially constructed, rather than constructed from a group’s structural location (Johnston et al. 1994; Klandermans 1992). NSMs also present temporary, latent, and submerged networks which underlay collective action, rather than assuming that collective action emerges from centralized organizations (Melucci 1989). Scott (1990) discusses the organizational form of new social movements, they: (1) are locally based, or centered around small groups; (2) organize around specific or local issues; (3) are characterized by cycles of movement activity and mobilization, i.e. periods of high or low activity; (4) have fluid hierarchies and loose systems of authority; and (5) have shifting membership and fluctuating members.

Our interpretive analysis of LGBT with NSM as a sensitizing theory enabled us to find a number of differences and similarities when this theory is compared against real world and virtual world social movements. Therefore, we can present the complete conceptual framework (see Figure 1.4). The findings are presented in Article III.
It was during this engagement with LGBT that the researcher became aware of a constant struggle between the technical ecosystem (WoW) and the social activities occurring within it. Often LGBT had to make changes to its structure or processes as the virtual world it was acting within evolved. We set out to explore how the social and the technology co-evolve. As the technology is altered by its designers and new configurations implemented, this sometimes forces the social groups acting within the technological ecosystem to co-evolve with the technology. We found that LGBT was forced to change the way it acted within the virtual ecosystem multiple times over the course of this study. This encouraged us to formulate a new research question.

*Research Question 4:* how do the technological artifact (the virtual world) and the social world (the social movement) co-evolve?

To explore this research question, we needed to combine NSM with a theory to help us explain the co-evolution. NSM is a theory which helps us to understand the dynamics and structure of social movements, but does not explain how they can be enacted through technology. A socio-technical approach is required to understand both the social aspects enacted, and the technology which mediates those social actions. To gain a socio-technical understanding of this phenomenon, we considered multiple theoretical perspectives.
We required an approach which would allow us to examine changes to the configuration of WoW and what impact they had on LGBT. To understand the technical evolution of the virtual world, it is necessary to examine how its configuration has changed over time. As WoW is constantly changing as the designers of the game release patches, we had to understand how the system has changed over time. First we considered grounding our research in social informatics (Kling 2000; Kling et al. 2005). Social Informatics is more of a field of study than a theory, and using this approach required researchers to employ other social theories. Social informatics could not adequately allow us to examine the co-evolution of the social and the technology. However, we discovered what we believe is a much more useful approach to follow technological and social changes, known as Biography of an Artifact (BoA) (Williams and Pollock 2012).

Therefore we have employed the BoA approach to study the biography of the virtual world. Williams and Pollock (2012) advocate understanding the biography of an IS by following it through time and space. Their approach attempts to study an IS over multiple frames of analysis, through extended longitudinal studies (i.e. ethnography). These biographies compare systems at different moments in the lifetime of the system, and capture linkages between different actors in time and space. To get an understanding of how the virtual world has evolved over time, we analyzed patch data. WoW regularly releases patches which change some nature of the game. Each time a patch is released it also comes with patch notes which describe the changes to the system. The BoA approach recommends using Actor-Network Theory (ANT) as a theoretical lens by following not only the system, but also the actors which use the system.

Therefore, to illustrate the co-evolution of the social and the technology we will also utilize ANT (Callon 1986a; Callon 1986b; Callon 1999; Latour 2005; Law 1992; Walsham 1997), which is an appropriate tool for socio-technical research (Callon 1986a), and has been advocated for use in Information Systems research by Walsham (1997). ANT can be considered a theory for explaining (Gregor 2006) and therefore will be used to explain how the social movement has been impacted throughout the biography of the system. ANT is a useful means for data analysis in this study for its ability to examine the co-evolution of society and technology (Callon 1986a), and for understanding a systems biography, or how a system is shaped over multiple time frames and settings (Williams and Pollock 2012).

ANT allows for the studies of sociotechnical processes and is recognized as having potential
for understanding the complex social interactions with IT (Hanseth et al. 2004; Sarker et al. 2006; Walshaw 1997). According to Latour (1993), the world is constructed of hybrid entities. ANT argues that society consists of heterogeneous materials which includes not only people, but also machines, animals, texts, money, architectures – or any other kind of material imaginable (Law 1992). The stuff of the social isn’t simply human. It is all these other materials too. Society would not exist if it were not for the heterogeneity of the networks of the social (Law 1992). ANT was developed to analyze situations where the separation of these heterogeneous materials is difficult (Callon 1999). ANT deals with the social-technical divide by claiming that purely social or purely technical relations are not possible (Tatnall and Gilding 1999). The emphasis on ANT’s empirical enquiry allows the researcher to see the relations among the heterogeneous actors in the network (Doolin and Lowe 2002). ANT considers that social and technical determinism are flawed and proposes instead a socio-technical approach (Latour 1986; Law and Callon 1988) in which neither social nor technical positions are privileged.

One of the distinguishing and controversial characteristics of ANT is its non-discrimination between human and non-human actors (Sarker et al. 2006; Walshaw 1997). Actors are human or non-human linked by associations of heterogeneous materials of aligned interests (Walshaw 1997). ANT does not distinguish between human and non-human elements, including people, software, hardware, organizations, and treats the social and the technical as inseparable (Walshaw 1997). Some other common examples of actors include, computers, concepts, ideologies, graphical representations, methodologies, and other technical artifacts (Sarker et al. 2006). The durability of actor-networks is a consequence of their heterogeneity (Doolin and Lowe 2002). Actor-networks become cohesive and stable because of their heterogeneity and that they are intimately bound up with the material and the technical. A consequence of this is that society and technology can be conceptualized as ontologically separate entities (Latour 1994).

ANT does not treat people as special; it treats all objects the same (Law 1992). ANT states that if humans form a social network, it is not because they interact with other humans. It is because they interact with humans and potentially endless other materials. Actors (material or human) are separate and drive each other. For example, social relations may shape technology, or technology may shape social relations (Law 1992). And just as humans have preferences, so too do the other materials which make up the heterogeneous networks of the
social. Actors can be shown to gain and lose attributes such as personal responsibility, intelligence, and independence. And conversely, actors can take on or lose those attributes (Law 1992). All actors in the network contribute to the patterning of the social. If these materials were to disappear, then the social order will also disappear (Law 1992).

Some have criticised the idea that non-alive objects can have their own interests, while others argue that it can provide researchers with a metaphor for analyzing complex social-technical networks in detail, without needing to worry about differentiating the social from the technical (Sarker et al. 2006). Each actor can only be understood and defined in relation to other actors (Law 1992). Callon (1986b) followed an actor to understand the moments of translation during the domestication of scallops. Latour (2005) suggests that researchers who “follow the actors themselves” learn from them what the collective existence has become in their hands (Latour 2005).

ANT allows us to describe in a fine level of detail how large heterogeneous actor-networks are created (Rodon et al. 2008). Social scientists explore these networks, characterize their heterogeneity, and investigate how they come to generate effects like power, inequality, and organizations (Law 1992). ANT was developed to analyze situations where the separation of humans and non-humans is difficult, and when actors have variable forms and capabilities (Callon 1999). Through ANT, we can see the emergence, development, and stabilization of an actor-network (Rodon et al. 2008). When new actors enter the network, or pre-existing actors leave the network or change alliances, actor-networks can become unstable (Callon 1986a). An actor-network relies on its maintenance for continued existence. These alliances between actors are under constant challenge and if they break down the network may collapse, or it may re-form in a different configuration (Tatnall and Gilding 1999).

ANT states that the boundaries between the social and the technical can always be questioned. Thus an actor-network can be viewed as a stabilized set of relations between heterogeneous materials (Rodon et al. 2008). ANT explores how the interests of a diverse set of actors are translated and inscribed into technical artifacts, and examines how those actors form alliances to mobilize support (Walsham 1997). For the actor-network to remain stable, the actors must be aligned. If alignment does not occur, the system will not survive (Rodon et al. 2008). It is possible to study the co-evolution of society, technological artifacts and knowledge of nature, using the concept of the actor-world, translation, and the actor-network (Callon 1986a).
In order to analyze actor-networks, and to treat human and non-human actors fairly, ANT is based on three principles: agnosticism, generalized symmetry and free association (Callon 1986b). Agnosticism implies analytical impartiality is required towards all actors in the actor-network. Generalized symmetry explains the various and sometimes conflicting viewpoints of different actors by use of abstract and neutral vocabulary which works in the same way for human and non-human actors. All elements in the heterogeneous networks should be treated with the same status. Free association requires that all a priori distinctions between technological or natural, and the social should be abandoned (Callon 1986b; Singleton and Michael 1993).

Translation, which is a key element of ANT, is the process where the different actors’ interests, meanings, and values are aligned which develops and stabilizes the network (Rodon et al. 2008). In order to enrol new actors into a network, actors persuade others’ interests towards their own. This implies that translation processes have political implications: “The result [of translation] is a situation where certain entities control others. Understanding power relationships means describing the way in which actors are defined, associated and simultaneously obliged to remain faithful to their alliances” (Callon 1986b p. 224). Agents build a network of alliances by defining, mobilizing, and juxtaposing heterogeneous actors, assisting them to perform certain roles, and fitting them together to form a working whole (Doolin and Lowe 2002). The translation process consists of the four stages of problematization, interessement, enrolment, and mobilization (Callon 1986b; Rodon et al. 2008):

1. The first phase of translation is problematization. Actors frame a problem or opportunity and persuade others in the network that they should dedicate resources to the solution to the problem or opportunity. The solution must be of a common interest for the actors participating, despite the diverse interests they may have (Doolin and Lowe 2002; Rodon et al. 2008). The agent attempts to enrol into a network by the process of problematization (Latour 1987). A key focus of problematization is the culmination of the obligatory passage point, which is a point where any actor with a stake in the network must pass through to obtain its objectives (Rodon et al. 2008).

2. The second stage, interessement, means that the other actors in the network become interested in the solution. Actors will change their affiliation from a certain group and favor an actor framing the problem or opportunity, and also attempts to interrupt any potential competing solutions with the aim of constructing a system of alliances
(Callon 1986b). If interessement is successful, the validity of problematization is confirmed (Rodon et al. 2008).

3. The third stage, enrolment, concerns “the group of multilateral negotiations, trials of strength and tricks that accompany the interessements and enable them to succeed” (Callon 1986b p. 211). Latour (1987) suggests five strategies for enrolment: (1) cater to others’ interests; (2) convince others that their usual ways are cut off; (3) to seduce them through a detour; (4) reshuffle interests and goals (displacing goals, inventing new groups or new goals, rendering the detour invisible, winning trials of attribution); and (5) become indispensable to others (Rodon et al. 2008). The agent then becomes a spokesperson for the actors in this translation (Callon 1986b; Law 1992).

4. The final stage, mobilization, concerns stabilizing the actor-network by creating durable and irreversible relations. If translation is successful, the network then results in a single actor, which can be treated as a black-box (Latour 1987). However resistance to enrolment processes is possible, and translation is only achieved when actors accept the roles assigned to them (Doolin and Lowe 2002). If translation fails when an actor defines itself differently it potentially leads to the modification or disintegration of the actor-network (Callon 1986a; Callon 1986b).

Some of the key elements of ANT are presented in Table 1.4.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>Actor (or actant)</td>
<td>“Both human beings and non-human actors such as technological artifacts” (Walsham 1997).</td>
</tr>
<tr>
<td>Actor-network</td>
<td>“Heterogeneous network of aligned interests, including people, organizations and standards” (Walsham 1997).</td>
</tr>
<tr>
<td>Translation</td>
<td>“Process of alignment of the interests of a set of actors with those of a focal actor” (Callon 1986b; Rodon et al. 2008).</td>
</tr>
<tr>
<td>Problematization</td>
<td>“First moment of translation in which an actor frames a problem or an opportunity and attempts to persuade other actors in the network that the problem/opportunity is worth dedicating resources to its solution” (Callon 1986b; Rodon et al. 2008).</td>
</tr>
<tr>
<td>Interessement</td>
<td>“Second moment of translation in which ‘other actors become interested in the solution proposed. They change their affiliation to a certain group in favor of the new actor’” (Callon 1986b:</td>
</tr>
</tbody>
</table>
Enrolment

“Third moment of translation that concerns the group of multilateral negotiations, trials of strength, and tricks that accompany the interressements and enable them to succeed” (Callon 1986b: p 211).

Mobilization

“Last moment of translation that consists of stabilizing the actor-network by making durable and irreversible relations” (Callon 1986b; Rodon et al. 2008).

Spokesperson

An actor who speaks on behalf of other actors (Walsham 1997).

Obligatory passage point

“Situation that is fixed during problematization, in which any actor with a stake in the network would have to pass through in order to attain his objectives” (Rodon et al. 2008: p 99).

Inscription

“Process whereby translations of one’s interests get embodied into technical artifacts. That is, the way physical artifacts embody patterns of use” (Rodon et al. 2008: p 99).

Black-boxing

“Process whereby an ‘assembly of disorderly and unreliable allies is…slowly turned into something that closely resembles an organized whole. When such a cohesion is obtained we at last have a black-box” (Callon 1986b: p131).

Irreversibility

“Concept that captures the accumulated resistance of an actor-network against change; irreversibility also reflects the strength of inscriptions” (Rodon et al. 2008: p 99).

<table>
<thead>
<tr>
<th>Table 1.4 ANT concepts modified from (Rodon et al. 2008; Sarker et al. 2006; Walsham 1997)</th>
</tr>
</thead>
<tbody>
<tr>
<td>We believe that ANT is useful for answering our research question because:</td>
</tr>
<tr>
<td>• It aids in the exploration of how actor-networks are created, hold together, or collapse.</td>
</tr>
<tr>
<td>• It provides an analytical framework to explore power processes in a socio-technical context.</td>
</tr>
<tr>
<td>• As systems evolve over time, it distances itself from the viewpoint that technologies are stable entities.</td>
</tr>
<tr>
<td>(Rodon et al. 2008)</td>
</tr>
</tbody>
</table>
Using ANT, we can analyze how the LGBT actor-network was created, and how it is maintained over the evolution of WoW. When a patch is released, we can follow actors through the network and determine how they are affected by the release of the patch. ANT also enables us to explore the power structures as Blizzard asserts its authority over players of WoW, and enables us to explore the impacts to these power struggles between the technical and the social.

ANT enables us to explore the socio-technical aspects relating to the instantiation of social movements within virtual worlds, and examine how the technology and the social are related. In particular, ANT will help us to further analyze how the biography of WoW impacts the social movement aspects presented in articles II and III. Using ANT, we aim to follow these aspects through the evolution of WoW.

The outcome of this study is an understanding of how the technological artifact itself (WoW) and the social phenomena (LGBT) co-evolve over time. Our study may have some important implications for business as new forms of organizing are enabled by virtual worlds. In this final stage, we used empirical data from our interactions with LGBT, to fully explore this social phenomenon. The findings of this study are presented in Article IV.

In total, the researcher spent over 1,600 hours immersed in WoW over all stages of this research. The next section will present how the original articles fit into the conceptual framework.

1.4.4. How the Papers Fit the Conceptual Framework

In the preceding section we presented the conceptual framework applied to this study. It is also necessary to discuss how each of the original articles presented in this thesis fit with the conceptual framework. This is shown in Figure 1.5 below.
Figure 1.5 How the original articles fit the conceptual framework

Article II titled ‘Chaotic Worlds: An Analysis of World of Warcraft’ which was published in the Americas Conference on Information Systems (AMCIS 2010) explored WoW. Article III titled ‘Issues in the Study of Virtual World Social Movements’ which was published in the Pacific Asia Conference on Information Systems (PACIS 2011) conceptualized social movements in virtual worlds. Article IV titled ‘Social Movements in World of Warcraft’ which was published in the Americas Conference on Information Systems (AMCIS 2011) explored the differences and similarities between real world and virtual world social movements. Finally article V titled ‘The Co-Evolution of the “Social” and the “Technology”’ has been submitted to Management Information Systems Quarterly (MISQ). An abridged version of article V was published in the International Conference on Information Systems (ICIS 2012). Appendix 2 contains a sample of qualitative codes used in the analysis for Article V.

Underlying this conceptual framework and the articles is the methodological approach used in this thesis. As the methodology underlies the entire conceptual framework, it does not occupy a specific stage in the conceptual framework. Article I titled ‘Using Netnography to Study Virtual Worlds: Problems and Potential Solutions’ which will be submitted to the European Journal of Information Systems (EJIS) explains the methodological approach employed in this thesis. Appendix 3 presents a sample of some of the images used as a data
throughout this thesis. Figure 1.6 illustrates the articles at each stage of this research and their contributions. The original articles follow the literature review sections of this thesis.

![Figure 1.6 Stages, articles, and their contributions](image)

Table 1.5 summarizes each of the four articles contained within this thesis. It outlines the purpose of each article, when the research for each article began, and the duration of each stage.

35
<table>
<thead>
<tr>
<th>Purpose</th>
<th>Article II (Stage 1)</th>
<th>Article III (Stage 2)</th>
<th>Article IV (Stage 3)</th>
<th>Article V (Stage 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Explore WoW</td>
<td>Explore general aspects of social movements in virtual worlds</td>
<td>Explore organizational aspects of social movements in virtual worlds</td>
<td>Explore the interaction between the technology and the social movement</td>
</tr>
<tr>
<td>Time</td>
<td>Summer 2010</td>
<td>Winter 2010</td>
<td>Winter 2010</td>
<td>Spring 2010</td>
</tr>
<tr>
<td>Duration</td>
<td>6 months</td>
<td>2 months</td>
<td>7 months</td>
<td>24 months</td>
</tr>
<tr>
<td>Main data collection techniques</td>
<td>Interactions with WoW players</td>
<td>Literature review</td>
<td>Empirical data from interactions with LGBT</td>
<td>Empirical data from interactions with LGBT</td>
</tr>
</tbody>
</table>

Table 1.5 Summary of Articles (Note: time refers to southern hemisphere seasons)

1.5. Thesis Structure

Figure 1.7 illustrates the structure of this thesis.
Introduction

Chapter 1: Introduction. This chapter has introduced the main purpose of this thesis, and presents the motivation for studying virtual world social movements. It also presented our philosophical perspective, the role of the researcher in this study, our methodological approach, the conceptual framework which connects the original articles, the research questions, and the theoretical approaches used in this study.

The following two chapters are literature review chapters. Each of the individual articles in this thesis contains its own literature review section. Therefore the purpose of chapters 2 and 3 is to extend the literature to provide a backdrop to the understanding of social movements and virtual worlds. The literature review sections in each of the articles draws on or extends the literature presented in chapters 2 and 3.
Chapter 2: Social Movements. This chapter first defines social movements; it then presents a literature review of social movement theories. Next it addresses some issues in the study of social movements, and finally reviews how social movements have used the Internet.

Chapter 3: Virtual Worlds. This chapter first reviews the concept of virtuality. It then presents a literature review of virtual worlds. Next it presents studies which have used WoW.

This concludes the front sections of this thesis. Chapters 4 to 8 contain the original articles.

Chapter 4: Article I. This article serves as the methodological chapter of the thesis. It presents the netnographic approach used to study LGBT in WoW. It then presents a modified version of netnography which is better used for exploratory studies. Finally it presents the usage of images as a data source and data mining using Leximancer as a data analysis tool.

Chapter 5: Article II. This chapter serves as the initial exploration of the virtual arena. It explores questing and raiding in WoW using Chaos Theory. This article serves as the basis for the remaining articles.

Chapter 6: Article III. This chapter presents the conceptual framework which addresses some issues when studying virtual world social movements. The framework is constructed with a literature review of virtual communities, virtual worlds, and social movements.

Chapter 7: Article IV. This chapter addresses some of the issues presented in the previous chapter. It presents an analysis of LGBT using New Social Movement Theory. The article concludes with some differences and similarities between real world and virtual world social movements.

Chapter 8: Article V. This chapter presents the co-evolution of the technology and the social. As WoW periodically changes its configuration when designers release patches, LGBT is forced to co-evolve its organization and processes. Using a BoA approach, and ANT, this article explores the struggle LGBT faces as it aims to stay active in a technological ecosystem which is constantly changing.

Chapter 9: Conclusion. Following on from the original articles, this chapter concludes the thesis. It presents the contributions of this thesis to theory and practice. It uses two sets of evaluation criteria, those of netnography and also interpretive research. It then summarizes the contributions of each of the articles, and presents the limitations of this thesis and some opportunities for future research.
2. SOCIAL MOVEMENTS

This chapter will introduce and define the topic of social movements. Firstly it reviews the research literature on social movements and presents the main theoretical perspectives applied to social movement research over the past 60 years. It then discusses the major issues of social movement research, and illustrates how social movements have used the Internet and communication technologies.

The purpose of this chapter is to provide a backdrop to the social movement phenomenon. Each of the individual articles draws on or extends the literature from this section.

2.1. Social Movements Defined

Throughout history, humans have employed many tactics to complain about things they have disliked. In modern history, people may have banded together with others to pursue common goals and achieve social or political change (Goodwin and Jasper 2003). This collection of people is called a social movement. Social movements are an important means of bringing out cultural and political changes through collective action (Staggenborg 2011). Some movements have looked for opportunities to claim new rights, while others have responded to threats or violence. Some movements seek political and economic liberation, while others fight for lifestyle changes. Some social movements create formal organizations, others use informal networks, while some others use more spontaneous actions such as riots (Goodwin and Jasper 2003). Della Porta and Diani (2006) argue that social movements are involved in conflicting relationships with clearly defined opponents; are linked by informal networks; and share a distinct collective identity (p. 20).

Social movements have been defined in many different ways. They have been considered as collective, organized, sustained, and non-institutional challenges to authorities, power holders, or cultural beliefs and practices (Goodwin and Jasper 2003). Snow et al. (2003) consider social movements as collectivities which act with some degree of organization outside of institutional or organizational channels with the aim of defending or challenging some authority. Gerlach and Hine (1970) define them as:

“a group of people who are organized for, ideologically motivated by, and committed to a purpose which implements some form of personal or social change; who are actively engaged in the recruitment of others; and whose influence is spreading in opposition to the established order in which it originated” (p. xvi).
Although social movement researchers often cannot agree about the definition of a social movement, there is some degree of common ground. There is agreement that social movements consist of collective actions of a certain duration and level of organization which use non-institutionalised methods to bring about social change (Staggenborg 2011). Social movements have used a wide variety of protest tactics around the world to encourage social changes, influence public opinion and government policies. Individuals come together in collective efforts to create social change by pressuring authorities to respond or presenting demands for injustice (Staggenborg 2011). One of the most influential social movement researchers, Charles Tilly, sees social movements as a form of contentious politics:

“**Contentious in the sense that social movements involve collective making claims that, if realised, would conflict with someone else’s interests, politics in the sense that governments of one sort of another figure somehow in the claim making, whether as claimants, objects of claims, allies of the objects, or monitors of the contention**” (Tilly and Wood 2009).

Social Movements have three important elements (Tilly and Wood 2009):

- A sustained, organized public effort making collective claims on target authorities.
- The use of combinations from different forms of political action such as: special purpose associations and coalitions, public meetings, vigils, rallies, demonstrations, petition drives, statements to the media, and the distribution of pamphlets.
- Participants’ concerted public representations of worthiness, unity, numbers, and commitment on the part of themselves and/or their constituencies.

There are a large number of theoretical perspectives which have been applied to the field of social movements (McAdam et al. 1988). The next section of this chapter will review the social movement theories available to researchers.

**2.2. Social Movement Theories**

Over the years there have been many theoretical approaches to the study of social movements. The next few sections will cover the literature relating to social movement theories.

**2.2.1. Collective Behavior Theory**

Collective behavior theory is often referred to as the classical model of social movements and has been labelled as a *strain* or *breakdown* theory because it speculates that collective
behavior arises from a period of social disruption (Staggenborg 2011). Social order, under normal conditions is one of integration. If the social order remains sufficiently integrated, strain and breakdown can be avoided (Buechler 2003).

There are several main assumptions associated with collective behavior theory. First, collective behavior exists outside of institutionalised structures. Second, social movements arise as a result of some kind of structural or cultural strain or breakdown such as a natural disaster or rapid social change. Third, there is an important role in the shared beliefs of participants in social movements (Staggenborg 2011).

Neil Smelser was very influential in the study of collective behavior. In his (1962) book, he lists forms of collective behavior ranging from panics, crazes, fads, riots, reform, and revolutionary movements. He argues that collective behavior may emerge from structural strain, generalized beliefs, mobilization for action, and the breakdown of social controls. He defines structural strain as ambiguities, conflicts, discrepancies, and deprivations in social structure. When strain occurs in a society and invokes collective behavior social action occurs. However, if social controls are in place, collective behavior can be prevented, hence the breakdown of these controls is a crucial determinant to collective behavior (Buechler 2003; Smelser 1962).

Collective behavior theory was criticised as being deeply problematic. It ignored the larger political context in which movements arise, and assumed a linear relationship between large scale social change, and individual level behavior. It was also criticised for ignoring how individual mental states are translated into collective behavior (Buechler 2003), while the individualistic emphasis is nothing more than a “convenient justification for what is at root a psychological phenomenon” (McAdam 1982).

2.2.2. Relative Deprivation Theory

Relative deprivation theory is based on an observation that people rebel when things are improving. People are driven towards collective action when their positions in society have improved, and hence their expectations have risen. When their expectations of society do not rise at the same rate as their position in society, people feel deprived (Staggenborg 2011). An example is when woman gained more access to education, but did not receive more access to high-paying occupations (Freeman 1975; Staggenborg 2011).
Relative deprivation theory has been criticized for inferring psychological states of relative deprivation based on objective indicators like unemployment rates. There have been many studies which have found little evidence that measures of objective indicators of relative deprivation are indicators of collective action. Although feelings of relative deprivation may exist, they are not likely to cause collective action without other factors such as resources and organization (Staggenborg 2011).

2.2.3. Mass Society Theory
Mass society theory views collective behavior as an extreme response to social isolation. Social stability is maintained through the existence and sharing of common values through various social institutions. In a “mass society”, there are few secondary or intermediate groups to bind people together to keep them attached to mainstream society (Staggenborg 2011). Such intermediary groups could include trade unions, religious groups, community organizations, or any other organization that could mediate between the government and the organization (Goodwin and Jasper 2003; Staggenborg 2011).

Mass society theorists argued that social movements occurred when society has lost other intermediary organizations that discontented individuals could join, for example trade unions, churches, community groups. Mass society theorists emphasized that the kind of people likely to join movements were when they felt alienated from the world around, or they had other psychological needs that the movement could satisfy (Goodwin and Jasper 2003).

Critics of mass society theory show that it is not isolated individuals who are likely to join social movements, but just the opposite. Research has demonstrated that individuals who are tied into social networks, and who participate in organizations, are likely to be recruited into social movements. Mass society theorists viewed organizations as keeping individuals from joining social movements and participating in collective action (Staggenborg 2011).

2.2.4. Resource Mobilization and Political Process Theories
In North America, social movement researchers began to focus on resource mobilization and political process methods which shifted the attention from earlier micro level analyzes to the macro level. This shift deemphasized group grievances and focused instead on internal organizational dynamics and external political processes that give rise and direction to social movements (Taylor and Whittier 1992).
Resource mobilization theorists noticed that social movements consist of formal organizations (McCarthy and Zald 1977), and that a prerequisite for any organization is the resources to sustain it. Resource mobilization theory argues that there are always enough people to join social movements, but what varies over time is the resources available to sustain the movement (Goodwin and Jasper 2003). Resources used and created by social movements include but are not limited to: moral resources, such as legitimacy; cultural resources, such as strategic know-how; social-organizational resources, including organizational structures, movement infrastructures, and networks; human resources, such as labor and experiences of members; and material resources, such as money and office space (Edwards and McCarthy 2003; Staggenborg 2011).

Resource mobilization theorists argued that movement entrepreneurs draw on public sentiments and increasing public demand for change to define movement issues. Resources used and created by social movements do not necessarily come from aggrieved groups, but may come from conscience constituents who contribute to movements but do not personally benefit from their achievements (McCarthy and Zald 1977). Resource mobilization altered the way in which social movements were studied by changing the core question of analysis from “why are people aggrieved?” to “why do aggrieved people protest when they do?” which changed the focus from societal breakdown to the resources which make a difference to mobilization success (Klandermans and Staggenborg 2002). Mobilization of resources became the new central theme of this approach and raised questions such as: where are the resources available for the movement, how are the resources organized, how does the state impede or facilitate mobilization, and what are the outcomes? (Mueller 1992).

Resource mobilization no longer attempted to explain the existence of grievances in a society which causes social movements to arise; rather resource mobilization theorists argued that the existence of grievances is ubiquitous in every society, and as a consequence grievances alone cannot cause the rise of social movements. The availability of resources and opportunities for collective action were now considered more important than grievances for causing social movement formation (Klandermans and Tarrow 1988). There are three key elements of the theory: First, the costs and benefits of participation play an important role in the analysis of mobilization processes. Second, organization is an important resource for social movements because it decreases the costs of participation, is important for the recruitment of participants, and increases the chances of success. Third, expectations of success play an important role in the collective incentives of participation (Klandermans and Tarrow 1988).
Political process theory (Goodwin and Jasper 2003) criticized resource mobilization theory for neglecting the fact that social movements act and develop in political arenas which may drastically alter the trajectory of the movement. Political process theory answers the questions of why do movements arise or take different trajectories by accounting for the changes in political opportunities across different contexts and over time (Klandermans and Staggenborg 2002). This approach emphasizes the interactions of actors within the social movement with the state and the role of political opportunities in the outcomes and mobilization of social movements. Political process theorists argue that the emergence of social movements occurs when actors perceive that conditions are favorable (Staggenborg 2011). This approach perceives movements as primarily political, where movement actors make demands of the state and ask for changes in laws and policies (Goodwin and Jasper 2003).

Critics of the political process theory argue that the theory is overly structural and focuses on the relatively stable political opportunity structure which influences movement outcomes and mobilization (Goodwin and Jasper 1999). Critics claim that the structural focus neglects the agency of activists who respond to or create outcomes, as well as ignoring the cultural elements of movements (Staggenborg 2011). The political process approach is also argued to be too static and fails to capture the dynamic interactions of contentious politics. The approach works best in relatively unified movements in democratic politics, but cannot be applied in a wide range of dynamic contentious political arenas (McAdam et al. 2001).

2.2.5. Collective Action Frames

The concept of the frame was first used in 1954 as a mental construct used to define what was going on in interaction situations, and was shown that participants always apply interpretive frameworks in order to understand how other’s words and actions are to be understood (Johnston 2002; Noakes and Johnston 2005). In social movement studies, frame analysis has become a popular trend (Johnston 2002). Collective action frames are used as a method of capturing the importance of ideas and meanings in stimulating protest (Benford and Snow 2000), and are used as interpretations of issues and events that inspire and legitimate collective action (Staggenborg 2011). “Framing functions in much the same way as a frame around a picture: attention gets focused on what is relevant and important and away from extraneous items in the field of view” (Noakes and Johnston 2005).
A frame can be defined as “an interpretive schema that simplifies and condenses the ‘world out there’ by selectively punctuating and encoding objects, situations, events, experiences, and sequences of action” (Snow and Benford 1992). There are a number of core concepts for frame analysis. The most basic concept is that a frame identifies a problem which is political or social in nature, the group responsible for causing the problem, and a solution (Noakes and Johnston 2005; Ryan 1991).

Collective action frames offer a strategic interpretation of issues with the intention of mobilizing people into action, and consist of three basic framing tasks (Snow and Benford 1988): *Diagnostic framing* presents a new interpretation of issues or events to potential participants. It describes what is wrong and why; *Prognostic framing* presents a solution to the problem identified in the diagnosis; *Motivational framing* endeavours to give people a reason to join collective action (Noakes and Johnston 2005; Snow and Benford 1988). While Snow and Benford (1988) focus their framing activities on movement leaders, another prominent researcher, William Gamson, focused on movement participants. Gamson provides an alternative list of basic components: the identity component specifies an aggrieved group which share interests and values; the agency component recognizes that the grievances can be changed and encourages the identified group to create this change; the injustice component places the blame for grievances on the individuals or organizations and sparks members to respond (Noakes and Johnston 2005).

In social movement research, a frame has several fundamental elements (Johnston 2002). First, a frame has content. Collective action frames have numerous items such as the police, grievances, and protest which are organized in memory as experiences arise. Second, a frame is a cognitive structure, or schema which can be hierarchically organized. Third, frames can be both individual and social. A frame can be an individually held cognitive scheme but is important to collective action in that it is shared by others in order to direct their behaviors in a shared and patterned way. Fourth, frames are both fixed cognitive structures as well as emergent cognitive processes. Therefore researchers can consider a frame in a moment in time, as well as important activities in the movement’s development. Fifth, frames are based on text, most commonly in the form of written documents; verbal behavior such as speeches and slogans; and sometimes visual representations such as pictures and cartoons (Johnston 2002).
Social movement analysts have used framing on a variety of movement processes. Snow and Benford (1992) developed the concept of master frames, which are generic frames available for use by a number of different social movements, and movement specific frames which can be derived from master frames (Staggenborg 2011). Central to the idea of master frames is the concept of cycles of protest. Cycles of protest are sequences of escalating collective action that occur with greater intensity and frequency than normal, which are spreading through various sectors of society (Tarrow 1994), over different time periods, and in different communities, regions, and the world at large (Snow and Benford 1992). Master frames can help to explain the emergence of a protest cycle which may consist of a number of different movements. For example the “rights frame” was a master frame adopted by multiple social movements such as the gay rights movement and the women’s movement during the protest cycle of the 1960s (Staggenborg 2011). The use of master frames can also bring together and form alliances between different movements. For example master frames dealing with peace and globalization were used in a number of social movements such as feminists, environmentalists, and unionists (Gerhards and Rucht 1992), while another master frame dealing with political-economies of injustice were used to form relationships between the labor, feminist, and peace movements (Carroll and Ratner 1996).

Another important aspect of framing is the concept of frame resonance, which describes the relationship between a collective action frame, the aggrieved community that is the target of movement mobilization, and the broader culture. A collective action frame is resonant if potential members of the movement find its expression and interpretation of grievances persuasive (Noakes and Johnston 2005).

### 2.2.6. New Social Movement Theory

Social movement theory in Europe developed independently of the North America theories and became known as New Social Movement Theory (NSM). This theoretical approach to social movements emphasized new types of social movements which emerged in post-industrial or advanced capitalist societies, for example women’s, student, gay and lesbian, environmental, and peace movements (Staggenborg 2011). The new social movement approach emerged as a response to inadequacies in analyzing collective action where traditional methods could not adequately grasp modern forms of collective action (Buechler 1995). The central aspect of new social movement formation is the collective search for identity where mobilization factors are focused on cultural and symbolic issues that are
associated with belonging to a differentiated social group and where individuals seek out new collectivities and “new social spaces” where social identities and novel life-styles can be experienced and defined (Johnston et al. 1994).

Traditional social movement methods presumed that all politically significant social action was derived from economic logic of capitalist production, and that all other social logics were secondary to shaping social action. Class structures were also presumed to be key to social action and that all other social identities were secondary (Buechler 1995). In contrast to resource mobilization, the NSM approach aims to explain the rise of social movements in the appearance of new grievances. It stresses that new movements differ from old movements in values, action forms, and constituency (Klandermans and Tarrow 1988). NSMs examine other logics of collective action based in culture, ideology, and politics as the root of collective action, and have examined other sources of identity such as sexuality, gender, and ethnicity to define collective identity (Buechler 1995).

Patterns of conflicts which gave rise to social movements have developed from the welfare-state conflict over distribution and channelling through parties and organizations. New conflicts have arisen in areas of cultural reproduction, social integration, and socialization where methods of protest are no longer institutional or political in nature. The questions are no longer about compensation provided from a welfare state, rather how to defend life styles. These conflicts are no longer sparked by problems of distribution, but rather concern on the forms of life (Habermas 2008).

Buechler (1995) argues that there is no such single NSM theory, but rather many variations on the new social movement approach, and has identified a set of common themes:

- New social movement theories emphasize symbolic action in the cultural sphere or civil society as a major arena for collective action alongside action in the state or political sphere (Cohen 1985; Melucci 1989).
- New social movement theories stress the importance of strategies which promote self-determination and autonomy instead of maximising power and influence (Rucht 1988).
- Theorists of new social movements emphasize post-materialist values in collective action, as opposed to conflicts over material resources (Inglehart 1990).
Theorists of new social movements problematize the process of constructing collective identities and identifying group interests over assuming that conflict groups and their interests are structurally determined (Johnston et al. 1994; Melucci 1989).

New Social Movement Theory emphasizes that grievances and ideologies are socially constructed, rather than assuming they are presumed from a group's structural location (Johnston et al. 1994; Klandermans 1992).

New Social Movement Theory recognizes temporary, latent, and submerged networks underlying collective action rather than assuming collective action emerges from centralized organizations (Melucci 1989).

Based on major theoretical debates of NSM theory, Buechler (1995) proposed a typology of new social movement theories (Table 2.1).

<table>
<thead>
<tr>
<th>Issue</th>
<th>Political Version</th>
<th>Cultural Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Societal Totality</td>
<td>Advanced capitalism</td>
<td>Information society</td>
</tr>
<tr>
<td>Image of Power</td>
<td>Systemic, centralized</td>
<td>Diffuse, decentralized</td>
</tr>
<tr>
<td>Level of Analysis</td>
<td>Macro and meso level, state orientated</td>
<td>Meso and micro level, civil society, everyday life</td>
</tr>
<tr>
<td>Movement Activity</td>
<td>Retains role for instrumental action toward strategic goals</td>
<td>Avoids strategic concerns in favor of symbolic expressions</td>
</tr>
<tr>
<td>View of New Movements</td>
<td>Recognizes their role without rejecting role of working-class movements</td>
<td>Regards new movements as having displaced working-class movements</td>
</tr>
<tr>
<td>Movement Orientations</td>
<td>Potential for progressive orientations if allied with working-class movements</td>
<td>Sees new movements as defensive or rejects category of “progressive”</td>
</tr>
<tr>
<td>Evaluation of Movements</td>
<td>Sees political movements as most radical, cultural movements as apolitical</td>
<td>Sees cultural movements as most radical, political movements as co-optable</td>
</tr>
<tr>
<td>Social Base of Movements</td>
<td>Analyzed in class terms via contradictory, or middle class</td>
<td>Analyzed in terms of non-class constituencies or issues and ideologies</td>
</tr>
</tbody>
</table>

According to Melucci (1988), a person’s tendency to become involved in collective action is linked to their capacity to define their own identity. In a modern society, the pace of change, the abundance of memberships and messages combine to weaken sources of personal identity.
NSMs are differentiated from earlier examples of social movements: First, NSMs are not related to class structures. Participants of NSMs come from vast structural roots of different social statuses such as gender, youth, sexual orientation, or professions that do not correspond with class structures (Johnston et al. 1994). Second, NSMs are in sharp contrast to old movements. Movements were typically characterized by their overarching ideologies: conservative or liberal; right or left; capitalist or socialist. NSMs are more difficult to characterize in these terms. They tend to have pragmatic orientations and search for institutional reforms, seek the expansion of civil versus political dimensions of society, and have pluralistic values and ideas (Johnston et al. 1994). Third, the grievances and mobilizing factors of NSMs tend to focus on symbolic and cultural issues which are linked to issues of identity rather than economic grievances. They are linked with a set of beliefs, symbols, values and meanings related to the sentiments of belonging to a differentiated social group (Johnston et al. 1994). Fourth, there is a blurred relation between the individual and the collective. In movements that have no clear class structure, the movement becomes the focus of the individual’s definition of himself or herself. Action within the movement is a mixture of collective and individual conformations of identity (Johnston et al. 1994). Fifth, NSMs often involve intimate and personal aspects of human life such as gay rights, abortion, or health movements. They expand on areas of daily life, for example what we eat, wear and enjoy, how we cope with personal problems, or how we make love (Johnston et al. 1994). Sixth, NSMs use radical mobilization strategies of resistance and disruption that differ from old social movements. NSM tactics often involve nonviolence and civil disobedience, that often challenge dominant norms through dramatic display (Johnston et al. 1994). Finally, NSM organizations tend to be segmented, diffuse, and decentralized (Johnston et al. 1994).

Although there is great debate about interpretations, new social movements are thought to have the following characteristics:

- **Values.** NSMs have broken with the traditional values of a capitalistic society and seek a new relationship to nature, consumption, work, the opposite sex, and to one’s own body.
- **Action forms.** NSMs make use of unconventional forms of action. They favor direct democracy, are anti-hierarchical, and prefer small-scale decentralized organizations.
- **Constituency.** There are two population groups particularly associated with participating in new social movements. The first group is those people who are paying
the costs of problems associated with modernization, particularly those who have been marginalized by society. This group cannot be defined by social classes or ranks. The second group consists of those people who have become sensitive to problems resulting from modernization because of more general shifts in values and needs. This group are primarily found in the middle class and well-educated young people.

- **New aspirations.** The rise of new post-materialist values explains the rise of NSMs against materialist political and social systems.

- **Satisfaction of needs endangered.** Some theorists attribute the rise of NSMs not to an explosion of aspirations but to increased social strain related to bureaucratisation and industrialisation. This results in a loss of identity which leads to a loss of traditional ties and loyalties. This in turn leads to people becoming receptive to visions of new utopias and new commitments.

(Klandermans and Tarrow 1988)

NSMs differ from movements of the past. These differences appear in the ideology, tactics, structure, and participants of movements. The central factor of NSMs is their ideological perspective. They break from industrial era movements and focus on quality of life rather than focusing on economic redistribution. They also question democracies which limit citizen input and participation in governance, and rather promote direct democracy, self-help groups, and collaborative styles of social organization (Pichardo 1997).

The tactics of new social movements tend to remain outside of normal political channels and use disruptive tactics to influence public opinion in order to gain political leverage. They also employ pre-planned and highly dramatic forms of demonstration, often with costumes and other symbolic representations (Tarrow 1994). However this does not mean the NSMs do not get involved with politics as some have indeed entered into the political arena, such as Green parties. Therefore the NSM paradigm recognizes that NSMs have no truly distinctive tactical style, rather the most prominent tactical additions to the approach being public opinion and anti-institutional politics (Pichardo 1997). Structure is the third difference, which relates to the way in which NSMs organize. They tend to organize themselves in a fluid, non-rigid style. They tend to vote communally on issues, rotate their leadership, and employ temporary ad hoc organizations, thus creating open, decentralized, non-hierarchical structures which are responsive to the needs of the individuals (Pichardo 1997).
The final difference to old movements is the views of the participants who join them, and the reasons why they join. There are two common view points. The first is that participants come from the middle class, who are not bound by the corporate profit motive nor are dependent on the corporate world. They tend to be highly educated, and work in areas such as academia, human service agencies, and the arts. The second view point is that participants are not defined by class structures, but join based on a common concern over social issues. This kind of participation is ideological, rather than class-based, religious, or based on ethnic communities (Pichardo 1997).

Scott (1990) defines the following characteristics of NSMs: 1) they are primarily social, with their focus more on life styles and values and not directly political in character; 2) they are located within civil society and have little concern with the state; and 3) they aim to bring about change through changing values or developing alternative life-styles. Scott (1990) also discusses the organizational form of new social movements; they are:

- Locally based, or centered around small groups;
- Organized around specific and often local issues;
- Characterized by cycles of movement activity and mobilization, i.e. periods of high or low activity;
- Have fluid hierarchies and loose systems of authority;
- Have shifting membership and fluctuating members.

Based on these characteristics, Scott (1990) argues that the term social network may be more appropriate than organization. These loose associations are often held together with informational or personal networks. During times of low mobilization and due to the low costs of such loose networks, few individuals can carry on the minimum level of movement activity. This leads to a strategic advantage for new social movements by making them more adaptable and flexible in response to new issues and sudden events (Scott 1990). Scott (1990) provides the following key points of contrast between NSMs and traditional workers movements, as illustrated in Table 2.2.
An important aspect emphasized by NSM theorists is the creation of a collective identity, which refers to the sense of shared values and experiences that connects individuals to movements (Staggenborg 2011). It is collective identities which distinguishes NSMs from class-based movements of the past (Taylor and Whittier 1992). Ayers (2003) defines collective identity as “an interactive and share definition system that incorporates boundary markers, consciousness, and complex levels of negotiation to situate the individuals and the group in the larger arena of a dominant-subordinate belief system” (p. 152).

In order to understand collective identity, it is important to distinguish among the three types of identity: social, personal, and collective. There are often overlaps between them, however one cannot be inferred from another (Snow 2001). Social identities can be thought of as identities attributed or assigned to others in an attempt to situate them in social space, for example social roles such as ‘teacher’ or ‘mother, or in broader categories such as gender or ethnic and national categories. Personal identities are the attributes and meanings attributed to oneself. They are self-attributions and self-designations regarded as personally distinctive to an actor. There is however no consensual definition of collective identity, however most theorists tend to agree that its fundamental nature is based on a shared sense of “we-ness” or “one-ness” rooted in real or imagined shared attributes and experiences among those who belong to a collectivity. This creates a sense of ‘collective agency’ which is in relation or contrast to more actual or imagined sets of ‘others.’ (Snow 2001).

Johnston et al. (1994) argue that collective identities are difficult to pin down empirically. Firstly because they are based on a continual mixture of the personal identity of the participant and the collective identity of the group. Secondly, social movements can often be considered a ‘moving target’ with different definitions prevailing at different points in the life of a movement. Lastly, because distinct processes in identity creation and maintenance are operative in different phases of the movement. Studies of collective action often the concept as if it was frozen in time and space and neglecting its process-based nature and shifting boundaries (Johnston et al. 1994). Snow (2001) agrees that the initial projected collective

<table>
<thead>
<tr>
<th>Location</th>
<th>Worker’s Movements</th>
<th>New Social Movements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Increasingly political</td>
<td>Civil society</td>
</tr>
<tr>
<td>Aims</td>
<td>Political integration / economic rights</td>
<td>Changes in values and lifestyle / defence of civil society</td>
</tr>
<tr>
<td>Organization</td>
<td>Formal / Hierarchical</td>
<td>Network / Grass roots</td>
</tr>
<tr>
<td>Medium of action</td>
<td>Political mobilization</td>
<td>Direct action / cultural innovation</td>
</tr>
</tbody>
</table>

Table 2.2 Contrast between workers and new social movements from Scott (1990)
identity may be transient and short-lived, and may be subject to transformation and modification during the course of on-going collective action.

Based on an analysis of lesbian feminist mobilization, Taylor and Whittier (1992) presented a framework for analyzing the construction of collective identity in social movements which is broad enough to include a range of mobilizations based on sexuality, ethnicity, gender, and race. The framework consists of three factors: boundaries, consciousness, and negotiation. **Boundaries** refer to the social, psychological, and physical structures which establish differences between dominant groups and a challenging group. **Consciousness** consists of the interpretive frameworks which emerge out of a challenging group’s struggle to realise and define its interests. **Negotiation** covers the symbols and everyday actions which subordinate groups use to resist existing systems of domination (Taylor and Whittier 1992).

Snow (2001) presents several factors which enable collective identities to be distinguished from social and personal identities. First, collective identities may or may not be rooted in existing social identities, since they are often emergent and evolving rather than being embedded in prior social categories. Second, the shared ‘sense of we’ and shared perceptions and feelings towards a common cause, threat, or fate motivates people to act together in the name of or for the sake of the collectivity. It is this process which creates the collective agency. Third, the operation and emergence of collective identities means that other social identities have subsided in relevance or importance for the time being. Lastly, while personal identities and collective identities are obviously different, they are still interrelated in the sense that collective identities are predicated partly on a member’s embracement of the relevant collective identity as an important part of their own identity and sense of self (Snow 2001).

Snow (2001) also argues that collective identities can surface among almost any kind of social grouping or aggregation in a variety of contexts which range from relatively small groups and gangs, to sports fans, celebrity devotees, laborers, occupational groupings, neighbourhoods, communities, and to even broader categories such as sexual, gender, religions, ethnic groups and nations.

There are several theoretical issues relating to the understanding of collective identities. Fundamental to understanding a collective identity, are an appreciation of the processes in which it is created, expressed, sustained, and modified. These processes have been called ‘identity work’ which covers the range of activities people engage in, both collectively and
individually, in order to express who they are and what they stand for in relation to the ‘others.’ This may involve the generation, invocation, and maintenance of symbolic resources used to bound and distinguish the collective identity both within the group and outside of it, which becomes known as the collectivities public expressions (Snow 2001).

Another theoretical issue relates back to the concept mentioned earlier or the collective identity changing over time (Johnston et al. 1994), which takes for granted the links between the individuals which make up the collectivity and the shared, overarching identity. It is important to realise that people often have multiple identities which vary in importance and occurrence. Therefore the question begs, how is any particular collective identity reconciled with other identities a member may possess? Also, what are the processes through which member’s begin to embrace a collective identity so that personal and collective identity are compatible and agreeable (Snow 2001)? There are two broad processes suggested: identity convergence and identity construction. *Identity convergence* refers to the unification of personal and collective identities when both are harmonious, so that an existing collectivity provides a venue for an individual to act in accordance with his or her personal identity (Snow 2001).

The second process is *identity construction*. In the absence of a connection between personal identity and collective identity, a variety of identity work is necessary in order to aid their alignment. The alignment of personal and collective identities can vary from elevating the importance of a particular identity, to a fairly dramatic change in one’s self. There are four processes involved: identity amplification, identity consolidation, identity extension, and identity transformation (Snow and McAdam 2000). *Identity amplification* affects a change in the individual’s identity importance hierarchy in such a manner that an existing but lower-order identity becomes sufficiently important to ensure involvement in collective action. *Identity consolidation* results in the adoption of an identity which is a blend of two prior but seemingly incompatible identities. *Identity extension* involves the increase of the situational frequency of an individual’s personal identity so that its reach goes well together with the collectivity’s, as when an individual begins to see them self as a representative for a specific cause which goes beyond other role obligations and identities. *Identity transformation* involves a dramatic change in identity, so that an individual now sees them self as astonishingly different than before, as often occurs when a member joins a new group or movement (Snow 2001; Snow and McAdam 2000).
Alberto Melucci focussed his studies of collective identity on how they are constructed from small groups in the “submerged networks” or everyday life (Melucci 1989; Melucci 1996). From his perspective, a social movement is not a collection of relatively stable movement organizations or as unified actors, but rather he sees them as fluid networks which can erupt into collective action from time to time. In order to understand the emergence of social movements, it is important to look at the formation of social relationships which form the basis of collective action (Melucci 1988). Before a movement becomes visible, there is a period of latency when a new collective identity is emerging. Once a movement has gained traction, the collective identity is continually constructed, and a failure to maintain unity may lead to tensions within the movement and a decline in collective action (Melucci 1988).

Collective identity can be used to explain how movements emerge; how people become motivated to participate in collective action; how strategic choices are made; and what outcomes a movement may have (Polletta and Jasper 2001). Some researchers have also emphasized how emotions can play a part in establishing collective identities which may help to understand why people participate, why movements continue or decline, and how collective identity is created (Goodwin et al. 2001; Jasper 1998; Staggenborg 2011).

2.3. Issues in the Study of Social Movements

The previous section reviewed the major theoretical perspectives used to study social movements. This section will briefly examine some major issues which social movement researchers have focussed their attention in the study of social movements.

Social movement researchers may explore issues relating to several levels of analysis, from the macro-level questions which deal with large scale structural changes, to meso-level questions which deal with organizational dynamics, and micro-level about individual actions and decisions (Staggenborg 2011). Table 2.3 lists the key issues addressed at each level of analysis. The items shaded grey are specifically analyzed in various forms throughout this study. This study is primarily focussed at the meso level, which details how LGBT acts within WoW. One item at the macro level is analyzed, which refers to how changes in the technological ecosystem (WoW) may impact LGBT. As this study is not considering individual action, we have not included any of the micro issues.
### Macro (large-scale) level

- How large-scale changes and events alter resources and organizational structures and create grievances that stimulate collective action
- How cultural and political opportunities facilitate the emergence of social movements
- How cycles of contention arise and spread
- How master frames originate and diffuse into a culture
- How changing political, cultural, and economic conditions affect the on-going strategies and growth, maintenance, and decline of a social movement
- How social movements contribute to large-scale cultural and political changes, which affect subsequent collective action
- How counter-movements emerge in response to social movements

### Meso (organizational) level

- What resources are available to groups and what organizational structures tie group members together prior to movement emergence
- How leaders use mobilizing structures, master frames, and cultural and material resources to organize movements
- How leaders and movement organizations frame injustices and recognize opportunities for collective action
- How collective identities are developed within structures of everyday life
- How the organizational structures of movement organizations affect maintenance and strategies
- How collective campaigns are mobilized and how they affect subsequent movement organization and collective action
- How coalitions are formed and maintained within and across social movements
- The impact of interactions of movement organizations with other organizations such as counter-movement groups, established interest groups and institutions, government agencies, and mass media

### Micro (individual) level

- How social networks lead individuals to movement organizations
- How individuals come to believe that collective action is necessary and effective
- How outrage and other emotions are generated to motivate participation
- How individuals take on collective identities and feel solidarity with a group
- Why individuals sustain or terminate their participation in social movements
- How individuals are affected by their participation in social movements
- How individuals decide that benefits of collective action are worth the costs

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Table 2.3 Key issues in the study of social movements from Staggenborg (2011) p. 29.

Other issues of interest to social movement research are mobilization and recruitment, strategies and campaigns, and the outcomes of movements which will be discussed next.

**2.3.1. Movement Emergence: Mobilization and Recruitment**

The emergence and mobilization of social movements has been an important focus for social movement research. Mobilization is the process where a group which shares interests or grievances gains control collective control over resources (Tilly 1978), while recruitment of individuals is part of the broader process of mobilization and involves other resources such
as time and money (Staggenborg 2011). Mobilization and recruitment are on-going processes, however early social movement theoretical approaches, such as collective behavior theory, focused their attention on the emergence of social movements. However they tended to avoid explaining how movements grow and decline (McAdam et al. 1988).

Mobilization issues of social movements generally focus on the macro level of analysis. Mobilization of movements generally arises from large scale economic conditions (McAdam et al. 1988), political changes, opportunities and threats, or critical events (Staggenborg 2011). There are three central propositions for social movement mobilization:

- Some level of resources must be mobilized before groups can engage in collective action.
- The mobilization of resources depends on the existence of some level or organization, whether that organization exists before the emergence of collective action or is formed as a result of it.
- The translation of mobilization into collective action is related to the expected costs of investing in the collective action, the anticipated risks, and the anticipated gains (Jenkins 1981).

Prior to movement mobilization, the extent of organization among members of a group, and the resources controlled by the group are important factors in mobilization. If individuals share membership in organizations, they have a pre-existing network, resources, and leadership which can be mobilized. This allows for large amounts of people to be recruited rapidly (Oberschall 1973). There have been many studies illustrating that pre-existing social networks of people help to recruit people into social movements as well as leadership which defines the issues and create social movement organizations (McCarthy and Zald 1977).

Comparing the macro-level questions of how movements emerge with micro-level questions of individual recruitment, social movement researchers have also been interested what causes an individual to become involved in a social movement in the first place. Therefore the two processes of movement emergence and individual recruitment are closely tied, however it is important to consider them as separate processes (McAdam et al. 1988).

Participants normally believe in a particular cause and hope for it to succeed. However, not all supporters of a cause become members of a movement (McCarthy and Zald 1977). There are many more supporters of a cause than there are members. For example, many people
support environmental measures, but few people contribute to environmental organizations (Staggenborg 2011). An important aspect of why this happens focuses on the costs and benefits of collective action. There are many people who have grievances, but few of them mobilize because costs may outweigh the benefits of participating in the movement. This problem of getting people to participate in collective action is known as the free rider problem (Staggenborg 2011).

2.3.2. Strategies and Campaigns

The strategies and campaigns a social movement employs are also of interest to researchers. There are many strategies and tactics a social movement can employ, such as demonstrations, petitions, press statements, public meetings, lobbying, displaying symbols of personal affiliation, or forming specialized associations dedicated to pursuing a cause (Staggenborg 2011). The methods employed by a movement can shape the course of a movement and alter its perception to observers and potential participants.

The goal of a social movement is to change the behavior of their opponents through persuasion or intimidation, and to undermine the opponent’s credibility with the state, media, or public. If the opponent is the state, social movements aim to avoid repression, or change administrative rules, regulatory practices, policies and laws. They may use the media to undermine their opponents and spread their message, and from the larger public, social movements seek sympathy, changes in awareness, and contributions (Goodwin and Jasper 2003).

Often people may have intense grievances, and may believe that some authorities may listen to them, but they do not protest because they are not sure how to do it effectively. However there are certain types of tactical protest which may be able to spread quickly if they are easy to adopt. During the 1960s many social movements began experimenting with one such tactical form or protest, the sit-in movement. For example on February 1, 1960 when four black college students staged a sit-in at a segregated lunch counter in North Carolina (Morris 2003). Sit-ins have also been used in the gay rights movement. In 1971, the New York City’s Gay Activists Alliance (GAA) initiated a campaign to add sexual orientation to the list of protected categories in the city’s human rights regulations. The GAA sort to increase publicity and altered the sit-in tactic, which became “kiss-ins” at heterosexual bars to protest bans on same-sex displays of affection (Bernstein 2003). Almost 40 years later similar tactics were applied when about 200 gay and lesbians in Barcelona, Spain staged a kiss-in to protest
against Pope Benedict XVI’s policies that consider homosexual acts “intrinsically disordered” (Winfield 2010).

Marches are another common form of protest. In May 2007, activists in China were fighting against the construction of a chemical plant in the city of Xiamen. They sent mass text messages from their mobile phones saying the local government is setting off an atomic bomb in Xiamen, and encouraged people to act for their children and grandchildren. On June 1, tens of thousands of people marched against the plant wearing yellow ribbons which read “people’s livelihoods, democracy, people’s rights, harmony.” They also employed other modern forms of protest by uploading photos, video and messages onto blogging sites. Later the government announced that the plant would be moved to Guangzhou which caused more protests in that city. Protestors went door to door handing out pamphlets and staged protests with 10,000 protestors carrying banners reading “we would rather die than be the descendants of death”. Protestors also threw stones at police vehicles and the police station when police came in an attempt to disperse the protestors (Tilly and Wood 2009).

The environmental movement emerged in the early nineteenth century to promote national parks, resource management, and wilderness preservation, and has employed a number of interesting tactics over the years. The increased access for the public to use the court system in the United States led to the right to file “class action” suits and the creation of legal defence funds, as well as the establishment of conservation organizations. Many of these organizations created lobbying offices in Washington DC, and employed direct-mail campaigns to bring new members into the movement (Bosso 2005; Staggenborg 2011). The public also gained awareness of the movement through media attention which often involved coverage of dramatic events such as oil spills and nuclear power accidents. Some environmental organizations also employ research strategies in order to provide information about various products and engage in market place tactics like boycotts of certain products (Staggenborg 2011). For example, a chemical which was commonly used to treat apples called Alar, was part of a boycott where consumers refused to buy Alar-treated apples, stores began to refuse selling them, and some growers stopped using the chemical (McCloskey 1992; Staggenborg 2011).

Violence is another form of collective action strategy. Violence makes the news, and may draw attention to the movement’s campaign. Violence is also relatively easy for small groups to initiate without encountering many costs of coordination and control. Violence has been
used in many social movements to allow enraged people to participate, and also to weld supporters together, and demonstrate a movement’s ability. However there is a growing acceptance for non-violent protest in contemporary social movements (Tarrow 1994).

2.3.3. Movement Outcomes

The outcomes of a social movement are also of interest to researchers. Ultimately we want to know what impact a movement has had on society. However, outcomes are often difficult to measure or evaluate. A movement may produce many different outcomes: long-term or short-term, intentional or non-intentional. Movements may also affect public policy, institutions, culture, political access, and opportunities for subsequent collective action. Social movements may also not produce a single outcome over time, but they may produce many outcomes such as court rulings and legislation (Staggenborg 2011).

2.4. Social Movements and the Internet

Social movement literature has, in recent times began to investigate how social movements have used the Internet. The Internet has played an important role in initiating and steering activism (Postmes and Brunsting 2002) as movements take advantage of the Internet’s capabilities in growing numbers, more social protest will take place online (Leizerov 2000). Brunsting and Postmes (2002) argue that the Internet affects the nature of collective action. Firstly the Internet allows those people who would not normally participate in collective action to become involved. Secondly, possibilities for understanding group norms for communication and action are restricted, and engaging negotiations about possible courses of action become more difficult. This implies that collective action on the Internet is more reliant on group member’s mental representations of the group(s) involved and results in social movement websites being structured in such a way to primarily persuade people to take part in their actions (Brunsting and Postmes 2002).

In their paper Postmes and Brunsting (2002) suggest that the Internet has assumed a significant role in transforming collective action which ranges from confrontational to persuasive, and from individual activities to collective ones and is thriving in many areas. The Internet has enabled mass communication which has succeeded in activating and mobilizing many people who may have previously been less politically active. The authors also find it ironic, that an otherwise socially isolating device – a computer – allows people to bring out a social dimension of their online activities to achieve social involvement. It is also suggested that the Internet may alter the nature of collective action and social movements due
to a possible influx of peripheral members and traditional non-activists due to the lower costs of participating in online actions (Postmes and Brunsting 2002).

Blickstein and Hanson (2001) examined how a global urban bicycle/sustainability movement called Critical Mass used the Internet to sustain local and global actions by combining cyber communication with face-to-face interactions. People involved with this movement participated for a number of reasons such as supporting global environmental policy changes, protesting against national and local transportation priorities, or simply to have a good time. They protested by organising mass bicycle rides, and also used the Internet as a forum for debate and to build networks necessary for sustaining local action, and planning global coordination among riders to achieve larger-scale impacts (Blickstein and Hanson 2001).

In 1999, three privacy advocacy groups campaigned against Intel’s launch of the Pentium III® processor and demonstrated how the Internet can be used by social movements to fight powerful organizations (Leizerov 2000). This movement’s campaign was executed entirely over the Internet, and revolved around increased control over the Internet’s services and applications intruding on the public’s privacy. Some strategies the movement employed were providing a link to a flyer and encouraged the public to download, encouraging the public to put a line of text in the signature block of their emails, and providing ready-made letters that the public could send to CEOs of leading computer manufacturers. In the end the movement was successful in their efforts against Intel (Leizerov 2000).

Brunsting and Postmes (2002) investigated online versus offline collective action among environmental activists in the Netherlands. They were interested to determine whether online activism was predicted by different factors from offline activism using a range of predictors derived from theories of collective action and mobilization. They found that online actions are qualitatively different from offline actions, for example the Internet allows people the freedom to decide to participate in collective action without facing direct consequences to being part of that action. Therefore factors such as identification are important for offline action, whereas self-efficacy is important for online action. Peripheral members are also more likely to become involved with online collection action. The authors conclude by arguing that the Internet is more suited towards persuasive collective action rather than confrontational action (Brunsting and Postmes 2002).

Wall (2007) investigated three email lists within the Seattle World Trade Organization protests to determine how they contributed to the expression of collective identities online. A
collective identity defines the boundaries of members within the group, what that group believes, how that group sees the world, which ultimately helps to establish trust. It is the process by which actors in the social movement recognize themselves, and how they are recognized by others (Porta and Diani 2000). However, it was found that none of the email lists were entirely successful in expressing movement identities. The study implies that due to the Internet, social movements contain a broader and more diverse range of identities which cannot always be unified, even through the use of the movement’s own communications (Wall 2007).

Salter (2003) examined how NSMs are using the internet. He found that because of its global reach, the Internet can be of value to social movements as it acts as a foundational medium for civil society. The Internet enables social movement groups to communicate, generate information, and is a cheap and effective means for distributing this information, and allows for response and feedback. The de-centered, textual communications, and user generated content structure of the Internet goes well with the characteristics of new social movements: non-hierarchical, open protocols, open communication, and self-generating information and identities. Although Salter (2003) has a reservation due to anonymity on the Internet. On the other hand it allows those who are too shy or otherwise inhibited to express their opinions as well as abolishing traditional obstacles to real-world face-to-face interactions such as profession, class, religion, ethnicity, gender, body language, or accent. However, often alongside anonymity comes irresponsibility, which is an important aspect of communicative action.

Ayers (2003) interviewed two sets of feminist activists: one which participates online, and the other an offline group, to determine whether members of the online group could have the same sort of collective identity that the offline group would have. Ayers (2003) found that the online group of activists mostly talked about meeting and having sex with other activists, while the offline group generally got some work done. He concludes because social movements presume the necessity of a collective identity for social change, that there is a possibility that online collective identities do not always exist among online activists, or does not lead to social-change efforts. He questions if the existence of a group of people operating under an activist group umbrella means that they are necessarily an activist group. Of the groups he studied, the online group did not seem politically and socially motivated outside the confines of the computer and suggests that research into online political groups must clarify what counts as activism.
McCaughhey and Ayers (2003) in their edited book refuse to define the boundaries of online activism or determine what counts as legitimate online activism. They believe that defining online activism is difficult and may take many forms such as, direct action, protests, self-help groups, educational groups, activist newspapers, cultural groups, and political bookstores. Vegh (2003) however, classifies activism over the Internet into three general areas: awareness/advocacy, organization/mobilization, and action/reaction. These classifications emphasize the direction of the initiative – whether one sends out information or receives it, calls for action or is called upon, or initiates action or reacts to one. Public awareness and advocacy is achieved by accessing information which is relevant to the cause. The Internet may serve as an alternative information and news source which may not be reported in the mainstream mass media. Information distribution over the Internet may also create distribution networks which can later be used by organization and mobilization purposes.

Vegh (2003) states that the Internet can be used for mobilization in three different ways. Firstly it can be used to call for offline action such as a post on a website calling for a demonstration at a set time and place. Second, it can be used to call for action which may normally take place offline but is more effective if done online, such as contacting people through email. Third, the Internet can be used to call for online action which can only be carried out online, such as a massive spamming campaign. The final category from Vegh (2003), is action/reaction which covers online attacks committed by hackers such as defacing websites and disrupting servers.

The Internet can also be a powerful tool for recruitment. Elin (2003) demonstrated this with a case study of Zeke Spier, a college student activist who was involved in the anti-globalization movement. Zeke combined real world activist tactics with online information gathering and distribution. Ultimately Zeke dropped out of university and joined a protest group with people he met through the Internet. Elin (2003) argues that the Internet can be a transformational force in a person’s life, and how real world activism can be combined with online activism.

Friedland and Rogerson (2009) make a distinction between social movements which have an online presence, and what they call “E-movements” which are social movements that emerge entirely online. E-movements have the freedom to operate in an entirely new fashion and are less restricted by traditional social movement constraints. For example, in a traditional group, a movement leader might face pressure from other members based on their leadership style.
However in an e-movement, many different movement entrepreneurs may approach the primary objective of the movement with their preferred methods and styles, and provide a number of pathways for interested individuals to participate to achieve the broad goals of the movement. A leader in an e-movement may simply be a member who proposed the best course of action.

Social networking sites such as Facebook, YouTube, and Twitter have altered the way people communicate over the Internet and thus have enabled greater real time and visual connections to social movements (Friedland and Rogerson 2009). A recent example is from the June 2009 elections in Iran where the government limited media operations in Tehran, as well as blocking access to pro-opposition websites and social networking sites. Demonstrations not only took place in Iran, but also in many other cities around the world by protestors voicing their “virtual voices” on social networking sites (CNN 2009). Twitter became a valuable agent for this digital protest by forming an e-movement that rallied around Iranian users. Users in Iran were able to get around the blockage of certain websites with the use of Internet proxies which allow servers in other countries to allow Iranians to hide their computer’s IP address from censors within the country. The e-movement grew with no centralized leadership and spread simply by word of mouth (Gross 2009).

There are some people who believe that social networking sites simply increase the number of weak ties between people (Gladwell 2010). While others disagree and suggested that while social networking sites do make it easier to form weak connections with people that one barely knows, however they also allow people to stay in touch with people they already know, therefore making strong ties stronger. Sites such as Facebook and Twitter reduce the cost of minor interactions, which increases the amount of minor interactions, while also allowing people to maintain friendships through trying times and circumstances (A 2010; Preston 2010).

There have also been a number of protests in virtual worlds such as Everquest, SL, WoW and Eve Online (Blodgett 2009; Blodgett and Tapia 2010; Castronova 2003a; Castronova 2005b; Robinson 2008). Blodgett and Tapia (2010) analyzed a protest which occurred inside SL. The protest was a virtual strike against IBM by its Italian employees. They examined four key elements of organising a protest and how they change when introduced into an online protest. The first element is identifying supporters. In an online environment, the increased amount and type of communication allows for more distant potential participants to find organizers.
and vice-versa; however this can also lead to an over production of messages and overwhelmed supporters and lost messages. The second element is establishing hierarchy, which in an online environment is less important and simpler to manage as much of the hierarchy is encoded into access and control rights within the technology. The third is getting the word out, which in an online environment empowers protest organizers to broadcast their messages to a larger audience. The final element is building solidarity, which in an online environment impacts all of the above elements to fuel protest action. Technologies have allowed the size of personal networks to grow, and allows new and distant strangers to find commonalities (Blodgett and Tapia 2010).

Blodgett and Tapia (2010) then analyze the pros and cons of the four elements when they are introduced into a virtual environment illustrated in Table 2.4.

<table>
<thead>
<tr>
<th>Identifying Supporters</th>
<th>Pro: New participants may be identified with in-world knowledge and presence.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Con: Avatar participants may be semi-anonymous. Perception of the world is game-like and playful. Additional technical requirements to participation.</td>
</tr>
<tr>
<td>Establishing Hierarchy</td>
<td>Pro: New mechanisms for identifying leadership, structure and hierarchy. Creates hybridized social structures between the protest organization and the virtual environment.</td>
</tr>
<tr>
<td></td>
<td>Con: Organizational structure and leadership is not obvious to avatar participants. Organizational culture may be unfamiliar to those new to the virtual world.</td>
</tr>
<tr>
<td>Getting the Word Out</td>
<td>Pro: Interactive objects can be created. Greater ease of communication with the world.</td>
</tr>
<tr>
<td></td>
<td>Con: Poor communication between the offline and the virtual, or other media</td>
</tr>
<tr>
<td>Building Solidarity</td>
<td>Pro: Shared culture between existing participants. Attractive to young and technically savvy.</td>
</tr>
<tr>
<td></td>
<td>Con: Requires technical expertise and social knowledge in order to fully participate.</td>
</tr>
</tbody>
</table>

Table 2.4 Pros and cons of four key elements in virtual worlds, modified from Blodgett and Tapia (2010) p. 6-7.

Some social theorists have argued that the Internet necessitates an almost total overthrow of existing social theory because the rules have changed too much, traditional boundaries no longer exist, and a wholly new approach is necessary (Peckham 1998). One such change is the removal of the role of the state. As the Internet contains no real state authority, movements must make appeal to the mass of Internet users. Online movements also change the way resources are sought, which now includes “virtual” resources (Peckham 1998).
It is clear that the Internet has changed the way in which social movements mobilize, recruit new members, organize their strategies and campaigns, and how the Internet affects movement outcomes. We still need more understanding of how collective identity processes work when social movements are online (Blodgett 2009; Clark and Themudo 2003). In particular, Blodgett (2009) emphasizes that greater synthesis is needed between social movements, game research, and computer-mediated communication as there is no clear understanding of what the technology means for social movements.

2.5. Conclusion

This chapter has introduced and defined the topic of social movements. It has presented the main theoretical perspectives applied to social movement research over the past 60 years, presented the major issues of social movement research, and illustrated how social movements have used the Internet and communication technologies. The following chapter will review the literature relating to virtual worlds.
3. VIRTUAL WORLDS

This chapter will briefly introduce the concept of virtuality, followed by a review of the virtual world literature. The chapter will then introduce World of Warcraft.

The purpose of this chapter is to provide a backdrop to virtual worlds. Each of the individual articles draws on or extends the literature from this section.

3.1. Virtuality

According to Panteli and Chiasson (2008), there has been a considerable amount of interest in virtual teams, organizations, groups, and communities. However they argue that the concept of virtuality has not been well conceptualized or explored. In their view, virtuality is increasingly extending its reach, and becoming more global, more dispersed, and more pervasive in all areas of society (Panteli and Chiasson 2008). Panteli (2009) identified four different categories of research on virtuality: computer-mediated communication, virtual teams and organizations, online communities, and virtual social networks. Panteli (2009) further explains that while computer-mediated communication is the most basic type of virtuality research, it is critical in understanding the other types of virtuality. Not only does it affect individuals involved in virtual networks, but also has implications for the team, community, and network aspects of virtuality.

There is no commonly accepted definition of virtuality. Some researchers adopt philosophical definitions, some see it as a computer representation (Panteli and Chiasson 2008), while Kreps (2008) argues that virtuality is inherent in human consciousness. Also important in understanding virtuality is an understanding of the people who use it. Virtuality is recognized in the particular local settings of individuals, and this influences the ways in which they use virtual systems. An individual must live, think, and breathe within their local sociological, psychological, and physical world, which in turn affects and shapes what they do in their virtual world interactions and interpretations (Woolgar 2002). In fact, Kreps (2008) questions whether the real and the virtual are truly opposed to each other, and that suggests virtuality may even be inherent in the nature of what it is to be human.

Research on virtuality within organizations is vast, for example, (Chudoba and Watson-Manheim 2008; D'Eredita and Nilan 2007b; Heckman et al. 2007b; Oshri et al. 2008; Weems-Landingham 2008). However my own research is focussed on virtuality beyond
organizations, and centers around the social sphere. Therefore the remainder of this section will focus on virtuality and social life.

Carter (2005) argues that the Internet is not a placeless cyberspace that is distinct and separate from the real world, as people ‘live’ and ‘construct’ new places. Based on an ethnographic study, Carter suggests that people invest just as much effort in maintaining relationships in cyberspace as they do in other social spaces, and are in fact widening their networks of relationships rather than weakening them. She argues that human relationships on the Internet are being assimilated into everyday life, rather than being removed from real life.

Pluempavarn and Panteli (2008) examined how bloggers’ identities are influenced by the identities of the communities they participate in, and how the bloggers themselves can influence their online communities. Using an ethnographic study of a blogging community, they conclude that social identity exists not only in the real world, but the virtual as well, and is shaped by the members within the community, and influences the identity of group members. Another important finding was that individuals with similar interests start forming specific groups or communities, and identify themselves with that particular group. These groups will then form their own unique characteristics and develop their own rules and norms.

In an ethnographic study of a virtual world game called Eve Online, Papargyris and Poulymenakou (2008) examined how people in virtual worlds achieve shared meanings of their own collective actions. Shared meaning can refer to rules and procedures of the game, to more complex forms of collective action such as PvP and fair play. They found that to achieve an understanding of shared meanings, players employ various instruments and strategies to negotiate meanings such as metaphors, game rules, and player roles. Players in these games learn the games rules and mechanisms through continuous experimentation, and sharing knowledge with others.

Within the IS arena, one budding stream of research into virtual worlds is focusing on virtuality in organizations (D'Eredita and Nilan 2007b; Heckman et al. 2007b). Another stream focuses on virtuality in online three dimensional worlds such as SL and WoW (Davidson and Goldberg 2009; Davis et al. 2009; Messinger et al. 2009; Nardi et al. 2007; Schultze and Rennecker 2007). The following section will follow the latter stream of research.
3.2. Virtual Worlds

Virtual worlds come in many sizes, shapes, and forms. Virtual worlds can further be defined into sub-categories such as social virtual worlds, like SL, or massively multiplayer online role-playing games (MMORPG) such as WoW (see Figure 3.1). Although these sub-categories can be somewhat debatable, as indeed MMORPGs can have very strong social factors existing between players, while social virtual worlds can have some game elements. Therefore these definitions are in need of further refinement. 3D virtual worlds have been emerging at a similar rate to Moore’s law – doubling every two years or so (Castronova 2007).

Bartle (2004) states that virtual worlds are implemented by computers that simulate a shared or multi-user environment, which continue to exist even when there is no one using them. Bloomfield (2007) defines virtual worlds as computer mediated environments which simulate real-world situations where one or more human participants have the ability to control one or more actors. Castronova (2005c) refers to virtual worlds as universes hosting massive flows.
of human intercourse, information, commerce, war, politics, society, and culture where thousands of people can interact with each other on a persistent basis.

For the purposes of this research, we will use the definition provided by Bell (2008), who defines virtual worlds as “a synchronous, persistent network of people, represented by avatars, facilitated by networked computers” (p. 2). Synchronous because shared activities require synchronous communication, persistent because a virtual world cannot be paused and continues to exist once the user has logged off while networks of people exist, communicate and interact with one another in the virtual environment. These people are represented by avatars which are digital representations of the self. All of the above is facilitated by networked computers which create the environment. Using this definition, environments such as SL and WoW can be considered virtual worlds, while environments such as Facebook or MySpace cannot.

Virtual worlds have attracted millions of users worldwide. Castronova (2007) sees an “exodus of people” to the virtual world in what he calls practical virtual reality which emerged from the video game industry in which already 20 to 30 million people immerse themselves in perpetual fantasy. This exodus is likely to change the social climate of the world around us, as more of us find ourselves interacting in cyber space. Castronova (2007) also predicts the following will occur:

- Larger numbers of people will spend more time inside online games. To non-players, this will seem like an exodus from reality.
- Due to this exodus, the public will begin to think of game design and public policy design as similar activities.
- Due to these similarities, there will be crossovers as real-world policy is used in game design, and vice-versa.
- Ultimately games will force fun into the policy agenda as people come to new understandings of human happiness.

Castronova (2007) refers to these online game worlds as being constructed to look very much like the real world, with creatures wandering around, trees, oceans, and mountains, and food and water. They continue to persist just as the real world does; and users will often encounter other real people in them.
But why should we care about online games and virtual worlds? Some business scholars have been dismissive of virtual worlds as irrelevant to both real life and scholarship (Beck and Wade 2004; Castronova 2005c) because these social arenas have tended to be used for gaming only. However millions of people have invested their time and energy into using these virtual worlds, creating characters, and meeting new people. Schultze and Rennecker (2007) argue that virtual worlds represent a legitimate arena for IS research. Virtual worlds are of interest to IS researchers for both their business and social aspects (Messinger et al. 2009). MMORPGs also provide an interesting research stream. Games such as WoW offer alternative worlds where social functions, learning, and the development of social skills can be practiced in a virtual environment (Davidson and Goldberg 2009). Until recently, very few IS scholars have examined MMORPGs.

Virtual worlds have become the focus of attention for social researchers both in gaming and non-gaming virtual worlds, on the premise that social behavior is easier to observe in computerised environments, and is comparable to behavior in the real world. Virtual worlds can be used to examine theories of culture, psychology, and human interaction (Bainbridge 2007).

Virtual worlds can also be used to study and simulate activities in the real world. Lofgren and Fefferman (2007), based on an unintended disease epidemic in WoW, showed how epidemiologists could use virtual worlds to model the real world spread of infectious diseases, and could explore social factors operating with real-world plagues, but with no human costs. Kafai et al. (2007) conducted an infectious disease experiment inside an educational children’s virtual world called Whyville. They created a virtual disease called Whypox, and encouraged children to track the spread of the disease, predict its course, and post theories about it. The children learnt about their own health or illness, and gained an awareness of disease transmission.

Bradley and Froomkin (2004) argue that games and virtual worlds can be used as laboratories for testing new regulations and laws before they are applied to the real world in order to understand social impacts of those new policies. Virtual worlds can become laboratories where experiments in humanity can test new norms, values, and institutions which might later be transferred to the real world (Bainbridge 2010a). Virtual worlds could have the potential to be proving grounds for real world social innovations, subcultures, and social movements (Bainbridge 2009). There is also some evidence that virtual worlds can serve as hatcheries for
new cultural movements such as facilitating the consolidation of post-Christian religious ideologies (Bainbridge and Bainbridge 2007) as well as substituting for disintegrating social institutions in the real world (Williams 2006).

The growing use of virtual worlds social environments and their importance to firms makes them an environment in need of understanding (Becerra and Stutts 2008). Virtual worlds provide IS researchers with new challenges, as social and business interactions move into these virtual environments. Recently in the IS field, virtual world research has gained momentum with several journals having special editions on virtual worlds, for example MIS Quarterly, the Journal of the Association of Information Systems, and the Journal of Database Management, and conferences hosting mini-tracks on virtual worlds and MMORPGs (i.e. AMCIS 2010). The current research in virtual worlds however is still in its infancy, and much more research is needed to fully understand the dynamics of virtual worlds, and how they relate to people’s social interactions in and out of the virtual world. The following section aims to present some of the research into virtual worlds.

3.2.1. Consumer Behavior

Virtual environments allow users to create avatars, which can enhance one’s physical attractiveness, as well as allowing the demonstration of non-physical traits such as warmth, honour, and honesty. Becerra and Stutts (2008) found that perceptions of a low body image or attractiveness, and low self-esteem increase the desire to become someone else, and thus increases the use of virtual worlds. Vicdan and Ulusoy (2008) investigated the concept of the body in virtual worlds, in terms of the symbolic meanings people attach to their avatars. They found that virtual worlds allow users to experiment with different identities and is a reflection of the independence from real world physical elements. Many individuals create avatars, where some reflect their real world life, while others reflect a totally different being, for example becoming a monster, or animal, or to create their ideal self.

Messinger et al. (2008a) examined the relationship between avatars and their users in terms of appearance and behavior. They found that users report making their avatars look similar to themselves, but somewhat more attractive. Users also report that their virtual world behavior is more outgoing and risk taking and less thoughtful/more superficial. They also found that people with avatars more attractive than their real self are more outgoing, extraverted, risk-taking, and louder than their real selves.
Boostrom (2008) further investigated consumer behavior in virtual worlds by investigating how reality within virtual worlds is constructed, the role secondary socialization plays in groups, and the way users react towards newbies. Secondary socialization occurs in SL, because users are already socialized individuals introduced into new environments, i.e. the virtual world. Aspects of their primary socialization may not carry over into the new secondary environment. He concludes that reality within virtual worlds is constructed by its residents and is actively altered by those who use it, and proper social interaction is derived from primary socialization. The concept of a newbie is also enhanced if a user does not collect enough “virtual stuff”, i.e. clothes or items. In the eyes of others, someone will always be considered a newbie unless they have spent the time effort and money to alter their appearance.

Virtual world users interact and form relationships with other virtual world users via avatars. Zhao et al. (2010) argue that avatars are becoming increasingly influential in business and society, however the sustainability and impact of virtual worlds depends on the closeness of human-avatar relationships. Their study presented some practical guidelines for designers of virtual worlds for effective human-computer interactions. Firstly, avatars should be designed to satisfy people’s needs, such as allowing users to join groups to have a sense of inclusion, and allowing intimate behaviors such as kissing, hugging, and touching. Secondly, avatars should be easily customizable and personalizable so users perceive them as irreplaceable. Third, allowing the user to visualize the resources they have invested in the avatar. Their research also provides some guidelines to businesses operating in virtual worlds, for example, sales avatars (i.e. sales people inside the virtual world), should dress similarly to their customers’ avatars, make the avatar smile sweetly at customers, and ensure the avatar nods during conversation to make it look as though it is a good listener (Zhao et al. 2010).

### 3.2.2. Virtual Economies and Virtual Goods

Despite having no capacity to fulfil physical needs, everyday millions of dollars are spent on virtual goods which only exist within a virtual environment and the computer servers in which they are based. Virtual goods are meaningful to individuals and can represent status, individuality, and belonging (Martin 2008). Virtual goods can include accessories for avatars such as clothing, hair, other apparel, cars, airplanes, and property. Often these are purchased so users can customize their appearance as users want the ability to change and control how
they are seen in the virtual world (Mitham 2010). Figure 3.2 illustrates the revenues of virtual goods from 2007 to 2012.

![Virtual Goods Revenues (USD)](chart)

**Figure 3.2 Virtual goods revenues (Kzero 2010)**

Castronova (2001) investigated some economic measures within and MMORPG called Everquest, in the world known as Norrath. Firstly he measured the Gross National Product (GNP) which is the market value of all goods and services produced in one year by labor and property supplied by the residents of a country. Castronova found that avatars in Norrath create about $15,000 (USD) in avatar capital an hour, with the total GNP of Norrath about $135 million, or $2,266 per capita. Compared with GNP data from the World Bank (in 2001), this made Norrath the 77th richest country in the world, almost equal to Russia. Norrath is richer than many countries including China and India. Castronova also measured inflation, where he discovered a 29 per cent deflation per year, and nominal wages where he found that the average avatar earns $3.42 per hour (Castronova 2001).

Virtual worlds have also created real world jobs for many other people apart from the designers and programmers of the game. One example is known as “gold farming” or the Real Money Industry (RMI). Often RMI studios are run out of China, and help players to progress their characters with a number of different services. For example, levelling a character while the player is not logged in, gaining new items, or obtaining gold for the character. RMI studios can range from large scale companies which employ hundreds of workers, to small family operations like the images shown in Figure 3.3-4, in Beijing, China
(Gilmore 2010). An approximate exchange rate of 1000 gold in WoW is $1.28 USD (wowgoldpig.com 2013). However, this practice is against the WoW terms of service.

Figure 3.3 RMI Studio in Beijing, China. Source: (Gilmore 2010)
3.2.3. Society and Culture

Social and political scientists can use virtual worlds as a social laboratory to examine and observe individual and collective patterns of behavior online. Such observations can test social theories or develop new ones, to achieve a better understanding of virtuality (Papargyris and Poulymenakou 2008).

Unfortunately criminals also have found their way into virtual worlds. Elliott (2008) reviewed some of them crimes that have occurred in SL. Some examples are: griefing (Chesney et al. 2009), which means causing grief to other players; phishing, by using social engineering and technical know-how to steal other users identity data; money laundering, for example terrorists, and organized crime using virtual money for their activities; and vandalism and theft by wilfully defacing buildings and placing obscene structures in public places (Elliott 2008).

Chesney et al. (2009) also investigated anti-social behavior (i.e. griefing) in SL. They found that griefing is relatively common and is typically targeted either towards new users of the virtual world, or towards a user who cannot easily defend him or herself, which is a characteristic of real-world bullying. Victims of griefing also felt that it had an impact on their real-world because ‘if you are harassing my avatar, you are harassing me’ (p. 542). So
called griefers in SL often did so because they found SL an easy place to *grief* and the world owners have the inability to prevent it, because they used their experiences in other (more violent) virtual worlds such as WoW, or because they wanted to show off their superior knowledge of SL (Chesney et al. 2009).

Jung and Kang (2009b) investigated users’ purposes for using social virtual worlds. They found that people come to social virtual worlds to escape from the real world and to satisfy both their social and hedonic needs. Some of the main reasons for using social virtual worlds are for social relations and amusement. Technical features such as voice chat and avatar interaction are useful for expanding users’ social interactions. Social virtual worlds are used by people to escape from the real world. Some virtual worlds allow users the ability to create virtual objects, this can not only help users to escape the real world, but may also lead to financial gains if they can sell these virtual goods. However, knowledge acquisition is a minor reason for using social virtual worlds, as the main goals are to socialize and for entertainment.

Choi et al. (2009) attempted to understand how people can promote cognition-based trust in virtual worlds by presenting two alternative looking avatars with or without the disclosure of offline identity information. Their results show that if a user has a more sophisticated looking avatar, this leads to higher cognition-based trust, while a less sophisticated avatar results in lower cognition-based trust. In relation to the presence or absence of offline identity information, for a more sophisticated avatar, the presence or absence of offline identity information had the same level of cognition-based trust. However, for less sophisticated avatars the presence of offline identity information results in higher cognition-based trust, while the absence of offline identity information resulted in lower cognition-based trust.

Goel and Prokopec (2009) explored the implications of social impacts enabled by virtual world technologies. They found that an individual’s level of social skills are related to his or her social awareness of others in the virtual world, which in turn is related to an individual’s cognitive absorption, and the level social interactions with others. The perceived social quality of the virtual world is related to an individual’s level of social interactions with others, which in turn is related to an individual’s level of cognitive absorption. Cognitive absorption is related to an individual’s satisfaction with the virtual environment, to the individual’s perceived ease of use of the virtual world, and the perceived usefulness of virtual worlds. An individual’s perceived ease of use of the virtual world is related to his or her
intention to use the virtual world. An individual’s perceived usefulness of the virtual world is related to his or her intention to use the virtual world.

Klastrup and Tosca (2009) explored clothing and fashion inside MMORPGs and claim that it is an important aspect of game aesthetics and player performance. Through participant observation and surveys, they aimed to understand how important fashion is to WoW players. They found that most players notice another players’ clothing when they are inside a city and argue that fashion in the game world is a vehicle for individualization and personal storytelling. For example, when a player is being casual around a city they may wear simple robes, and only wear high armour gear once they leave the city.

Paul (2009) advocates that to understand how shared practices constitute as cultures, it is important to study common practices over multiple virtual worlds. Games research tends to only focus on a single game. However, there is a risk that we are not capturing the true virtual world cultures which may span multiple virtual worlds. He argues that cultures are defined by the practices that virtual world inhabitants share, rather than the worlds they inhabit.

Papargyris and Poulymenakou (2009) explored the concept of collective memory in two MMOGs. Collective memories can be defined as the aggregated individual memories of members of a group. During their ethnographic study, Papargyris and Poulymenakou found that to preserve the collective memories, the group rely on war stories, the roles that individuals play, and propaganda. They conclude that collective memory is gradually constructed through participation in a community’s collective actions.

3.2.4. Brand Value

Park et al. (2008) investigated affordances in virtual worlds which can be used to increase the level of flow a user experiences when they experience a virtual business site, and how this enhances brand equity in virtual worlds by creating a conceptual model. Later, Nah et al. (2010) partially tested this conceptual model to understand and empirically assess brand equity and behavioral intention in virtual worlds. They found that a user’s experience of skills and challenges in virtual worlds impacts users’ flow experiences and brand equity. The influence on brand equity then increases behavioral intention. Their research also highlights that in order to increase the behavioral intention associated with a brand, it is important to balance the challenges posed by virtual world branding with the users’ skills to maximize and brand equity.
3.2.5. Team Collaboration

Virtual worlds offer great potential for supporting the collaborative work of geographically distributed teams (Nardon and Aten 2012). Boughzala et al. (2012) suggest that virtual worlds present opportunities and challenges for organizational teams. For example, teams in virtual worlds can overcome the limitations of sharing the same physical workspace, and can also perform activities that are not possible in the real world. They claim that virtual worlds, through avatars, offer deeply involved social interactions and economic and commercial activities.

Schmeil et al. (2012) present a collaboration based framework based on semiotics theory using the distinct features of 3D virtual worlds. The framework represents a blueprint for how to describe or generate collaborative group interactions in virtual environments. The framework was created to present lectures on natural, artificial, and embodied intelligence, to 3D designers and modelers, and virtual world developers and scripters. The framework was successful in supporting the design of collaboration patterns, and realizing innovative ideas.

Chandra et al. (2012) elaborated on the intention to adapt the use of virtual worlds from a recreational to a workplace applications. Their model relates the antecedents of cognitive involvement to the level of trust and adaptive use intention for virtual worlds. Venkatesh and Windeler (2012) investigated the value of virtual worlds for team collaboration, due to the interactive nature of virtual worlds, and an increasing reliance on virtual teamwork. The authors examined the relationship between a team’s disposition toward IT, their general disposition (personality), and virtual world use in influence team performance and team cohesion. They compared two collaborative field systems, one traditional desktop metaphor, and one in virtual worlds. They found that a virtual world system is positively influenced by the relationship between technology use and team cohesion, which in turn predicts team performance.

Goh and Wasko (2012) explored virtual world teams to shed light on how to manage synchronous and highly dependent work activities using leader-member exchange theory. Their findings indicate that the influence of the leader-member relationship on member performance is mediated by the development and allocation of resources. They also found that trust is less vital in virtual teams where everyone’s actions are visible. When managing large virtual teams or social collectives, building relational capital helps to facilitate the transformation from self to collective interest and is an effective leadership tactic.
In their exploration of how individuals’ interpretations of virtual worlds influence their judgments of the value of technology, Nardon and Aten (2012) assessed the value of virtual worlds in a business setting. They found that the relative importance of the criteria for assessing a technology varies with potential users’ interpretations and mental categorizations. They identified three mental categories which were used by participants to understand virtual worlds: virtual worlds as an extension of reality, virtual worlds as a place, and virtual worlds as a medium.

The previous sections have presented general literature relating to virtual worlds. The next section will specifically focus on WoW.

3.3. World of Warcraft

The point of this section is two-fold. Firstly WoW the game will be introduced, and secondly academic research on WoW will be presented.

3.3.1. The Game

WoW is the most popular MMORPG which in 2010 reached over 12 million players globally (Blizzard 2010b). A player in WoW assumes the role of a hero as they explore this virtual world. Players can interact with thousands of other players in the same world to adventure together or fight against each other. Players can form friendships, create alliances, and compete against enemies (Blizzard 2010a).

The world in which WoW is set is named Azeroth. This world is comprised of three major continents, and a number of smaller islands. The content of Northrend is located in the north, the Eastern Kingdoms in the east, and Kalimdor in the west (see Figure 3.5). Each continent is also divided up into zones (similar to countries), Figure 3.6 shows the zones of Kalimdor. Each zone is suited to characters of a certain level, and may have political alignment to the major factions of WoW, or may be considered a neutral zone.
When a player starts a new character in the game, there are some important decisions to be made at the beginning. The first decision is which realm to play on. A realm (also called a server), is the game world which exists for several thousand players within it. Every realm in
the game is exactly the same, however each realm has its own characters (players) who are tied to that realm. It is possible to interact with players in your own realm, but not with players in other realms. There are also different types of realms. A normal realm is where the focus of the players tends to concentrate on player vs. environment (PvE) objectives, for example defeating monsters and questing. A second realm type is player vs. player (PvP), which has the same objectives as the PvE realms however there is the added element of continuous faction vs. faction combat. This means that players can attack players of the opposing faction, which is not possible in a PvE realm. The next realm type is called role-playing (RP) where players imagine they are inhabitants of a fantasy-based world. In a RP realms, players assume the role of the race they are playing and must remain in-character at all times. This means that talk of the real world is often limited. RP realms have 2 types, normal (simply called RP) which is like PvE, and role-playing PvP (RP-PvP).

The second decision a player must make is the faction they will play. In Azeroth, there are two factions, the Horde and the Alliance which are locked in a struggle for control over the land. Horde and Alliance characters can battle each other in PvP realms, but they are not able to group together, trade, or even talk to each other. Once a player has chosen their faction, they then decide what race they would like to play. Table 3.1 shows the races available for each faction.

<table>
<thead>
<tr>
<th>Horde Races</th>
<th>Alliance Races</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orcs</td>
<td>Humans</td>
</tr>
<tr>
<td>Tauren</td>
<td>Dwarves</td>
</tr>
<tr>
<td>Trolls</td>
<td>Gnomes</td>
</tr>
<tr>
<td>Undead</td>
<td>Draenei</td>
</tr>
<tr>
<td>Blood Elves</td>
<td>Night Elves</td>
</tr>
<tr>
<td>Goblin</td>
<td>Worgen</td>
</tr>
<tr>
<td></td>
<td>Panda (Available for both factions)</td>
</tr>
</tbody>
</table>

Table 3.1 Races available for each faction

Players then need to decide which class they would like their character to be. There are several types of classes available to choose: Druid, Hunter, Mage, Paladin, Priest, Rogue, Shaman, Warlock, Warrior, Death Knight, and Monk. A character’s class determines what skills and spells a player can learn.
Once a player has made all of the decisions listed above, they can then customize their character by choosing the gender, hairstyle, hair colour, skin colour, and other features such as facial markings, earrings, horns, and facial hair. Lastly, the player must choose a name for their character. Figure 3.7 illustrates the character creation screen.

Figure 3.7 Character creation screen

Once the character is created, they can then be “born” into the world. Each new character starts at level 1 and each class has a predetermined starting zone. One of the most important activities in WoW is levelling a character; to achieve a higher level, a character must perform quests and kill in-game monsters which reward experience points. Once a character has earned enough experience points, they will “level up”. Levelling up increases the strength and power of the character, and allows them to learn new spells and abilities which may only be available once a character has achieved a certain level. Each increase in level provides the player with more strength or magic abilities which enable the player to kill higher level mobs (non-player characters, i.e. monsters). Levelling is also important because it allows a character to travel around Azeroth. Each zone has a certain level range, for example 10-20, which means players below level 10 are not yet strong enough and may easily die if they
enter while players over level 20 will not earn many experience points if they remain in that zone. See Rettberg (2008) for a description of quests and levelling.

Questing is one of the first things a new player will do as they enter WoW. If the player right clicks on a quest-giver, he or she may then choose to accept or decline the quest (Figure 3.8). A quest usually involves a series of activities. Upon completion of the quest, the player is rewarded with experience points, money, an item, or any combination of these. Once enough experience points have been collected by a player, they can proceed to the next level.

![Figure 3.8 Quest-giver and brief story explaining the details of the quest.](image)

Players can exhibit different patterns of behavior: one player may be more cautious, attacking only one mob at a time; another player may be more aggressive, preferring to attack multiple mobs simultaneously. Players also have the option of using a PvE server, or a PvP server. If a player is using PvP, then at any time, a player from the opposing faction could attack that player. In a PvP scenario not only do players have the chance to be attacked by mobs, but they also may be attacked by other players. In a PvE scenario, other players cannot attack a player unless they allow it.

Raiding is another popular activity in WoW. Raids are groups of players who group together to fight powerful monsters or to engage in PvP combat. Raids allow players to enter the most dangerous areas of WoW and overcome their challenges (Blizzard, 2010). In raids, players
are no longer acting alone, but are part of a larger group, which creates strong social ties among them. Therefore it is essential to be a good team player in order for the group to complete the objectives of the raid.

A raid group is formed by inviting others to join in the adventure. These players could be members of your guild or new players. Each group has their own group chat which is only viewable by members of that group. The location of each group member is shown on the map. A raid leader is in charge of raid organization, structure, and communication. The leader can move people between groups and add or remove raid members. Leaders also have the ability to promote other players to help them to manage the raid based on their abilities. During the planning of the raid, the leader will mark targets with symbols which indicate the order of attack. All players in the raid will be able to see these symbols and are used to coordinate the attack.

In WoW, there are a large number of raids which groups could undertake, each with different objectives and requirements. For example, some raids are designed for 20 players, while others are for 40 players. A particular raid scenario may be repeated multiple times with different player membership. Each instance may differ. Different groups of players completing the same raid instance could exhibit different patterns of behavior. Prior experience may alter a group’s behavior so as to have a more favorable outcome from the raid. Patterns of behavior could also be different between different raids for the same group.

Although questing and raiding are the main activities a player can perform, there are a large number of other activities available to players. Players may concentrate on enhancing their characters’ professions, exploring the world, or socializing with other players. Many activities performed in WoW are aperiodic, where players perform tasks on an irregular basis.

### 3.3.2. Research on WoW

Krzywinska (2006) investigated the worldness of WoW and argues that in order to understand the game’s formal, aesthetic, and structural specificity, its meanings and pleasures, it is essential to understand the underlying stories and myths of the game. Myths and stories (also called lore), help to create a fantasy world which increases a player’s sense of belonging. Castronova (2007) further explains that people are happiest when the meanings of their actions are embedded in a bigger story; hence virtual worlds attempt to explain everything – why a city is located where it is, or why members of one culture do not like another. Players can then place their activities in the context of the lore.
Chen (2009b) looked at group collaborative improvements on communication and coordination in WoW. Groups are successful when the group can successfully define and retain a coherent group identity and establish shared social incentives, rather than individual incentives for participation. Groups should learn together through iterative attempts at in-game tasks, and then reflect on their failures and form new strategies. During an in-game task, teams should divide labor tasks into specialized roles which allows each member to contribute and should focus on building friendships, and learning how to complete tasks together. Goals should be explicitly stated and then reflected upon afterwards.

Ducheneaut et al. (2006a) explored the social experiences of players in MMOGs. They argue that the difference with MMOGs compared with other games is the shared experience, the collaborative nature of most activities, and the reward of being socialized into a community of gamers and acquiring a reputation within it. Therefore it is the presence of other players in the game which sets MMOGs apart. While many of WoW players play alone, Ducheneaut et al. (2006a) believe people prefer playing a MMOG because of a different kind of "social factor." They define three factors which influence the appeal of being “alone together” in multiplayer games: audience, social presence, and spectacle. The zones inside WoW have their own local chats which create a sense of social presence. While playing WoW, players are always surrounded by the background chatter. Complete strangers can be a constant source of entertainment while other players can become a spectacle, for example a group of players waiting for a boat breaking into dance with an audience of other players watching.

WoW provides a system where players group together into guilds. A guild consists of several players with similar interests within one of the two in-game factions (Alliance or Horde), and provide opportunities for assistance with quests, social interactions, and protection from rival factions. Hardcore players often employ behavior that suggests tribalism. The majority of players join guilds because they enjoy the feelings of group unity, cooperation, friendship, and accomplishment. It is common for players to promote unity and argue against fighting within guilds so as to unite and successfully fight a rival faction (Brignall and VanValey 2007).

According to Williams et al. (2006) guilds either have a non-hierarchical (low) or hierarchical (high) structure. Players in highly structured groups have more social experiences than low structured groups, while low structured groups do not encourage members to connect with one another. Williams et al. (2006) also examined social structures in WoW. They
Virtual Worlds

investigated the social dynamics of guilds and found that small guilds tend to be more focussed on social ties, while larger guilds may have higher chances of conflicts between members. Therefore, a large guilds require high levels of leadership for political and practical purposes. Guilds often employ formal practices such as the use of mission statements, recruitment and expulsion policies, and external websites. Social ties between members of the guilds are important because weak social ties are the leading cause of people leaving a guild although most players recognize the social value of being in a guild. Some players even consider the social ties they have with their guild members as stronger than their real world social ties.

A popular activity for players in WoW is raiding. This involves a large number of players cooperating together, often for hours at a time (Bardzell et al. 2008). This involves high levels of collaboration among all players, where one’s survival depends on it. Using a combination of ethnographic observation, interviews, chat and video analysis, Bardzell et al. (2008) examined the conditions which produce the most effective collaborations in a raid. Raids involve encounters with mobs (enemies) that can often be chaotic. In order to avoid this, they suggest that players should try to distribute the threat of mobs across the members of the group.

Aarseth (2008) investigated the notion that Azeroth (the world within Warcraft) is a crafted, fictional world, and questioned its worldliness. Blizzard Entertainment has put in a lot of effort to make Azeroth a rich experience platform to give players the impression of a continuous landscape consisting of challenging tasks, sights and beings. Azeroth is a pre-programmed landscape and once a mob has been killed by a player, it is revived by the system minutes later, ready for the next player.

Klaztrup (2008) argues that understanding death is an important aspect to understanding the complexity of WoW. Every player will experience death many times during their adventures in the game world. Death in WoW does not mean the end of the character. After a short time the character will be resurrected and can continue playing in the world. Designers of WoW hold the perspective that death in the game is seen as a way to teach players to handle the aspect of the game in a more successful way.

Rettberg (2008) investigated questing in WoW. Quests are tasks in the game which players are asked to perform. Every quest has a clear structure. The quest starts with a quest giver who provides a background, gives some objectives, and offers a reward for successful
completion. Rettberg (2008) argues that this clear structure means that certain patterns emerge during the course of questing.

All games have rules, and WoW is no exception. Rules are made by the designers of WoW and are supposed to be followed by players. Schultze and Rennecker (2007) describe WoW as a fantasy game with a progressive rule structure where social norms develop around designer intended rules. However, there are various ways in which players can break the rules (Mortensen 2008b). Some examples of this are gold farming, where players illegally pay “sweatshops” of players (often from China) to earn them in-game items or gold, or “bot-fighting,” where characters are not controlled by the player, but by a program the player has installed. Both of these examples are illegal in WoW. Mortensen (2008b) claims that games can teach us about human society, as well as human behavior, innovations, and deviance. Code is the ruler in all computer games, and just as social norms can change, so can computer games, as such the rules of the game can change.

Tronstad (2008) discusses how players identify with their characters, either as an experience of “being” that character, or by feeling empathy toward the character. Tronstad found that character identification is defined by the appearance of the character and the capacity of that character, i.e. what the character can do in-game. Appearance and capacity affect and inform each other, which contribute equally to the identification a player feels towards their character. This is contrary to previous game studies where identity was only based on the capacity of the character. This implies that in virtual worlds, compared with non-virtual world games; avatar appearance is more important.

There are a number of studies which have looked into the social interactions that exist in WoW. Sherlock (2007) investigated how grouping is mediated and the expectations players put in place when they participate in groups. Chen et al. (2008) looked at how game feature changes such as patches affect the social interactions which exist in WoW. Nardi and Harris (2006), investigated how different kinds of social interactions, from brief informal encounters to highly organized play in structured groups, affect players enjoyment. Nardi et al. (2007) examined how players learn the game through chat conversations with players to devise tactics and strategies for game play. Chen and Duh (2007) attempted to understand the social interactions that exist between players and developed a broad framework to better understand these interactions.
Malone (2009) investigated the hierarchical and political structures that exist within raiding groups and looked at a game add-on called Dragon Kills Points, an intra-guild economic system which is used to generate the political cohesion necessary for raiding groups to successfully engage in raiding activities. Such economic systems are used to ensure that individuals are compensated based on their level of participation in the group which ensures there are no free riders as users must contribute to the group in order to receive rewards. Malone found that intra-guild economic systems motivate players to remain in the guild because player contribution is rewarded. Taylor (2008) argues that these kind of systems allow raid leaders to track raid member’s performance to very fine details. This kind of surveillance is compulsory in many guilds, and also potentially has an impact on players and their style of play.

3.4. Summary

These two literature review chapters have presented the key ideas within the context of social movements and virtual worlds.

In chapter 2 we presented the literature on social movements. Throughout history, humans have employed many tactics to complain about things they have disliked. In modern history people may have banded together with others to pursue common goals and achieve social or political change. This collection of people is called a social movement. Social movements are an important means of bringing out cultural and political changes through collective action (Staggenborg 2011). Some movements have responded to threats or violence, while many seek opportunities to claim new rights. Some movements seek political and economic liberation, while others fight for lifestyle changes. Some social movements create formal organizations, others use informal networks, while some others use more spontaneous actions such as riots (Goodwin and Jasper 2003).

Firstly in chapter 2 we defined the concept of social movements, followed by a presentation of the key theoretical concepts used to examine social movements, which included classical and contemporary social movement theories. Following this we presented some key areas of social movement analysis which included social movement strategies and campaigns, mobilization, movement outcomes, and how social movements have used the Internet.

The study of social movements on the Internet created the stepping stone to the literature review chapter about virtual worlds. This study is focused on social movements which occur
within virtual worlds. Therefore, chapter 3 was an analysis of the literature relating to virtual worlds. Firstly it presented the definition of virtual worlds used in this study, followed by an illustration of the way in which virtual worlds have been used in a wide range of domains. Finally we presented the general concept of the virtual world WoW, followed by an analysis of the research conducted on WoW to date.

This thesis combines the two literature streams of social movements and virtual worlds to explore the intersection of these two domains (see Figure 3.9). Previous studies of social movements have examined how movements connect “through” the Internet; however, virtual worlds also allow people to connect “within” the Internet (Wasko et al. 2011), which provides a new set of issues for social movements. This enables a more engaging experience when compared with two dimensional environments (Nah et al. 2011). In the virtual world, there have been virtual protests in SL (Blodgett and Tapia 2010; Robinson 2008), in WoW (Abalieno 2005), and various other virtual worlds (Blodgett 2009; Blodgett and Tapia 2011; Castronova 2003a), and most recently in Habbo Hotel.

![Figure 3.9 Intersection of literature streams](image)

Virtual worlds have enabled intense human interaction, and have become powerful social platforms which enable millions of users worldwide to gather, produce massive economies of their own, while giving rise to virtual communities and complex social relationships (de Andrade 2009). It is clear that virtual worlds have changed the way in which social movements mobilize, recruit new members, organize their strategies and campaigns, and
affected movement outcomes. Therefore, the remainder of this thesis will be focussed around these two literature streams.

These two literature review chapters aimed to introduce the key concepts of social movements and virtual worlds to provide a backdrop for the understanding of the remainder of this thesis, which consists of original articles exploring the concepts of virtual world social movements. Each of the original articles contains a literature review section which extends or draws upon the literature review presented in chapters 2 and 3. The next chapter will present the methodology applied to this study, followed by each of the original articles.
Article I
4. ARTICLE I – USING NETNOGRAPHY TO STUDY VIRTUAL WORLDS: PROBLEMS AND POTENTIAL SOLUTIONS

Abstract
Netnography is a form of ethnography that is adapted to the study of virtual worlds and online communities. This paper discusses the problems that may arise when netnography is used to study virtual worlds. The problems that can arise include gaining access to a virtual field site, figuring out how to document the researcher’s fieldwork experience, and deciding how to analyze very large datasets. Based on our own virtual fieldwork experience, we suggest some potential solutions to these problems.

Keywords
Virtual Worlds, Netnography, Ethnography, Images, Data Mining, Leximancer

4.1. Introduction
Ethnographic research has been used within the field of information systems to provide rich insights into the human, social and organizational aspects of information systems. One of the key features of ethnography is that researchers spend a considerable amount of time in the ‘field’ and seek to place the phenomena studied in their social and cultural context (Myers 1999). With increasing social and cultural interactions on the Internet and the increasing popularity of virtual worlds such as Second Life, however, various modifications to the traditional ways of conducting ethnographic research are needed. In virtual worlds, fieldwork no longer involves physically visiting a research site, but instead requires engagement and immersion in an online community via a computer.

Various names are used for this new kind of ethnography such as virtual ethnography, online ethnography or netnography. In this article, however, we mostly use the term netnography. Netnography, originally proposed by Kozinets (1998; 2001), is a form of ethnography that is adapted to the study of virtual worlds and online communities.

Kozinets (2010) provides many useful guidelines for conducting netnographic research. However, when we used netnography in one of our own research projects, we came up against a few unexpected problems. The purpose of this paper therefore is to discuss the
problems that may arise when netnography is used to study virtual worlds and also to suggest some potential solutions to these problems. Although we provide just one example of a netnographic study (our own), we believe that the lessons learnt are likely to be relevant to other IS scholars who decide to study online worlds.

This paper is organized as follows. Firstly we briefly review ethnographic studies within information systems. We then review the unique aspects involved while studying virtual worlds and present some examples of ethnographic studies of virtual worlds. Following this we review the netnographic method. We then present some of the problems that may emerge when using the netnographic method, along with some potential solutions. The final section is the discussion and conclusions.

4.2. Ethnographic Research in Information Systems

Ethnographic research has been used for many years by information systems researchers to study IS-related phenomena (Myers 1999). For example, Orlikowski (1991) used ethnography to study the extent to which IT deployed in work processes changes in forms of control and forms of organizing, Myers and Young (1997) used ethnographic research to explore the political aspects of IS development, while Schultze (2000) investigated knowledge work with an eight month ethnographic study of three groups of knowledge workers. All these studies were ‘traditional’ organizational ethnographies and this kind of ethnographic work continues to be valuable today (Leonardi 2011). However, virtual worlds provide some unique challenges for the conduct of ethnographic research. We will briefly review what these challenges are.

4.3. Virtual Worlds

Virtual worlds create unique challenges for researchers. One unique aspect of virtual worlds is the field site. The main difference between traditional ethnographic field sites and virtual world field sites is that a virtual world researcher cannot physically visit a research site (Guimarães 2005; Kozinets 2010). Instead, the researcher has to log into the virtual world from wherever they happen to be. This means that online ethnographic research is more like deskwork than fieldwork (Rutter and Smith 2005). Another unique aspect is the ability for researchers to use hidden observations, without members of the online community even knowing the researcher is there (Guimarães 2005; Moore et al. 2009). Data analysis in virtual worlds also introduces some unique aspects, for example, it may not be possible to determine the true age, sex, or ethnicity of virtual world participants (Kozinets and Kedzior 2009).
People in virtual worlds have the ability to be anonymous or use pseudonyms (Christopher 2009; Kozinets 2010). Virtual worlds also provide users the ability to express themselves in ways which extend beyond their body, for example, by modifying the environment around them, altering their identity, creating multiple avatars (Boellstorff 2008), and they may inhabit multiple virtual worlds simultaneously (Fornäs et al. 2002; Kozinets and Kedzior 2009; Moore et al. 2009).

Given the unique challenges that confront those that wish to conduct ethnographic fieldwork in virtual worlds, traditional methods of ethnography need to be modified. Over the last decade, several attempts to study online environments have been attempted, such as cyber-ethnography (Fox and Roberts 1999; Pearce and Artemesia 2009; Ward 1999), digital ethnography (Masten and Plowman 2003; Murthy 2008), virtual ethnography (Ducheneaut and Moore 2004; Hine 2000) and netnography (Kozinets 2010).

4.4. Ethnographies in Virtual Worlds

There are examples of ethnographic studies in virtual worlds such as Star Wars Galaxies (Ducheneaut and Moore 2004), Everquest (Jakobsson and Taylor 2003; Taylor 2006), The Palace (Guimarães 2005), Active Worlds, (Hudson-Smith 2002), Uru (Pearce and Artemesia 2009), Second Life (Azeharie and Sharma 2011), and There (Brown and Bell 2006).

Boellstorff (2008) spent more than two years of fieldwork in Second Life. He “lived” among Second Life residents observing their behavior. He studied issues of gender, race, sex, money, conflict and antisocial behavior and demonstrated how virtual worlds can change ideas about identity and society. Chesney et al. (2009) also studied Second Life and investigated negative behavior called “griefing”, a classification of cyber bullying and generally harassing avatars, via participant observation and focus groups held in-world. Their findings show that grieving behaviors in Second Life are common and are mostly targeted towards inexperienced residents by more experienced residents.

Brignall (2008) conducted ethnographic research in World of Warcraft (WoW). He looked at hard-core players and their tribalistic behaviors. Chen (2009a) gave detailed descriptions of actual player practices defeating in-game characters through collaboration, communication, and coordination. Chen found that a team’s success is dependent on its ability to create a coherent group identity and shared incentives rather than individual participation. Ducheneaut et al. (2006a) investigated the social experiences of players. They found that shared experience, the collaborative nature and rewards for being part of a community are
important factors and that these types of games stand apart from other games because of the presence of other players.

Nardi & Harris (2006) investigated the social organization of WoW through immersive ethnographic fieldwork and described how player culture affects enjoyment and learning. They found that play is characterized by brief informal encounters with other players in-game, to highly organized play in structured groups. Williams et al. (2006) investigated the social dynamics of guilds in WoW through ethnographic participant observation and sampling of the player population. They found that small guilds are more focused on social ties than game goals, whereas larger guilds tend to have more conflict between members and requires high levels of leadership. Nardi (2010) spent three years of participatory research in WoW and investigated player behaviors and activities in the United States and China.

4.5. Netnography and the problems we faced

Since netnography, developed by Kozinets (2010), is the most fully developed of all the various attempts to use ethnography online, we focus our discussion on netnography from now on. Netnography adapts ethnographic procedures to use computer mediated communications as a source of data and is used to gain an ethnographic understanding of online cultural and communal phenomenon (Kozinets 1998; Kozinets 2010).

Kozinets (2010) says there four critical differences between traditional ethnographic techniques and their adaption to online environments. The first is alteration, as the nature of interactions has been altered from face-to-face interactions to computer-mediated communications. Second is anonymity, because users of online environments have the option of remaining anonymous. Third is accessibility, as almost anyone can access the online forums. Fourth is archiving, which refers to the persistency of data on online communications, even after the user has logged off. Together, these four concepts lay the foundations for adapting traditional ethnographic face-to-face interactions to online computer-mediated communications.

Of course, it is possible for researchers to combine both netnography and traditional ethnography, if they are studying both the online and offline communications of a particular community (Kozinets, 2010). For example, Kozinets (1997) attended conventions and fan club meetings in the real world as well as observing websites and newsgroups. Kozinets (2010) makes a distinction between research on ‘online communities’, and research into ‘communities online’. With the former, the social interactions of the community take place
only on the Internet, whereas with the latter, the social interactions take place on the Internet and in the real world.

Another difference between netnography and traditional ethnography is that the researcher can end up with huge amounts of data, even more so that with traditional ethnographic studies (Myers 1999). This is because conversations, events, and almost anything that happens online is logged and can be recorded. Online studies make the collection of data very easy, since in many cases the users of virtual worlds are in effect automatically recording many of their own words and actions themselves. For example, if someone posts a comment in a discussion forum, the comments are already typed up and transcribed by the user and are freely available to anyone else who reads them online. We discuss later how we solved this problem by data mining large textual datasets.

Yet another difference between netnography and traditional ethnography is that online studies have new types of digital texts (Urquhart and Vaast 2012). These digital texts include images or photographs (Andrade and Arthanari 2009). Virtual worlds are highly graphical systems in which avatars interact with each other (Castronova 2007). Due to their highly graphical nature, images become a major source of data in virtual world studies. In this paper we also present how we combined traditional textual analysis with these new digital texts.

Ethnography has some key issues or concepts, which differ when ethnographic procedures take place online. Kozinets (2010) compared ethnographic methods with his netnographic approach, however we found that there were a number of problems which need to be addressed when using netnography to study virtual worlds. In Table 4.1 we describe these problems and also summarize the potential solutions or opportunities to overcome those problems.

<table>
<thead>
<tr>
<th>Ethnographic Issues</th>
<th>Problem with Netnography</th>
<th>Solution/Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpretation of organizational setting</td>
<td>Interpretation of virtual setting which may have alternative characteristics to real world settings (Kozinets and Kedzior 2009)</td>
<td>Researcher must understand the virtual world under investigation.</td>
</tr>
<tr>
<td>Large amounts of data</td>
<td>Even larger amounts of data (Boellstorff et al. 2012), which is easily downloadable</td>
<td>Use of data mining techniques to analyze vast amount of text.</td>
</tr>
<tr>
<td>Traditional texts</td>
<td>Digital Texts (Urquhart and Vaast 2012).</td>
<td>Analysis of images as a data source.</td>
</tr>
</tbody>
</table>
Researcher appears as his or herself | Researcher must create an avatar (re-embodiment) (Schultze 2010) | Researcher can appear to the participants using avatars which take into account the values or cultures of the participants.

Researcher has only one body | Some users maintain just one avatar, while others have multiple avatars (Christopher 2009) | Users can understand the research problem from multiple perspectives.

Participants are physically known to the researcher(s) | Participants may be anonymous or use pseudonyms (Christopher 2009), and may never physically meet the researcher. | Develop research questions where identity of participants is not important. Identify online community earlier during the research.

| Table 4.1 Comparison of traditional ethnography and netnography |

### 4.5.1. Conducting Netnography

Netnography follows a similar process to ethnography (see Figure 4.1). The first stage is to define the research questions, social sites and topics for investigation. Stage two involves selecting and identifying an online community. During the third stage, the researcher will engage and immerse themselves in the online community using participant-observation and various data collection methods. This is followed by stage four where the data is analyzed and the findings are interpreted. The final stage of a netnographic study is to write, present, and report on the research findings and theoretical or practical implications (Kozinets, 2010).
One of the first problems we faced was to do with understanding the virtual arena. Before we could begin any research we first had to have a thorough understanding of the virtual arena under examination. Virtual worlds are an entirely new form of online media, and to understand the social dynamics of these worlds, it is important to first understand the broader context of the virtual world (Boellstorff 2012). To solve this problem we will propose an initial stage in the netnographic process. This will help a researcher to understand the context of the virtual arena under investigation, as is recommended by Urquhart and Vaast (2012).

4.5.2. Netnographic Data Collection

Netnographic research has three different types of data collection: elicited data, archival data, and field note data. Elicited data is a data type where the researcher co-creates information with members of the online community through personal and communal interaction. Some examples are postings and comments, email, and chat logs (Kozinets, 2010). In his study of consumer behavior, Kozinets (1997) participated in panels, discussions, and attended conventions and fan club meetings. Kozinets and Handelman (1998) conducted interviews wholly over the internet. Another problem we faced while attempting to find participants to interview was a lack of interest from subjects to participate in an interview. This is possibly due to the fact that the virtual world we were studying is a game, and subjects were more
interested in gaming activities than participating in research. Another reason could be the lack of trust that subjects had in us as researchers, as we had never physically met any members of the virtual community. Because of this problem, we had to turn to archival data in the form of discussion forums.

Archival data is data which is copied directly from pre-existing communications of online community members, and where the researcher had no direct involvement in the creation or prompting the members. Kozinets and Handelman (1998) observed postings on internet newsgroups to understand boycotting behavior. Nelson and Otnes (2005) archived messages from wedding related websites to understand cross-cultural weddings.

The third type of data is the field notes of the researcher. These field notes record the researcher’s own participation in the life of the community and the meaning of their observations. One key issue of field work in studies of online cultures is the ethical problem of the possibility of hidden observations (Guimarães 2005). When studying virtual worlds, hidden observations are more likely, as only the researcher’s avatar can be seen by the subjects and there is no indication through the avatar that the researcher is recording the interactions. It is possible for the researcher to record field notes about online interactions without the contributors to those interactions having any knowledge of the researcher’s presence (Moore et al. 2009). In the Nelson and Otnes (2005) study, observations were taken from public computer-mediated environments, but there is no mention of the participants being aware of the researchers’ observations. Kozinets (2010) recommends that netnographers should make themselves known to the subjects they are investigating. In large online communities, like the one addressed in our study, it may not be possible to let all subjects know of the researcher’s presence. Therefore we suggest that researchers become as familiar as they can with the virtual arena under investigation, and to at least contact some of the more important members of the community, such as leaders, or members or make a large amount of contributions. To solve this problem, we suggest that online communities are contacted earlier on in the research, to allow for refocusing if members of the community refuse to participate.

There are several basic ways in which netnographic researchers can capture data. The first is to download files as a computer-readable file (Kozinets 2010). For example, Nelson and Otnes (2005) downloaded data from websites, while Kozinets and Handelman (1998) downloaded data from newsgroups. Another method which may be particularly useful for
data collection in virtual worlds is the use of still or video screen captures. These can be useful to observe how avatars move around the virtual space. Kozinets (2010) discusses taking screenshots of whatever is on the researchers computer screen, but mostly focuses on screenshots with textual data, not images. Virtual worlds are highly graphical where virtual objects (i.e. avatars) are the primary focus rather than text. They can be considered technological ecosystems where users “live” within a virtual environment. Screen captures can be very useful for showing the space and inhabitants of a virtual world, while video captures allow researchers to examine how avatars move through space and how their animations appear (Moore et al. 2009). Images are not a common data source in information systems, therefore, we advocate for a greater usage of screenshots (images) as a method for data collection.

4.5.3. Netnographic Data Analysis

Data analysis in netnographic studies raises two key concerns compared with traditional ethnographic data analysis. The first key concern is that it may be impossible to determine the true age, sex, or ethnicity of the person communicating, which raises the issues of authenticity and of generalizability to other members of the community (Kozinets, 2010). Often researchers in virtual worlds only know participants by the way they represent themselves (Moore et al. 2009). To overcome these issues, Kozinets (2010) suggests that netnographic researchers ask themselves if particular aspects of identity are important (practically or theoretically) to their particular study, and if they are, a blended ethnographic/netnographic approach may be appropriate.

The second concern with data analysis in netnographic research is the potential for anonymity, or pseudonymity, as people in virtual worlds have the ability to alter their identities or present themselves in an untruthful manner (Kozinets, 2010). Pseudonymity allows the ability to create a number of in-world identities, each with their own reputations, personalities, and social circles (Christopher 2009). To solve this problem, we suggest that researchers develop research questions where the identity of participants is not important. For example, examining a collective rather than individual members of a community. Kozinets (2010) argues that although this can cause potential problems, it may help us to gain insights in some areas, but lose them in others. For example, online environments may provide the medium where people can express themselves in ways they would previously keep hidden in the real world (Boellstorff 2008).
Data analysis also became a problem due to the large quantity of text we managed to obtain. Ethnographic research usually has to analyze large amounts of data, however due to the ease of data collection in online studies, the amount of data increases dramatically. Our initial attempts to analyze a large dataset proved to be near impossible, therefore we propose using other data mining tools to aid in the analysis of large datasets.

Based on the problems we faced in performing netnographic studies in virtual worlds, we modified the netnographic approach with some potential solutions to these problems. The updated netnographic approach is discussed in the following sections.

4.6. Updated Netnographic Research Procedure

This section presents our own exploration with netnography in an on-going research project. The research procedure for this study was altered from that proposed by (Kozinets, 2010). This method was developed for exploring online communities on blogs, websites, newsgroups, and discussion forums. However, virtual worlds are an entirely new form of online media, and hence the netnographic research method was modified to take into account these new forms of media.

The updated netnographic procedure is illustrated in Figure 4.2, and will be explained in the following sections. The updated procedure was developed over the course of an exploratory study in virtual world social movements. The study began with the intention of using the netnographic method, which was then modified over the course of the study to better reflect the alternative form of media under examination in this study (virtual worlds). We propose that this updated procedure is more suited towards exploratory studies, where research questions develop as the research progresses.
4.6.1. Entering the Virtual Arena (Setting the Context)

The original netnographic approach begins with defining the research questions. In this study, before we proposed any research questions, we realized it was important for us to first understand the virtual arena in which our study was taking place. This helped us to understand the context of the virtual arena under investigation, as is recommended by Urquhart and Vaast (2012). Virtual worlds are an entirely new form of online media, and to understand the social dynamics of these worlds, it is important to first understand the broader context of the virtual world (Boellstorff 2012). This allowed us to fully understand the social values and cultures of the virtual community.

The virtual world we studied was World of Warcraft (WoW). WoW was selected as a field site for several reasons. Firstly, it has a large user base and it is easy to identify active participants. Second, few IS researchers have studied virtual world games, although Schultze and Rennecker (2007) and Assmann et al. (2010) say that virtual world games are a valid area for IS research. Finally, we believe that this field site demonstrates an interesting combination of gaming and social movement activities, which takes the game beyond that which the designers initially intended.
Before any research questions can be developed, it is important to first understand the intricacies of the virtual world we were studying. Hence, one of the researchers created some characters in WoW and immersed himself by playing the game. This enabled the researcher to understand the dynamics of not only how the game worked, but also how the players of the game interacted with each other socially.

It is important to note that in the initial stages of the larger study, the researcher had no preconceived ideas, feelings, research questions or hypotheses in mind. This is a similar approach as taken by Nardi (2010) and recommended by (Boellstorff et al. 2012). This stage was more focused on exploring the virtual world, and attempting to discover any academically interesting phenomena which could be occurring. The researcher began to participate in gaming activities, such as questing, and participating in raids (groups of players who join together to fight powerful monsters).

The field work for this phase lasted for six months. The total play time for this stage of the research was 330 hours.

4.6.2. Identifying Online Community

After the context of the virtual arena has been established, and the researcher feels as though they have a thorough understanding of the nature of the virtual world under investigation, the researcher can begin to identify online communities of interest.

We discovered that quite a few social movements were occurring within the game. For example we found a Christian social movement which meets in-game and pray together with their avatars before they go and kill monsters. There are also other make believe religious movements which exist only within WoW.

However, we decided to focus our exploration on one of the largest social movements within WoW, the Lesbian, Gay, Bisexual, and Transgender movement, hereafter referred to as the LGBT movement. LGBT aims to create awareness for LGBT issues, both in game and out. By early 2013 LGBT has over 7,800 members (players) in WoW and has over 15,000 characters (it is possible for one player to add multiple characters). LGBT was established on a WoW server in October 2006 to “better service the LGBT community and offer a safe, inclusive place to game for members of any sexual orientation or gender identity” (LGBT movement website, 2010). The server where LGBT is located has become the un-official LGBT-friendly server. Blizzard initially disallowed LGBT-guilds as they saw it as a form of
discrimination. Eventually, after complaints from LGBT players, Blizzard allowed these guilds to exist. As a result, many of the general LGBT community joined the server. The researcher approached the leadership of LGBT and got their approval to use them in this study. Because we had already become familiar with the virtual arena in the previous stage, we were already aware of some of the WoW characteristics which were also important in interacting with LGBT. For example, creating an avatar of suitable level, as LGBT has requirements of what level avatars can join. LGBT is also a Horde guild, therefore we had an understanding of what it is like to be a Horde player.

4.6.3. Defining Research Questions

In this phase the research questions are defined. After initial explorations of WoW, we eventually defined a research question which was focused around player experiences. We explored how virtual worlds create chaotic environments where the outcomes of players experiences while playing the game are strongly influenced by initial conditions, and how if those initial conditions are altered for another player in the same game experience, the outcomes could be drastically different.

In our early explorations of virtual world social movements, we were also interested to explore the differences between real world and virtual world social movements, which aided in the formation our second research question. Therefore the second research question became: how do virtual worlds affect the organization of social movements? This leads us to the next phase of the netnographic process where the researcher engages and immerses themselves with the online community, and includes data collection.

4.6.4. Engage and Immerse with Online Community

The next stage involved the researcher engaging and immersing themselves in the online community. The lead researcher joined the LGBT movement in WoW and participated in a number of movement activities such as virtual pride parades, dance parties, and group photographs. We joined three of the researcher’s avatars in LGBT, while another three avatars were not part of any guild. This gave us multiple perspectives from which to observe LGBT from within, and as an outside observer. Field notes are taken during involvement with the movement, this involved taking screen captures of movies. Digital texts, as defined by Urquhart and Vaast (2012) could also contain images and videos.
Participant observation plays an extremely important role in ethnographic research (Myers 1999), and this is also true for virtual ethnographies (Boellstorff et al. 2012). In this study participant observation was used to provide triangulation and to cross check findings from the other data sources. Field note data was therefore a central to this study, as the participant observations of avatar interactions as well as the screenshots enabled us to place the discussion forum data and other data sources into context.

Field notes based on participant observations took a different form than traditional ethnographic studies. The researcher did not actively take field notes during interactions with LGBT, but rather chose to record details with movie screen cams. Field notes took this form, rather than written notes for a particular reason. The researcher spent many hours playing the game. However most of the time LGBT members are also simply just playing the game, and nothing interesting was happening from a social movement perspective. On occasions, LGBT would meet together and perform social movement activities, such as the pride parade. This meant that the researcher spent most of the time also just playing the game, and at the time that LGBT activities took place, chose to record movie screen cams of the activities, rather than take notes of the activities. This allowed the researcher to free himself from note taking during this time, and allowed for true participant observation as he could truly participate in the activities, for example marching in the parade. Marching in the parade involves controlling an avatar’s movements with a keyboard and mouse, which means hands are not free for active note taking. Participant observations also lead to the creation of new research questions, which are discussed in the next section.

In ethnographic studies, interviews are commonly used as the main source of data after participant observations (Boellstorff et al. 2012; Myers 1999), and often used to cross check observations (Hine 2000). In fact many researchers of virtual worlds have utilized interviews to cross check participant observations (Boellstorff 2008; Nardi 2010). In our study, however, there was a lack of interest on the part of LGBT members to participate in interviews. Therefore we decided to use discussion forum (archival) data instead of interviews. It turned out that the discussion forum data was extremely valuable and in some ways it can be argued that the discussion forum data is more “authentic” than interview data. As Myers and Newman point out, the interview is an artificial situation (Myers and Newman 2007), whereas discussion forum data records what people actually thought and posted at the time. The multiple sources of data collected throughout the netnographic research project are listed in Table 4.3. In total, the lead researcher spent over 1,600 hours engaging with LGBT.
### Table 4.2 Data Sources used in this study

<table>
<thead>
<tr>
<th>Source of Data</th>
<th>Nature of Data Collected</th>
<th>Quantity Collected</th>
<th>Netnographic Data Type</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant Observation</td>
<td>Movie screen cams from movement activities.</td>
<td>Several hours of movie files collected. At least 50 screenshots.</td>
<td>Field notes</td>
<td>II, IV, V</td>
</tr>
<tr>
<td>Discussion Forum Posts</td>
<td>Discussion posts from movement website.</td>
<td>128,773 posts dating back to 2006.</td>
<td>Archival</td>
<td>IV, V</td>
</tr>
<tr>
<td>Chat Logs</td>
<td>Chat logs from movement in-game chat channels.</td>
<td>Approximately 1.5 years worth of chat logs.</td>
<td>Archival/Elicited</td>
<td>V</td>
</tr>
<tr>
<td>Social movement’s website</td>
<td>Textual information relating to background information about the movement and rules of membership.</td>
<td>Approximately 20 pages of information.</td>
<td>Archival</td>
<td>IV, V</td>
</tr>
<tr>
<td>WoW Patch Notes</td>
<td>Documents the changing configurations of WoW.</td>
<td>Patches dating back to 2006. 114 patches.</td>
<td>Archival</td>
<td>V</td>
</tr>
<tr>
<td>Other WoW websites</td>
<td>Textual information relating to aspects of WoW gameplay.</td>
<td>Not documented but estimated to be over 100 pages of information</td>
<td>Archival</td>
<td>II, IV, V</td>
</tr>
<tr>
<td>Informal conversations</td>
<td>Conversations with WoW players about game play.</td>
<td>Not possible to quantify</td>
<td>Elicited</td>
<td>II, V</td>
</tr>
</tbody>
</table>

4.6.5. Participant Observations Creating New Research Questions and Re-Immersion

After the initial research questions were developed, and the researcher engaged and immersed himself even more with the online community, the researcher became aware of changes LGBT had to make to survive within the virtual world. We found that the social movement was forced to change the way it acted within the virtual ecosystem multiple times over the course of this study. This encouraged us to formulate a new research question: how do the

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1 The ‘Article’ column from Table 4.2 is included in this thesis for the reader to understand the entire study and will not appear in the journal submission version.
social and the technology co-evolve? This meant that we had to re-engage ourselves with LGBT again and follow how they changed their practices while trying to stay active in the technological ecosystem.

In all the research questions we developed, the unit of analysis was the collective, and not the individual. We were studying LGBT as a whole, rather than individual members of the LGBT. This meant that we were not concerned with the identity of individual members of the community.

4.6.6. Data Analysis

The next stage involves data analysis. Due to the differing nature of the data types collected, we employed multiple methods of data analysis. The discussion forum data proved problematic due to the large amount of data collected. It was necessary for the researchers to find a way to filter out the data which was not needed for answering the research question.

Data analysis involved two qualitative software packages, Nvivo which was used for Articles IV, and V, and Leximancer which was used for Article V.

The textual data was loaded into NVivo and theoretically coded. Specific instances of data were selected through keyword searches on the dataset. Keywords were created with theoretical sensitivity towards new social movement theory (NSM). In total 100 discussion forum posts were examined for Article IV. However for Article V, we needed to find a way to filter out the data which was not needed for answering the research question. This involved multiple steps.

For the analysis of the dataset for Article V we first loaded the entire dataset into Leximancer. We realised that this was not a good approach as the dataset contained many posts which were irrelevant to the research questions proposed. Therefore we had to find a way to reduce the dataset. For the writing of Article V we examined the patch notes. We read the patch notes of 114 patches in an attempt to discover which patch had an impact on LGBT. After analysis of the patches, we discovered 3 patches which had a strong influence. Second, we had to discover the impact that these patches had on LGBT. Often the patch notes are released before the patch is implemented into the game. Therefore we were able to filter the data from the discussion forum by extracting only those posts made about a certain patch before and after the patch was released. We also performed keyword searches using keywords from our theoretical approaches along with keywords based on our knowledge of
the game and the impacts from analyzing the patch notes. Therefore we were able to disregard most of the posts, which gave us a final count of 405 posts. The chat logs also proved to be difficult to extract useful data. Having collected 1.5 years of chat logs, the data set was massive. Similarly we used keyword searchers to extract useful text. In total we extracted 10 useful text excerpts from the chat logs.

4.6.6.1. Leximancer

Data analysis subsequently involved both the use of NVivo and Leximancer. NVivo is a well-known qualitative software package so a discussion of its use of beyond the scope of this paper. Leximancer developed at the University of Queensland, Australia is less well-known in information systems. Leximancer uses machine learning (content analysis) to analyze large qualitative data sets and to display the results in a visual format. Examples of research using Leximancer include studies in accounting and management (Crofts and Bisman 2010), conceptual modeling (Davies et al. 2006), human-computer studies (Stockwell et al. 2009), risk management (Martin and Rice 2007), and event management (Scott and Smith 2005). Leximancer has been evaluated for stability and reproducibility and its results have been proven to be reliable (Palmer 2013; Rooney 2005; Smith and Humphreys 2006).

Leximancer creates a conceptual map and presents the main themes contained within the text, and information about how those themes are related. The themes are heat-mapped to indicate their importance. Therefore, the ‘hottest’ (most important) themes appear in red, and the next most important theme in orange, and so on. Leximancer also allows the researcher to extract the actual pieces of text which were used to create the themes.

Content Analysis in Leximancer can be supervised or unsupervised. If using the supervised approach, the researcher will construct a set of key terms (known as concepts) usually with some background knowledge within the domain, or with some theoretical sensitivity. Alternatively, in the unsupervised approach, the algorithm will discover the concepts on its own via reading and re-reading the data. It is the unsupervised approach which is the greatest strength of Leximancer as it is very useful when there is no prior model or set of factors by which to analyze the data (Davies et al. 2006; Palmer 2013). This approach removes researcher subjectivity and bias from the analysis as the algorithm in Leximancer detects the main themes and concepts arising from the data (Palmer 2013). Because the nature of this study was exploratory, the unsupervised approach was used as we were interested to see what emerged from the data.
An example of the Leximancer output is illustrated in Figure 3. In the example illustrated, a sub-set of the entire data set was used to extract the common themes evident in the discussion forums when a new patch was released which placed a cap on the size of guilds. On the left hand side is the conceptual map. Each circle with the map represents a theme. We can see from this image that the most important theme was “guild”, followed by “members”. Each theme contains multiple concepts (nodes) which make up that theme. The solid line indicates the knowledge pathway, which shows the connections between concepts. The right hand side indicates the actual text extracted from Leximancer which creates the knowledge pathway, i.e. the text which supports the relationship between the concepts guild and Blizzard. Knowledge pathways can be created between any concepts in the map.

![Figure 4.3 Leximancer output](image)

Leximancer allows for pathways to be created between concepts. In the example presented we examined the pathway between the concept guild and Blizzard. Leximancer produces a knowledge pathway which connects concepts together, and presents text from the data source. These pathways were used to empirically link concepts together which provided a very useful way of understanding the data, and analyzing relationships between concepts.

The textual data was also loaded into NVivo and theoretically coded. Themes were created along theoretical constructs relating to NSM and actor-network theory (ANT). In essence this gave us multiple rounds of coding on the same data set. The researcher coded the data set manually in NVivo, and Leximancer performed content analysis on the same data set. The
text excerpts produced by Leximancer were also loaded into NVivo and further coded manually by the researcher, thus creating a third round of coding on the dataset. This process is illustrated in Figure 4.4-5.

**Figure 4.4 Data Analysis approach with Leximancer**

**Figure 4.5 Leximancer Process**

### 4.6.6.2. Images (Screenshots)

The other main data source was the screenshots (images). Boellstorff et al (2012) suggest that in virtual world studies, images should be given as much attention as other forms of data.
Where we saw something interesting while immersed in the virtual world we took a screenshot. This approach of using images as a data source has been advocated by Andrade and Arthanari (2009) and Urquhart and Vaast (2012), for interpretive research, and especially for ethnographic studies (Boellstorff et al. 2012). Andrade and Arthanari (2009) present their study using photographs. In this study we have used screenshots (images) which is essentially taking a photograph of a virtual world. We then coded the screenshots using NVivo. Boellstorff et al. (2012) certainly advocate for the usage of images in virtual worlds studies, however their book on method, is surprisingly lacking in detail on the methods of image collection and analysis. Therefore, in the following section, we will briefly review some key points from Andrade and Arthanari (2009) who present three stages for using images in research: image maker, image analyzer, and image presenter.

The first stage of using images in a research report is the information systems researcher playing the role of an image maker. Andrade and Arthanari (2009) discuss that one of the major concerns is the use of a camera which can sometimes be seen as a threat to participants (Prosser and Schwarts 2006), and may seem obtrusive unless the photo is taken from a great distance (Andrade and Arthanari 2009). Loizos (2006) further elaborates that subjects may arrange themselves in certain ways once they find out a photo is about to be taken, and even the photographer may place subjects in a specific composition. Collusions and negotiations may also take place between the subjects and the photographer. This did not cause a problem in our study. The image taken was not like a photograph taken in a physical world scenario. There was no act of the researcher’s avatar taking out a virtual camera and snapping a picture of other avatars. The image was taken by the researcher typing a keyboard command on his computer which took a screenshot of the researcher’s computer screen (WoW has a built in command for taking screenshots). None of the other players would be aware that the screenshot is taken as there is no indication from inside WoW that another player has taken a screenshot. These screenshots are saved automatically in a WoW folder within the computer where the game is installed. These screenshots were covertly taken without the knowledge of participants. This is very common practice in WoW, and a simple Google image search of WoW will produce thousands of similar images.

The second stage of using images requires the researcher to become an image analyzer. In order to interpret an image, the researcher must understand the subject matter and understand the context of the image (Andrade and Arthanari 2009). In their paper, Andrade and
Arthanari (2009) address several issues relating to the analysis of images. The first issue is that of subjectivity (Pink 2007). They argue that in the interpretive paradigm being subjective in the analysis is a basic assumption (Guba and Lincoln 1994; Myers 2013; Walsham 1995). The second issue is unrepresentativeness of the images. This is solved by the researcher collecting images which are enlightened by theory (Charmaz 2006). Just as qualitative research can analyze text with theoretical sensitivity (Klein and Myers 1999a), images can be used in a similar manner, rather than collecting images by random samples. This provides a deeper insight into the phenomenon (Andrade and Arthanari 2009). The final issue is that of specificity, which according to Andrade and Arthanari (2009) is addressing by putting into practice the hermeneutic principle, or understanding the whole to make sense of its parts (Klein and Myers 1999a).

In this study images were used to aid in the analysis of social movements. For example, the image presented in Figure 4.6 illustrates players getting their avatars ready to begin the virtual parade. Avatars group together into pre-organized floats, and then begin to form into lines in order to march through the virtual landscape. Images similar to this were captured based on the theoretical constructs of New Social Movement theory (Buechler 1995; Buechler 2007).
Another example of images taken which fit within the context of social movements is illustrated in Figure 4.7. This image illustrates the actual parade. Here we can see several items of interest to the study. Firstly we can see the parade itself, in which both friendly and enemy players are participating. In WoW, Horde and Alliance players are meant to be fighting each other, but during the parade they come together and fighting is discouraged. In fact the lead researcher had installed an add-on to the game which notifies him when an enemy player is nearby. This add-on is displayed at the bottom right of the image, and is creating many warnings due to many of the parade participants being enemy players.

The image also shows non-members of LGBT who come out to watch the parade. In this image they are standing to the side of the parade, however it is not uncommon for non-members to also participate in the parade. The image also illustrates that not all parade participants choose to walk with the parade, in the top left of the image some participants choose to fly above it. Using the concept of the hermeneutic principle, we can gain a full understanding of the parade event by gaining an understanding the aforementioned virtual pride parade characteristics.
The final stage of using images is where the author becomes an image presenter, where researchers produce a written report of their findings. Alongside the written text, images can be presented to provide an understanding of a phenomenon which is difficult to present in textual form (Wagner 2007). Boellstorff et al. (2012) suggest that we might find images that help explain the written material. Andrade and Arthanari (2009) argue that images can be treated in a similar way as text or numeric data to support an argument alongside the written analysis. For example, if the researcher wrote that they participated in a virtual pride parade, virtual group photograph, and virtual dance party, a reader of the text would have to form their own understanding of what these virtual activities might entail. If the reader of the text also has little understanding of virtual worlds, the significance of these virtual activities might be completely lost to the reader. Therefore, images similar to those in Figure 4.6 were presented in our research. These images allow the reader to know what these virtual activities actually look like, and would greatly improve the understandability of the written analysis. Therefore images must be placed alongside written descriptions of theoretically informed texts which support the researcher’s interpretation (Andrade and Arthanari 2009; Ball and Smith 2006). Andrade and Arthanari (2009) also argue that a major advantage of this approach is that images allow the reader to not only rely on the researcher’s written report, but can also visually see an original source of data.

![Image: ©2004 Blizzard Entertainment, Inc. All rights reserved.](image)

**Figure 4.8 Parade (left), group photograph (middle), and dance party (right)**

4.7. **Written Report**

The final stage is to write, present, and report on the research findings and theoretical or practical implications. One important question for ethnographers is how to present the findings of their research in written form. Myers (1999) suggests that the study could be broken up into multiple papers with each telling a separate story. We have taken this approach and reported the results of our study in three separate papers. Each study presented
a different research question on the theme of virtual world social movements. Table 4.3 summarizes these studies.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Approach</th>
<th>Theoretical Lens</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>How can we explain differences in player experiences?</td>
<td>Empirical data</td>
<td>Chaos Theory</td>
<td>McKenna et al. (2010)</td>
</tr>
<tr>
<td>How do virtual worlds affect the organization of social movements?</td>
<td>Empirical data</td>
<td>New Social Movement Theory</td>
<td>McKenna et al. (2011b)</td>
</tr>
<tr>
<td>How does the technological artifact (the virtual world) and the social world (the social movement) co-evolve?</td>
<td>Empirical data</td>
<td>New Social Movement Theory</td>
<td>McKenna et al. (2012) Submitted – Under Review at MISQ</td>
</tr>
<tr>
<td>What are the issues when studying virtual world social movements?</td>
<td>Conceptual.</td>
<td>Literature review</td>
<td>McKenna et al. (2011a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide background information.</td>
<td></td>
</tr>
</tbody>
</table>

### Table 4.3 Individual studies

**4.8. Discussion**

It would be useful to illustrate combining multiple data sources together to explain virtual world social movement phenomena. The following example illustrates how multiple data sources were used to triangulate our analysis. Depending on the situation, not all data sources and analysis methods were used in every stage of the research. For example, in the first example, Leximancer was not used; in the second example images were not used.

**4.8.1. Pride Parades**

The pride parades were directly impacted by a patch. This example illustrates the use of patch notes, images, chat, and discussion forum data. This patch was implemented in December 2010 and changed the virtual landscape of WoW. Some virtual areas within the game become flooded, while in others giant canyons were formed. The patch notes are illustrated in Table 4.4. If a reader was unfamiliar with WoW, this would mean absolutely nothing to them. However, if an image was to accompany the text, it would add more value to the full understanding of the context.
Azeroth Shattered:

- Deathwing's return has had an immeasurable impact throughout the Eastern Kingdoms and Kalimdor. Players will notice drastically altered terrain.

<table>
<thead>
<tr>
<th>Table 4.4 Patch 4.0.3a patch notes</th>
</tr>
</thead>
</table>

Therefore in this example we have used an image to illustrate the changes to the virtual landscape (see Figure 4.7). In this example we can see the virtual landscape before and after patch implementation. The images at the top are before patch, the images at the bottom are after patch. The image at the top-left shows a peaceful village called Camp Taurajo in the region known as The Barrens which was used as the starting point of the pride parade. The image at the top-right shows a flat plain land where the pride parade used to march through. On the bottom-left, the image shows how Camp Taurajo was destroyed after the patch, and on the bottom-right how the plain land has now become a deep and canyon which has split The Barrens into North Barrens and South Barrens.

We also captured some chat from LGBT members around this event. Note that names have been disguised.

[Pradush]: aww poor camp taurajo

[...]  

[Hasan]: I'm loving how southern barrens turned out

[Adwardomos]: how does one get from northern barrens to southern barrens?

[Sramak]: go south?

[Zeb]: i had to go all the way around it

[Adwardomos]: to the west or east?

This chat was especially important because it illustrates that players were having difficulty crossing the canyon. This was the same route that LGBT had previously taken for their pride parade. Therefore LGBT had to move the parade to a new virtual location for the parade.
Together these multiple data sources are able to tell the story of how changes in configurations to a virtual world affect the inhabitants of that virtual world. The next example illustrates a further impact, this time on the size of guilds.

### 4.8.2. Guild Size Caps

During beta testing of the expansion pack called Cataclysm, Blizzard became aware that the size of the guilds must be capped. Blizzard was implementing new systems to manage guilds, which contained complex systems which track the (gaming) contributions that an individual guild member makes to the guild. Larger guilds would therefore place more strains on these systems. Therefore in order to allow the system to run smoothly, they found that capping the size of guilds was necessary. At the time this patch was implemented, LGBT had approximately 6,200 members. In this example mostly the discussion forum data was used, and NVivo and Leximancer were used for the analysis.
On the left side of Table 4.5 the Leximancer conceptual map is illustrated which indicates the discovered themes and concepts from the data relating to the guild size caps. This example also illustrates the knowledge pathway (i.e. actual text) which represents the linkage between *guild* and *size*. This pathway connects these two end concepts with the intermediate concepts of *members* and *chat*. On the right hand side the text which creates the knowledge pathway is presented.

<table>
<thead>
<tr>
<th>Leximancer Conceptual Map</th>
<th>Knowledge Pathway [data source]</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Conceptual Map" /></td>
<td>1. Hello lovely members of LGBT! As you all know by now, Blizzard is instituting a 600-person hard cap on guild size starting in patch 4.0.1, which we expect to be released next week [discussion forum].</td>
</tr>
<tr>
<td></td>
<td>2. Previously, adding players to a guild was as simple as adding people to a chat channel. While approximately 500 members were visible in the UI, there was no real need to limit guild size [discussion forum].</td>
</tr>
<tr>
<td></td>
<td>3. While some players have used options including mods and custom chat channels to support large player and guild alliances that number multiple thousands, groups of that size aren't ideally suited to our design philosophy. As always, we're continually looking into adding new features to help facilitate guild management, scheduling, and player communication [Blizzard official announcement].</td>
</tr>
</tbody>
</table>

![Conceptual Map](image)

Concepts:

**Guild** → **Members** → **Chat** → **Size**

**Table 4.5 Leximancer Output**

We also created manual codes in NVivo based on the discovered Leximancer concepts. The Leximancer output was loaded into NVivo and further coded. This gave us our second round of coding. Table 4.6 illustrates some of the Leximancer discovered concepts, and the manual coding performed in NVivo from the same text excerpt.
With the advent of the new guild system in Cataclysm we are tracking many more things on each individual player in a guild and in order to support that, we need to limit the amount of members to a reasonable level. The new cap of 600 members is fully supported in the new guild system and that means that everyone will be visible in the UI and able to contribute to all guild functions like experience and reputation gain.

<table>
<thead>
<tr>
<th>Supporting Text</th>
<th>Leximancer Concepts Discovered</th>
<th>NVivo Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>With the advent of the new guild system in Cataclysm we are tracking many more</td>
<td>• System</td>
<td>• Blizzard’s reasoning</td>
</tr>
<tr>
<td>things on each individual player in a guild and in order to support that, we</td>
<td>• Support</td>
<td>• Potential Impact on LGBT</td>
</tr>
<tr>
<td>need to limit the amount of members to a reasonable level. The new cap of 600</td>
<td>• Members</td>
<td>• Limitations over code</td>
</tr>
<tr>
<td>members is fully supported in the new guild system and that means that everyone</td>
<td>• Experience</td>
<td></td>
</tr>
<tr>
<td>will be visible in the UI and able to contribute to all guild functions like</td>
<td>• Level</td>
<td></td>
</tr>
<tr>
<td>experience and reputation gain.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When patch 4.0.1 goes live (most likely next week), we will reactivate the</td>
<td>• Patch</td>
<td>• Potential Impact on LGBT</td>
</tr>
<tr>
<td>LGBT guild for all future invites, since we won’t be able to add any toons</td>
<td>• Future</td>
<td>• Game systems</td>
</tr>
<tr>
<td>to LGBT. We will not be making any other changes or adding any other sub-</td>
<td>• System</td>
<td>• Potential solutions</td>
</tr>
<tr>
<td>guilds until we see exactly how the new system works and the results of our</td>
<td>• Toons (Avatar/Character)</td>
<td>• Discussions with Blizzard</td>
</tr>
<tr>
<td>advocacy efforts with Blizzard.</td>
<td>• Guild</td>
<td>• New sub-guilds</td>
</tr>
</tbody>
</table>

Table 4.6 Leximancer concepts and NVivo codes

4.8.3. Challenges

Our study has presented a number of unique challenges not evident in traditional ethnographic studies. First, data collection in online studies enables the researcher to easily collect a huge amount of data. This creates potential problems of having too much data to realistically manage and code. With such a large data set, it becomes necessary for the researcher to weed out data which is not relevant to the study, and to hunt through the data set to find the correct data points relevant to the research question. In some instances this is like finding a needle in a haystack.
If the researcher was to code manually in NVivo it is important to filter the dataset in some way, either with events, theory, or keywords from the researchers own knowledge. This however creates some bias and subjectivity into the analysis from the researcher. In this study, patch notes were initially examined and dated. Using these dates as a reference point, the discussion forum data, and field observations were analyzed around close proximity to this date to provide a snap shot in time of the changes in technology alongside the social changes which took place.

The second challenge is how to analyze such a large data set. One obvious solution is to use automatic data analysis software. In this study, we realized that coding 128,773 discussion forum posts would be time consuming if using a qualitative data analysis software package like NVivo. Therefore, we decided to use Leximancer, which provides automated qualitative data analysis. Leximancer automates the data analysis process and removes the bias and subjectivity. The entire data set can be loaded into Leximancer and analyzed.

However researchers need to be aware of the ‘garbage in garbage out’ problem, which is especially problematic when using live data such as discussion forums. Discussion forum data contains many threads and posts about an unlimited number of topics, and conversations which may start about one particular topic may suddenly go off on a tangent. Therefore we believe that even in the Leximancer approach some filtering is required by the researcher. We found that without this prior filtering, the Leximancer analysis was producing a lot of inappropriate results. It was also necessary to further filter the data after the Leximancer analysis. For example the data from the discussion forums often had HTML tags embedded within it. As these tags are text, they were included in the results. Leximancer contains a pre-defined set of stop words, which are common English language words which will be skipped over by the algorithm. It is possible to edit the stop word list so the HTML tags were added to the list and the algorithm was run again. This iterative process was completed many times to remove words unnecessary for the analysis. Other words were also added to the stop word list based on the prior knowledge of the researcher. It is claimed that the strength of Leximancer is an unbiased analysis of the data, however this iterative process would add some amount of subjectivity and bias to the results based on the words the research decides to exclude from the analysis.

The third issue is because virtual worlds are also 3D graphical environments, it becomes necessary to examine how avatars move around these virtual spaces. Therefore, our data
analysis required the examination of images (screenshots). This will require data analysis similar to those presented in Andrade and Arthanari (2009) where the authors advocate the use of photographs for interpretive studies.

The final challenge is combining all of the many different digital texts and analysis into the written report to tell a convincing story. We have presented examples of how this can be achieved. It is our hope that IS researchers will begin to use these alternative data sources and analysis techniques in their future research.

4.9. Conclusion

This paper has suggested a modified version of netnography as being appropriate for the study of virtual worlds. Netnography, a form of ethnography that has been used to study online communities in marketing (Kozinets 2010; Myers 2013), has much potential as a research method for studying virtual worlds and online communities. We believe our version of netnography better fits exploratory studies within this new form of media. The key modification was the addition of an initial stage to the research process, which we have called enter the virtual arena (setting the context). This enables the researcher to have a strong understanding of the context for the study. We believe that this modified process can also be applied to other forms of social media, not just virtual worlds. For example, a researcher examining Facebook, or YouTube, should become a user of these sites to gain a full understanding before any research questions are developed.

We have available to us new forms of digital texts (Urquhart and Vaast 2012). Virtual worlds are highly graphical, and we believe that a study which does not use images as a data source may overlook some important phenomenon. Information systems researchers do not commonly use images, but we concur with Andrade and Arthanari (2009) they should play an important role during research projects, and authors should consider using images alongside their written text.

We have also discussed the use of automatic qualitative data analysis software, Leximancer. As the quantity of textual data in online forms is increasing, we need to find new ways to manage and analyze this data. We have presented our approach to this problem by using this machine learning software to automatically discover key themes in vast quantities of text.

This paper has presented our modified netnographic approach, and discussed how we have used multiple data sources to present our studies on virtual world social movements. We
hope that further studies in virtual worlds, or other forms of online social media, can validate our modified approach.

4.10. References


Article II
5. ARTICLE II – CHAOTIC WORLDS: AN ANALYSIS OF WORLD OF WARCRAFT

Abstract
Virtual worlds provide new forms of collaboration and social interaction. The World of Warcraft (WoW) is one such virtual world. It is the most popular example of what is called a Massively Multiplayer Online Role Playing Game (MMORPG). In this paper, we analyze players’ outcomes with WoW using chaos theory. Our paper suggests that players are highly sensitive to initial conditions which are impacted by style of play and the social structure of groups.

Keywords
Virtual Worlds, Chaos Theory, World of Warcraft, MMORPGs.

5.1. Introduction
Virtual worlds, where millions of people can interact with each other via graphical three-dimensional representations of a user (called avatars), (Shen and Eder 2009), are becoming a new area of interest for information systems scholars. Virtual worlds provide collaboration mechanisms to overcome geographic barriers (Davis et al. 2009). Virtual worlds such as Second Life have implications for business, education, social sciences, and society as a whole (Messinger et al. 2009).

One budding stream of IS research into virtual worlds is focusing on virtuality in organizations (D'Eredita and Nilan 2007a; Heckman et al. 2007a). Another stream is focusing on virtuality in online games (Davidson and Goldberg 2009; Davis et al. 2009; Messinger et al. 2009; Nardi et al. 2007; Schultze and Rennecker 2007). Our paper contributes to this latter stream.

Massively Multiplayer Online Role Playing Games (MMORPGs) are particularly interesting as a new kind of social phenomenon. Games such as WoW offer alternative worlds where social functions, learning, and the development of social skills can be practiced in a virtual environment (Davidson and Goldberg 2009). Until recently, very few IS scholars have examined MMORPGs.

In this paper we analyze one MMORPG, namely WoW, from the perspective of chaos theory. Chaos theory has been used in organizational studies (Beinhocker 1997; Fitzgerald 2002;
Kellert 1993; Lissack 1997) and to a limited extent in IS (McBride 2005). This paper aims to explore player experiences in WoW. We apply chaos theory which may be able to assist in the understanding of MMORPG environments. Our findings suggest that it is chaos which makes MMORPGs fun and enjoyable for players, and hence, contributes to the ongoing popularity of the game.

5.2. World of Warcraft

World of Warcraft is the most popular MMORPG with over 11 million players globally. A player in WoW assumes the role of a hero as they explore this virtual world. Given the nature of the game as explained below, there are opportunities for social and strategic interactions. Players can interact with thousands of other players in the same world to adventure together or fight against each other. Players can form friendships, create alliances, and compete against enemies (Blizzard 2010a). In this light, players have fun while achieving the objectives of the game.

WoW provides a system where players group together into guilds. Guilds consist of several players with similar interests within one of the two in-game factions (Alliance or Horde), and provide opportunities for assistance with quests, social interactions, and protection from rival factions. Hardcore players often employ behavior that suggests tribalism. The majority of players join guilds because they enjoy the feelings of group unity, cooperation, friendship, and accomplishment. It is common for players to promote unity and argue against fighting within guilds so as to unite and successfully fight a rival faction (Brignall and VanValey 2007).

A popular activity for players in WoW is raiding. This involves a large number of players cooperating together, often for hours at a time (Bardzell et al. 2008). This involves high levels of collaboration among all players, where one’s survival depends on it. Using a combination of ethnographic observation, interviews, chat and video analysis, Bardzell et al. (2008) examined the conditions which produce the most effective collaborations in a raid. Raids involve encounters with mobs (enemies) that can often be chaotic. In order to avoid this, the authors suggest that players should try to distribute the threat of mobs across the members of the group.

Aarseth (2008) investigated the notion that Azeroth (the world within Warcraft) is a crafted, fictional world, and questioned its worldliness. Blizzard Entertainment has put in a lot of effort to make Azeroth a rich platform for play experience to give players the impression of a
continuous landscape consisting of challenging tasks, sights and beings. Azeroth is a pre-programmed landscape and once a mob has been killed by a player, it is revived by the system minutes later, ready for the next player.

Klaztrup (2008) argues that understanding death is an important aspect to understanding the complexity of WoW. Every player will experience death many times during their adventures in the game world. Death in WoW does not mean the end of the character. After a short time the character will be resurrected and can continue playing in the world. Designers of WoW hold the perspective that death in the game is seen as a way to teach players to handle the aspect of the game in a more successful way.

Rettberg (2008) investigated questing in WoW. Quests are tasks in the game which players are asked to perform. Every quest has a clear structure. The quest starts with a quest giver who provides a background, gives some objectives, and offers a reward for successful completion. Rettberg (2008) argues that this clear structure means that certain patterns emerge during the course of questing.

All games have rules, and WoW is no exception. Rules are made by the designers of WoW and are supposed to be followed by players. Schultze and Rennecker (2007) describe WoW as a fantasy game with a progressive rule structure where social norms develop around designer intended rules. However, there are various ways in which players can break the rules (Mortensen 2008a). Some examples of this are gold farming, where players illegally pay “sweatshops” of players (often from China) to earn them in-game items or gold, or “bot-fighting,” where characters are not controlled by the player, but by a program the player has installed. Both of these examples are illegal in WoW.

There are a number of studies which have looked into the social interactions that exist in WoW. Sherlock (2007) investigated how grouping is mediated and the expectations players put in place when they participate in groups. Chen et al. (2008) looked at how game feature changes such as patches affect the social interactions which exist in WoW. Nardi and Harris (2006), investigated how different kinds of social interactions, from brief informal encounters to highly organized play in structured groups, affect players enjoyment. Nardi et al. (2007) examined how players learn the game through chat conversations with players to devise tactics and strategies for game play. Chen and Duh (2007) attempted to understand the social interactions that exist between players and developed a broad framework to better understand these interactions.
5.3. **Chaos Theory**

Chaos theory was selected for this paper because we believe it can help understand how play experiences differ over time, and from player to player. Chaos Theory originated in mathematics and can be defined as ‘the qualitative study of unstable aperiodic behavior in deterministic non-linear dynamical systems’ (Kellert 1993). Chaos involves the study of phenomena exhibiting a sensitive dependence on initial conditions. Therefore, if any parameter in a system is slightly changed, very different results can occur (Pickover 1994). Chaos can also be thought of as how something changes over time (Williams 1997).

The existence of chaotic systems is now well established in mathematics, ecology, meteorology and similar non-social science fields (Gregersen and Sailer 1993). In their paper, Gregersen and Sailer (1993) argue that some social behavior is unpredictable and hence inherently chaotic. Existing social entities, such as groups, institutions, or organizations with identical initial states and identical environments, may exhibit completely different behaviors even though their behavior is governed by the exact same set of rules or laws.

There are a few examples of chaos theory used in information systems. Dhillon and Ward (2002) used chaos theory to discover patterns in complex quantitative and qualitative evidence for the nature of information systems. McBride (2005) reviewed organizational literature relating to chaos theory and formulated a number of key concepts which should be incorporated into an interpretive framework for the analysis of chaotic systems. These concepts are described in Table 5.1.

<table>
<thead>
<tr>
<th>Domain of Interaction</th>
<th>Systems can be defined by a bounded space, which encompasses all possible states that a system could be in.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Conditions</td>
<td>The set of initial states for the information system at the start of a period of change.</td>
</tr>
<tr>
<td>Strange Attractors</td>
<td>Patterns of behavior that information systems and actors can exhibit over time.</td>
</tr>
<tr>
<td>Outcome Basin</td>
<td>A subset of possible behaviors within the domain of interaction, within which the strange attractor iterates.</td>
</tr>
<tr>
<td>Events and Choices</td>
<td>During an information systems life cycle, events occur and choices are made which can significantly influence the role in the organization.</td>
</tr>
</tbody>
</table>
A system may be in a stable state until internal or external events and choices made by participants drive the system towards a critical point where dramatic change results.

A change in behavior of a dynamic system. This change may trigger the system to ‘topple’ over the edge of chaos.

A cycle of repeating behavior of a strange attractor. Aperiodic cycles of interaction amplify initial conditions which contributes to the evolution of the system.

Knowledge flow which exists because of the interactions between actors, either human or machine.

<table>
<thead>
<tr>
<th>Edge of Chaos</th>
<th>A system may be in a stable state until internal or external events and choices made by participants drive the system towards a critical point where dramatic change results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bifurcation</td>
<td>A change in behavior of a dynamic system. This change may trigger the system to ‘topple’ over the edge of chaos.</td>
</tr>
<tr>
<td>Iteration</td>
<td>A cycle of repeating behavior of a strange attractor. Aperiodic cycles of interaction amplify initial conditions which contributes to the evolution of the system.</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Knowledge flow which exists because of the interactions between actors, either human or machine.</td>
</tr>
</tbody>
</table>

Table 5.1 Chaos theory concepts by McBride (2005)

5.4. Methodology

The study used a qualitative research method called netnography, which is a form of ethnography used to study online communities (Kozinets 2010; Myers 2009). The collection of data in netnographic studies usually involves participant observation and interaction with community members (Myers 2009).

One of the researchers began playing WoW for a few hours per day. The researcher completed a large number of quests and a couple of raids with multiple characters. Extensive field notes were recorded during play time. This involved screen captures (WoW provides the ability to record the game in movie files) and note taking. At the time of writing, the researcher had obtained one level 55 character, and one level 64 character and a number of lower level characters. Both high level characters were members of guilds. The researcher also spent considerable time reading and researching WoW through wowwiki.com and thottbot.com and gaining experience through YouTube clips of raids to assist understanding of complex raids scenarios (Youtube.com 2008). Considerable time was also spent discussing play tactics with other WoW players. The field work lasted for six months. The total play time for this study was 330 hours.

5.5. Chaotic Worlds

This section applies the framework of McBride (2005) to an analysis of the chaotic nature of WoW using two examples: questing and raids. The first example, questing, will show how chaos theory (see Table 1 above) can apply to solo players in WoW. The second example, raiding, is where multiple players must interact together in order to achieve a common goal.
5.5.1. Questing

Questing is one of the first things a new player will do as they enter WoW. If the player right clicks on a quest-giver, a player may then choose to accept or decline the quest (Figure 5.1). A quest usually involves a series of activities. Upon completion of the quest, the player is rewarded with experience points, money, an item, or any combination of these. Once enough experience points have been collected by a player, they can proceed to the next level. Levelling is one of the most important aspects of WoW, as each increase in level provides the player with more strength or magic abilities which enable the player to kill higher level mobs.

We can define our initial conditions as follows. A quest will begin with a brief story and a request for help, along with the rewards which will be offered for the successful completion of the quest. Players may only undertake a quest if they have not already successfully completed it and they have achieved the appropriate level to play. If a quest was accepted, the player must travel to the location required to fulfill the objectives of the quest. Initial conditions could differ for separate characters starting the same quest. One could be 20% through level 10, while another could be at 90%. The lower level character therefore has a higher incentive to kill more mobs to reach the next level (killing mobs earns experience points). Therefore one player may choose a different game tactic than the other player.

The domain of interaction for any quest is the location of the event within WoW. These locations are often filled with unfriendly mobs who will try to kill our character.

Players can exhibit different patterns of behavior: one player may be more cautious, attacking only one mob at a time; another player may be more aggressive, preferring to attack multiple mobs simultaneously. Players also have the option of using a Player vs. Environment (PvE) server, or a Player vs. Player (PvP) server. If a player is using PvP, then at any time, a player from the opposing faction could attack that player. In a PvP scenario not only do players have the chance to be attacked by mobs, but they also may be attacked by other players. In a PvE scenario, other players cannot attack our player unless we allow it. Each of these styles are our strange attractors, potentially altering the experience the player has. The outcome basin would depend on if the player is using a PvE or PvP server.
Events and choices impact the initial conditions. If, for example, a player is trying to attain a level quickly, they may spend more time killing mobs in order to earn more experience points. A low level character may also decide to proceed more carefully than a higher level character. This may give positive feedback to the player starting the next quest.

Depending on the events and choices the player makes, the system could arrive at different states. The edge of chaos could be reached if a player decides to run into the location, which is in a stable state, annoying all the mobs inside. The system would then shift to a state (bifurcation), where all mobs are focused on the character. If he is skilled enough, the player may be able to kill all the mobs, and thus earning more experience points than a player who takes a more cautious approach.

Throughout game-play in WoW, aperiodic cycles of questing contribute to the evolution of the player’s character. Each quest the player completes results in experience points for the quest and extra for killing mobs. Therefore the total number of experience points (Et), earned during a quest is calculated by the sum of the total experience points earned while killing mobs (Ek), plus the reward points (Er). This can be illustrated in the following formula: $Et = \sum Ek + Er$. Therefore, these iterations of behavior create positive feedback which creates different initial conditions for different players starting the next quest.
There are different levels of **connectivity** which appear during play: the connection between players (social) and the connection between the player and the virtual world itself (software).

### 5.5.2. Raids

Raids are groups of players who group together to fight powerful monsters or to engage in player vs. player combat. Raids allow players to enter the most dangerous areas of WoW and overcome its challenges (Blizzard 2010a). Players are no longer acting alone, but are part of a larger group, which creates strong social ties between players. Therefore it is essential to be a good team player in order for the group to complete the objectives of the raid.

A raid group is formed by inviting others to join in the adventure. These players could be members of your guild or new players. Each group has their own group chat which is only viewable by members of that group. The location of each group member is shown on the map.

A raid leader is in charge of raid organization, structure, and communication. The leader can move people between groups and add or remove raid members. Leaders also have the ability to promote other players to help them to manage the raid based on their abilities. During the planning of the raid, the leader will mark targets with symbols which indicate the order of attack. All players in the raid will be able to see these symbols and are used to coordinate the attack.

The **domain of interaction** is the particular raid instance. In WoW, there are a large number of raids which groups could undertake, each with different objectives and requirements. For example, some raids are designed for 20 players, while others are for 40 players. The domain of interaction will also include the environmental features of the world, as well as the mobs the group will meet.

The **initial conditions** for a raid group can change. A particular raid scenario may be repeated multiple times with different player membership. Each instance may differ. The initial conditions are also sensitive to the rules of the game. As software patches become available, rules within the game may change.

The **strange attractors** may change with each raid instance as well. Different groups of players completing the same raid instance could exhibit different patterns of behavior. Prior experience may alter a group’s behavior so as to have a more favorable outcome from the raid. Patterns of behavior could also be different between different raids for the same group.
Therefore, the **outcome basin** is the pattern of behavior which could be exhibited over raid instances. This could also apply to different raid leaders coordinating the same raid over different times as each exhibits different characteristics.

The **events and choices** that a raid group make will greatly impact the outcome of the raid. Poor choices could negatively impact the group. If a group was to attempt the raid at another time, they would be able to draw on previous experience. This would therefore change the initial conditions as the second raid would be attempted with the benefit of hindsight.

The **edge of chaos** in a raid is recognized from the different variables which make up a raiding group. Raid groups have different players, with different skills and abilities. As a raid group enters the domain of interaction, players begin interacting with the environment. The system transforms from a stable state where all mobs were standing idle, to a state where mobs are attacking players. Depending on the variables, the outcomes may differ from a poorly managed group where all members die to a well managed group where many survive. **Bifurcation** will occur as the state of the environment changes in response to the variables in the raiding group, i.e. all raid group members could die, or all mobs could die and the raid group “wins”.

**Iteration** will occur in a raid group as groups perform the patterns of behavior in order to attack mobs during the raid. Members exhibit different behavior traits, for example, a member known as the tank is used to “agro” the mob and another is a healer to keep other players alive. Such patterns of behavior are repeated for each mob that the group attacks.

**Connectivity** in a raid exists in the group that is undertaking the raid. A raid must have strong social ties and good coordination in order to successfully complete the raid.

5.6. **Discussion**

Chaos theory provides a framework whereby researchers can understand a phenomena and how it changes over time. Chaos involves the study of phenomena exhibiting a sensitive dependence on initial conditions. Therefore, if any parameter in a system is slightly changed, very different results can occur (Pickover 1994). Chaos theory is the ‘study of unstable aperiodic behavior in deterministic non-linear dynamical systems’ (Kellert 1993).

We found that there are chaotic elements in WoW. Aperiodic behavior in WoW can be demonstrated by the large number of activities a player can perform. As well as questing and raiding, players may concentrate on enhancing their characters professions, exploring the
world, or socializing with other players. Many activities performed in WoW are aperiodic, where players perform tasks on an irregular basis.

Behaviors in chaotic systems are often perceived as unpredictable (Gregersen and Sailer 1993). Non-linear dynamic systems are those that do not clearly follow predictable and repeatable pathways over time (Dhillon and Ward 2002; McBride 2005; Williams 1997). McBride (2005) suggests that this chaotic behavior is not an indication of disorder, but rather indicates that behavior is difficult to define. Although quests in WoW have a predefined repeating nature (Rettberg 2008), their chaotic nature is exhibited by the multitude of pathways a player can take to complete a quest. Quests have set rewards, however the total amount of experience points a player receives after quest completion is determined by play-style and differs between players. Play style is not something that can be determined by WoW programmers. Raids also offer non-linear pathways toward chaos as the behavior of the raiding group is entirely dependent on the social structure within the group. As Gregersen and Sailer (1993) point out, social structures are inherently chaotic. Initial conditions impacting a raiding group could also be changed with players installing modifications to the user interface, such as those presented by Taylor (2008).

Hence, despite the rules of the game and pre-programmed nature of WoW, the element of chaos is introduced into WoW by the addition of players interacting with the world. In chaos theory, two objects with the same initial conditions within the same environment can exhibit completely different behaviors, even though their behavior is governed by the same set of rules (Gregersen and Sailer 1993). Therefore, two players completing the same activity on different servers (players on different servers cannot interact) may have completely different experiences.

Dying is an important aspect of WoW. Any character venturing out on a quest or a raid has a chance of dying (Klaztrup 2008). Chaotic systems can be described by their current state (McBride 2005), and two important states in WoW are the state of the character, “alive” or “dead.” Bifurcation will occur depending on the state of the character. If a character is dead, they will move around the world as a ghost. Ghosts have limited functions, and until the ghost returns to the location the character died, the player cannot continue normal game functions. Bifurcation will then occur again once the character is returned to life. Although death in WoW is not permanent, it is not something that any player wants to happen. However, the developers of WoW believe that dying in a game is useful for teaching players
to handle the aspects of the game and to learn from past mistakes (Blizzard 2010a). Therefore, dying has a positive feedback response to the initial conditions for a player.

5.7. Conclusion

This paper has suggested that chaos theory can be applied to a virtual world such as WoW. Although WoW has rules and is defined by the limits of its programming, the introduction of human players into the game extends the limits of the game and introduces a range of play experiences. Social behavior is often hard to predict and hence virtual worlds such as WoW may be inherently chaotic.

Interactions in WoW take many forms, from a solo player completing a quest and interacting with the environment, to raids where players must cooperate together. We believe that these interactions are inherently chaotic, in the sense that the game experience is significantly different from player to player. Game scenarios vary depending upon play style and how groups are coordinated. Every player who logs into WoW is likely to experience the game differently from any other player and ultimately arrive at different outcomes.

Of course, we recognize that our study is only a preliminary effort aimed at understanding virtual worlds and MMORPGs. Further research is needed to see if chaos theory can be applied to other MMORPGs besides WoW.

We conclude this paper by emphasising that we do not consider chaos to be a negative aspect of virtual worlds. In fact, it is chaos which makes MMORPGs fun and enjoyable for players. Slight changes in initial conditions for a character ensure that every time the game is played, the possible end points can be vastly different. We suggest that this may have contributed to the success of WoW. The practical implications of this paper is that it suggests developers of MMORPGs should ensure games remain fun and interesting by ensuring that game experience differs between players and characters each time the game is played.

5.8. References


Article III
6. ARTICLE III – ISSUES IN THE STUDY OF VIRTUAL WORLD SOCIAL MOVEMENTS

Abstract
Virtual worlds are online three-dimensional worlds that are often constructed to look much like the real world. As more people begin to use these virtual worlds, virtual communities are emerging enabling various social activities and social interactions to be conducted online. Based on a literature review of social movements, virtual communities and virtual worlds, this paper suggests a framework to guide IS research into this new and exciting area.

Keywords
Social Movements, Virtual Communities, Virtual Worlds

6.1. Introduction
Virtual worlds enable millions of people to interact with one another through avatars in online three-dimensional worlds. These worlds are often constructed to look much like the real world and can contain mountains, trees, oceans, and wild creatures (Castronova 2007). As an increasing number of people start to use virtual environments, they need to be studied as an important phenomena in their own right (Castronova 2005a; Castronova 2005c).

Information Systems (IS) researchers have long been investigating the relationships between technology and organizing. Applegate (1994) reviewed the changes in organizations caused by changing conditions and the role IT played within these organizational transformations. Recently virtual worlds have further changed the way organizations and social groups organize. Schultze and Rennecker (2007), argue that virtual world games have changed the way organizations communicate and conduct business, and are a legitimate arena for conducting IS research. Schultze and Orlikowski (2010) argue for the value in virtual worlds enabling globally distributed work, project management, online learning, and real-time simulations. Virtual world games also offer new and promising opportunities for IS research into virtual organizations and teams (Assmann et al. 2010; Schultze and Orlikowski 2010; Schultze and Rennecker 2007). Virtual worlds such as Second Life and World of Warcraft have implications for business, education, social sciences, and society as a whole (Messinger et al. 2009). However, there is much that is yet to be understood on how virtual worlds impact organizations and society.
One important social phenomena which has moved into the virtual world is the social movement. Historically, humans have employed many tactics to complain about things they have disliked, or to raise awareness for their cause (Goodwin and Jasper 2003). In modern history, people have banded together to form social movements with the aim of pursuing common goals and achieving social or political change. Social movements are an important means of bringing out social, cultural and political changes through collective action (Staggenborg 2011). In the virtual world, there have been virtual protests in Second Life (Blodgett and Tapia 2010; Robinson 2008), in World of Warcraft (Abaliero 2005; McKenna et al. 2011a), and various other virtual worlds (Blodgett 2009; Blodgett and Tapia 2011; Castronova 2003b). However, there has been surprisingly little research in this area. Previous research has claimed that social phenomena in the virtual world can be used as a proxy to studying social phenomena in the real world. However, virtual worlds have some important characteristics which make them quite different to the real world. Therefore, further understanding of how virtual world technologies, avatars, and the unique nature of virtual worlds impacts social phenomena is in need of attention from the IS community. To address these issues, this paper presents a research framework designed to provide a roadmap for the IS community in conducting research into this new and exciting area of virtual world social movements.

6.2. Virtual Worlds

A virtual world can be defined as “a synchronous, persistent network of people, represented by avatars, facilitated by networked computers” (Bell 2008 p. 2). Virtual worlds include social virtual worlds such as Second Life (SL), and gaming virtual worlds, often referred to as Massively Multiplayer Online Games (MMOG), such as World of Warcraft (WoW). In a similar way to Putzke et al. (2010), in this paper we do not distinguish between the different kinds of MMOGs, such as Massively Multiplayer Online Role Playing Games (MMORPG), sports games (MMOSG), or first-person shooters (MMOFPS). Our proposed research framework presented below holds for all types of MMOGs.

Virtual worlds have been used to study and simulate activities in the real world. Virtual worlds have the potential to be used by political and social scientists to observe individual and collective patterns of online behavior in order to test social theories or develop new ones (Papargyris and Poulomenakou 2008). Researchers have examined criminal or disruptive behavior in virtual worlds such as money laundering (Elliott 2008) or griefing (Chesney et al.
Jung & Kang (2009a) investigated users’ purposes for using social virtual worlds and found that some people use them to escape from the real world and to satisfy their social and hedonic needs. Klastrup & Tosca (2009) explored clothing and fashion inside virtual worlds. They found that players notice other players clothing and that fashion in the game world is a vehicle for individualization and personal storytelling.

Virtual worlds also have the potential to become laboratories where experiments in social science can test new norms, values, and institutions (Bainbridge 2010a). Virtual worlds have the potential to be proving grounds for real world social innovations, cultures, and social movements (Bainbridge 2009) as well as substituting for social institutions in the real world (Williams 2006). The unique nature of virtual worlds means that researchers of these worlds must be prepared to adapt to them and the social conventions and rules within. To guide researchers, Kozinets and Kedzior (2009) developed three characteristics of virtual worlds, re-worlding, re-embodiment, and multiperspectivity. These characteristics will be discussed next.

6.2.1. Re-Worlding

Re-worlding relates to how an apparently new world is experienced. It has a related concept of plastic worldrules which implies that the rules in virtual worlds are flexible. Schultze and Rennecker (2007) developed a classification scheme that characterizes virtual worlds between progressive or emergence rule structures and their degree of correspondence to reality or fantasy. This has consequences for the interpretation of reality inside virtual worlds. Each virtual world is different to the next. Some virtual worlds contain radical alterations of real-world physics, for example enabling avatars to fly or teleport, while others allow users to modify the environment around them such as deciding the time of day or altering weather conditions. Providing the user the ability to alter and shape their surroundings extends the identity of the avatar far beyond the body. Therefore virtual places can become representations of the virtual identity of users (Kozinets and Kedzior 2009).

6.2.2. Re-Embodiment

Users of virtual worlds must create an avatar which usually requires choosing its gender, race, appearance, and skills. The creation of an avatar is extremely important since the identity they create will affect how there are perceived by others (El Kamel 2009). Re-embodiment is where the user or researcher is required to select a new bodily form to represent him or herself in the virtual world (Kozinets and Kedzior 2009). There have been a
number of studies which have examined virtual world identities including Bainbridge (2010b), Boellstorff (2008), Hagström (2008), Nardi (2010), and Tronstad (2008).

For IS researchers, this means that, if they are going to do some kind of online fieldwork, they must choose an avatar. The avatar they choose who will affect the way they are perceived by other users. Clearly, knowledge is required of the virtual world cultures and norms in question before embarking upon the research (Kozinets and Kedzior 2009). In World of Warcraft (WoW), for example, players are required to create a name, which is then displayed above the characters head and is how the character (and researcher) will be identified by others (Hagström 2008). The appearance of a character also has an impact on the capabilities of that character (Tronstad 2008). Therefore researchers must consider their virtual identity carefully before entering a virtual world community (Kozinets and Kedzior 2009).

6.2.3. Multiperspectivity

Users or researchers have the option of occupying more than one virtual world simultaneously (Fornäs et al. 2002; Moore et al. 2009) and can have multiple online bodies (Bainbridge 2010b; McKenna et al. 2010a). The concept of multiperspectivity, or multiple perspectives and multiple bodies is also quite unique to researchers. Some users maintain just one avatar, while others have multiple avatars (Christopher 2009). For example, McKenna et al. (2010a) used two characters to understand player experiences in WoW, Bainbridge (2010b) used twenty-two characters, while Nardi (2010) used just one. This unique concept of multiple bodies creates a challenge for researchers.

Gender swapping (Boellstorff 2008) is another expression of multiperspectivity. This has the potential to provide an opportunity to learn about virtual world experiences of the opposite sex (Kozinets and Kedzior 2009) or gender stereotypes in a virtual world (Bainbridge 2010b; Taylor 2006)

6.3. Social Movements

Historically, humans have engaged in collective action to achieve social or political change, or to pursue common goals (Goodwin and Jasper 2003). Social movements may seek political or economic liberation, fight for lifestyle changes, or raise awareness for their cause (Staggenborg 2011). Social movements are collective actions of certain levels of organization
and duration which employ non-institutionalized methods to bring about social change (Staggenborg 2011) or increase social awareness (Vegh 2003).

New social movement (NSM) theory emphasizes new types of social movements, which emerged in advanced capitalist societies. Examples of new social movements include, women’s, student, gay and lesbian, environmental, and peace movements (Staggenborg 2011). NSMs are focused on the collective search for identity where cultural and symbolic issues are associated with members belonging to differentiated social groups. Individuals seek new collectivities and social spaces to define their collective identity where they can experience and define novel lifestyles (Johnston et al. 1994). NSMs examine collective action based on culture, ideology, and politics, and define collective identities through alternative sources such as ethnicity, sexuality, and gender (Buechler 1995). Three aspects of social movement are discussed below: mobilization and recruitment, movement organization, and strategies and campaigns.

6.3.1. Mobilization and Recruitment

Mobilization and recruitment of individuals for social movements has been an important focus for social movement research. Mobilization is the process whereby a group which shares interests or grievances gains collective control over resources (Tilly 1978), while recruitment of individuals is part of the mobilization process and also involves gathering other resources such as time and money (Staggenborg 2011). Resources created or used by social movements include but are not limited to: strategic know-how, organizational structures, movement infrastructures, networks of people, human resources, money, and office space (Edwards and McCarthy 2003; Staggenborg 2011). Mobilization and recruitment are ongoing processes within a social movement.

Mobilization of movements generally arises from large scale economic conditions (McAdam et al. 1988), political changes, opportunities and threats, or critical events (Staggenborg 2011). There are three central propositions for social movement mobilization (Jenkins 1981):

1. Some level of resources must be mobilized before groups can engage in collective action.

2. The mobilization of resources depends on the existence of some level or organization, whether that organization exists before the emergence of collective action or is formed as a result of it.
3. The translation of mobilization into collective action is related to the expected costs of investing in the collective action, the anticipated risks, and the anticipated gains.

The extent of organization among members of a group, and the resources controlled by the group are important factors in mobilization. If individuals share membership in organizations, they have a pre-existing network, resources, and leadership which can be mobilized. This allows for large amounts of people to be recruited rapidly (Oberschall 1973). There have been many studies illustrating that pre-existing social networks of people enable social movements to recruit people, as well as leadership which defines the issues and creates the social movement organization (McCarthy and Zald 1977).

6.3.2. Movement Organization

NSMs break from earlier industrial era movements that focused on the redistribution of wealth, and now focus on concerns for forms of lifestyles (Habermas 2008; Pichardo 1997). They promote direct democracy, self-help groups, and collaborative styles of social organization (Pichardo 1997). NSM tactics tend to remain outside of normal political channels and use disruptive tactics to influence public opinion. They also employ pre-planned and highly dramatic forms of demonstration, often with costumes and other symbolic representations (Tarrow 1994). NSM organizational structure also differentiates them from earlier industrial era movements. NSMs tend to organize themselves in a fluid non-rigid style. They tend to vote communally on issues, rotate their leadership, and employ temporary ad hoc organizations. Thus, NSMs create open, decentralized, non-hierarchical structures that are responsive to the needs of individuals (Pichardo 1997).

Scott (1990) defines the following characteristics of NSMs: 1) they are primarily social, focusing on life styles and values and not directly political in character; 2) they are located within civil society and have little concern with the state; and 3) they focus on change through developing alternative lifestyles and changing values. Scott (1990) also discusses the organizational form of new social movements, they:

- Are locally based, or centered around small groups;
- Organize around specific and local issues;
- Characterized by cycles of movement activity and mobilization, i.e. periods of high or low activity;
- Have fluid hierarchies and loose systems of authority;
• Have shifting memberships and fluctuating members.

6.3.3. Strategies and Campaigns

The strategies and campaigns a social movement employs are also of interest to researchers. There are many strategies and tactics a social movement can employ, such as demonstrations, petitions, press statements, public meetings, lobbying, displaying symbols of personal affiliation, or forming specialized associations dedicated to pursuing a cause (Staggenborg 2011).

The methods employed by a movement can shape the course of a movement and alter its perception to observers and potential participants. The goal of a social movement is to change the behavior of their opponents through persuasion or intimidation, and to undermine the opponent’s credibility with the state, media, or public. If the opponent is the state, social movements aim to avoid repression, or change administrative rules, regulatory practices, policies and laws. They may use the media to undermine their opponents and spread their message, and from the larger public, social movements seek sympathy, changes in awareness, and contributions (Goodwin and Jasper 2003).

One popular tactic is to stage a sit in, for example for black rights (Morris 2003) or even “kiss-ins” for gay rights (Bernstein 2003; Winfield 2010). Marches are another common form of protest and can often include activities such as distributing pamphlets and carrying banners (Tilly and Wood 2009). Other tactics could include direct mail campaigns (Bosso 2005; Staggenborg 2011), or even simply refusing to purchase products made by a certain company or those which contain certain chemicals (McCloskey 1992). Violence is another form of collective action tactics, which often makes the news and draws attention to the movement’s campaign. However, there is a growing acceptance of non-violent protest in contemporary social movements (Tarrow 1994).

6.4. Virtual Social Movements

Social movement literature has, in recent times begun to investigate how social movements have used the Internet. The Internet has played an important role in initiating and steering activism (Postmes and Brunsting 2002) as movements take advantage of the Internet’s capabilities in growing numbers, more social protest will take place online (Leizerov 2000). Brunsting and Postmes (2002) argue that the Internet affects the nature of collective action. Postmes and Brunsting (2002) suggest that the Internet has assumed a significant role in
transforming collective action which ranges from confrontational to persuasive, and from individual activities to collective ones and is thriving in many areas. The Internet has enabled mass communication which has succeeded in activating and mobilizing many people who may have previously been less politically active.

McCaughey and Ayers (2003) in their edited book refuse to define the boundaries of online activism or determine what counts as legitimate online activism. They believe that defining online activism is difficult and may take many forms such as, direct action, protests, self-help groups, educational groups, activist newspapers, cultural groups, and political bookstores. Vegh (2003) however, classifies activism over the Internet into three general areas: awareness/advocacy, organization/mobilization, and action/reaction.

Vegh (2003) states that the Internet can be used for mobilization in three different ways. Firstly it can be used to call for offline action such as a post on a website calling for a demonstration at a set time and place. Second, it can be used to call for action which may normally take place offline but is more effective if done online, such as contacting people through email. Third, the Internet can be used to call for online action which can only be carried out online, such as a massive spamming campaign. Vegh (2003) also states that online collective action could covers online attacks committed by hackers such as defacing websites and disrupting servers.

Social movements have also begun to proliferate through virtual worlds. Blodgett and Tapia (2010; Blodgett and Tapia 2011) analyzed a virtual protest against IBM Italian employees which occurred in Second Life. Blodgett and Tapia (2010) discussed a number of differences between real world and virtual world protests. The first being the identification of supporters when protests move to the virtual, as more distant participants can become involved. Second, establishment of hierarchy changes as hierarchies are now encoded into access and control rights. Third, getting the word out to participants enables a broader audience. Last, building solidarity through technology allows the size of personal networks to grow and allows distant strangers to find commonalities. Using the concept of digital protestainment, Blodgett and Tapia (2011) discussed virtual protests as a blend of work and play, work and entertainment, with each of these opposing forces impacting the way in which protest actions in a virtual world shape the eventual outcome.

McKenna et al. (2011a) have gone further than just protest activities and examined how the organization of virtual world social movements changes from the real world versus the virtual
world. Through netnographic research (Kozinets 2010) of a gay and lesbian social movement inside WoW, McKenna et al. (2011a) apply the theoretical concepts of NSM and suggest that there are a number of similarities and differences between real world and virtual world social movements, namely in their locality, issues they represent, their periods of activity, the hierarchical structure of the movement, and the fluctuation of membership levels.

6.5. Research Framework

As social movements move into the virtual arena, a greater understanding of what virtual worlds mean for social movements is required. Researchers of social movements have studied what the Internet means for collective action (Blickstein and Hanson 2001; Leizerov 2000; McCaughey and Ayers 2003; Postmes and Brunsting 2002; Salter 2003). Despite virtual protests occurring often in virtual worlds (Abalieno 2005; Blodgett 2009; Blodgett and Tapia 2010; Castronova 2003b; Robinson 2008), surprisingly little research has been conducted on social movements in virtual worlds. As McKenna et al. (2011a) and Blodgett and Tapia (2010) illustrate, there are a number of differences between real world and virtual world social movements. Therefore we question the notion that virtual worlds are a proxy to real world social phenomena. The research framework presented next illustrates some key areas where IS researchers can study how the characteristics of virtual worlds change the way in which social movements organize and behave once they move into a virtual world arena.

Based on the literature presented in the previous section, we present the following research framework (See Table 6.1). The multi-dimensional framework is designed to capture the major issues for the study of virtual world social movements. The first dimension, virtual worlds, captures the three characteristics of virtual worlds discussed earlier viz. re-worlding, re-embodiment, and multiperspectivity. The second dimension, social movements, captures the three dimensions of social movements discussed above, namely, mobilization and recruitment, organization, and strategies and campaigns. Using these dimensions, nine areas of importance are presented at the intersection of these dimensions which illustrate the main issues when studying virtual world social movements. The area VIII, for instance, is concerned with how re-embodiment affects the strategies and campaigns employed by a social movement, for example altering an avatar’s appearance as a strategic tactic for a movement campaign. The framework intersects the literature from social movements and virtual worlds to illustrate some important questions for research into virtual world social movements.
6.5.1. Key Issues

This section will detail the key issues in studying virtual world social movements.

6.5.2. Mobilization and Recruitment

Social movements must mobilize and recruit new members in order to be effective (Jenkins, 1981). *Re-worlding* affects how social movement leaders may find potential participants, and how they control the potential resources of that world (Tilly 1978). An important issue involves how virtual worlds allow for group organization, and the technical requirements of finding people to join movements such as identifying pre-existing groups (McCarthy and Zald 1977; Oberschall 1973). For example, World of Warcraft (WoW) allows the construction of guilds (Brignall and VanValey 2007) which creates rigid group structures, however Second Life (SL) is more open (Messinger et al. 2008b) and does not allow this. Some virtual worlds allow users to generate their own content and grant others access to use it (such as in SL), while others such as WoW offer systems to allow people to group together and provide procedures to add people to a group. Each virtual world has its own costs of being a member, for example monetary or time commitments. Therefore, just as social movements have costs (Edwards and McCarthy 2003; Staggenborg 2011), so do virtual world social movements. Virtual worlds have lessened the costs of protest, however movement leaders are required to involve more time, effort, and resources into organizing virtual movements (Blodgett and Tapia 2010). Therefore it is important to consider the costs of being part of a particular virtual world (such as subscription costs), the costs of being part of a movement (i.e. does a member have to contribute in game currency to the movement, or create virtual objects?), and the costs involved in leaders establishing the virtual movement (such as developing virtual spaces, or building groups of members). Virtual worlds may also provide new recruits the freedom to decide to participate in collective action without facing direct consequences to being part of that action (Postmes and Brunning 2002), and may
attract new members by creating objects seen to be of some value in the virtual world, i.e. digital placards (Blodgett and Tapia 2010).

*Re-embodiment* plays a different role in gaming virtual worlds compared with social virtual worlds. In a gaming world, characters create an avatar in a way which best increases its capabilities for in-game activities (Tronstad 2008). Therefore the boundaries between recruitment for membership based on movement goals, and recruitment for membership based on gaming activities become blurred. There are two types of players in a MMOG, *role-players*, who are satisfied with play as avatars, and *power gamers*, who get pleasure from accumulating experience points (El Kamel 2009). Therefore an important issue becomes how does a researcher validate those members who feel they are truly part of the movement, and those members who are more interested in game play? A social virtual world may offer completely different reasons why a member joins a movement as these worlds offer more freedom in avatar creation and are more open to design freedom (Boellstorff 2008; Messinger et al. 2008b), such as creation of virtual identities which better represent the user’s real self (Vicdan and Ulusoy 2008). Therefore the nature and design of the virtual world is intertwined with the identities that a user creates, and their capacity to join virtual world social movements. There is also the chance for deception of movement leaders (Donath 1999), for example a woman’s movement may only allow a real world female to join the movement. However just because an avatar is female does not imply that the user is female (Boellstorff 2008; Consalvo and Harper 2008; Kozinets and Kedzior 2009). It is also possible for users of virtual worlds to remain anonymous (Christopher 2009; Kozinets and Kedzior 2009) therefore this begs the question: do members of virtual world social movements know the true real world identities of all recruits, and is this important (Choi et al. 2009)?

It is possible for players to inhabit multiple virtual worlds simultaneously (Fornäs et al. 2002; Kozinets and Kedzior 2009; Moore et al. 2009), or have multiple avatars in one virtual world (Bainbridge 2010b; McKenna et al. 2010a). Therefore *Multiperspectivality* is an important issue as it provides the opportunity for a user to join only some of his or her avatars to a movement, or to join a movement in multiple worlds. Therefore a researcher could potentially consider social movements in multiple virtual worlds (Blodgett 2009; Blodgett and Tapia 2011), or within a single world (Blodgett and Tapia 2010; Robinson 2008), and it is important to ask why a user joins the avatars that they do. This also should make a researcher query, if a user has only one of their avatars as a member of a movement, does that make the user any less committed to the movement’s goals? Another important issue
resulting from this is related to the concept called the *free-rider problem*. This problem results from rational individuals becoming free riders because their goal of collective action is a collective good, such as seeking new rights for gays and lesbians, which the individual will receive regardless of whether or not he or she joins the movement (Staggenborg 2011). Hence, an important issue relating to multiperspectivity and the free-rider problem asks which is more important, the *users* who join virtual world movements, or the *avatars* they join or do not join.

### 6.5.3. Organization

*Re-worlding* has implications for the organization of virtual world social movements. Virtual worlds consist of virtual locations much as the real world consists of geographical locations (Ondrejka 2007; Robinson 2008). Some virtual worlds constrain avatars to certain virtual spaces, therefore virtual world social movements may also be constrained to virtual spaces. Another important issue relates to the designers of virtual worlds who Castronova (2005c) considers as “gods” who have full control over the entire world. This has important implications on how groups in these worlds organize as they can change at the designers’ will (McKenna et al. 2011a). Social movements tend to create open, decentralized, and non-hierarchical structures (Pichardo 1997), however virtual worlds enable new mechanisms for leadership, structure, and hierarchy which creates hybridized structures between virtual world social movements and the virtual world (Blodgett and Tapia 2010; McKenna et al. 2011a). The control designers hold over the virtual world also means that organizers of virtual protest could be banned from the virtual world (Blodgett 2009). Members of virtual worlds meet each other and bond through their avatars, however some members seek to meet each other offline (El Kamel 2009). Therefore a researcher may need to consider online and offline interactions between movement members (Blickstein and Hanson 2001).

Again *re-embodiment* has different implications between gaming and social virtual worlds. As was mentioned previously, gaming virtual worlds need to consider aspects of the game when recruiting new members. Consider WoW for example. It consists of various activities which require people to group together to complete difficult tasks (Quandt and Wimmer 2008). The makeup of the avatars’ capabilities has an important impact on the outcome of the activity (McKenna et al. 2010a; Tronstad 2008). Therefore virtual world social movements may be required to construct teams with certain characteristics to play certain roles. However, the non-hierarchical structures and responsiveness to individuals which exists in real world
social movements (Pichardo 1997) may not exist in gaming virtual world social movements. The design of an avatar in these virtual worlds changes the way in which movements act, as movement activities are now more closely related to surviving the game. Within a social virtual world, however, these issues may not exist, for example SL is designed with an open structure (Messinger et al. 2008b), and users have more freedoms for avatar and object construction. Therefore a greater understanding is required between avatar construction, the design of the virtual world, and movement goals.

**Multiperspectivity** has implications for the organization of virtual world social movements in two aspects. The first is that virtual world social movements may exist in multiple virtual worlds. Therefore the concept of social movements being locally based (Scott 1990) becomes questionable. Rather than a movement being located in one real world geographical location, a virtual world movement may be instantiated in multiple virtual localities. Even if the same user occupies multiple virtual worlds, is the important issue for researchers the users’ real world locality, or their virtual world locality (McKenna et al. 2011a)? Virtual protests could take place in a single virtual location (Blodgett and Tapia 2010; Robinson 2008), or in multiple virtual locations within the same virtual world, or in different virtual worlds (Blodgett 2009). This raises the question of how do virtual world social movement leaders organize collective action across multiple virtual worlds, each with their own set of rules? The second aspect is the organization of users with multiple avatars. Membership levels in social movements often fluctuate (Scott 1990), however this effect may be greater in virtual world social movements (McKenna et al. 2011a). Users may create multiple avatars, some of which may be members of a movement. Leaders of a movement will have to deal with issues of joining a current member’s avatars, or limiting the numbers of avatars per user.

### 6.5.4. Strategies and Campaigns

**Re-worlding** is an important aspect because the nature of the virtual world has a strong influence on how a virtual world social movement implements its strategies and campaigns. For example, in SL protestors can create any object to aid their campaign such as digital placards or virtual spaces (Blodgett and Tapia 2010; Robinson 2008), but in WoW, users do not have freedom to create objects other than those which are already part of the game. It is important to consider what is necessary for collective action in virtual worlds. Just as in real world social movements, virtual world social movements can occupy a virtual space in order to disrupt activities (Robinson 2008). Virtual world social movements have other tools they
can employ, such as holding virtual parades (Ryan 2009), or causing a server to crash because too many movement members have logged in which creates serious lags (Abalieno 2005; Castronova 2005b). Hence there are new constraints to virtual world social movements, such as a maximum number of members which can become involved in collective action before the technology begins to break down, or preventing more people from becoming involved in the campaign as server capacity reaches its maximum number of users.

*Re-embodiment* allows members of virtual worlds social movements new strategies of expressiveness for their movement campaigns. Virtual worlds allow players to express themselves in ways not possible in the real world (McKenna et al. 2011a), for example appearing as a monster or a human. Schultze & Rennecker (2007) pose questions relating to avatar choice affecting communication in virtual world organizations between both the communicator and the audience, and if these methods of expressiveness enable or disrupt communication. Similar questions can be posed for virtual world social movements. If a movement leader uses a monster avatar during a campaign, does that affect the way the movement is perceived by outsiders, and is the movement considered to be more or less serious in this situation than if the leader had used a more human looking avatar? Another important question comes from the issue of trust. Avatar sophistication is an important aspect in avatar creation and trust, as is the presence of offline identity information (Choi et al. 2009). Therefore a researcher needs to consider how a movement creates awareness for their cause through the sophistication of their avatars. An important question to ask non-movement members could be how does a movement create trust for itself based on the appearance of the avatars within the movement, and is offline identity information necessary for them to take the movement seriously? Based on the research on virtual world fashion (Klastrup and Tosca 2009), and virtual identities (Bainbridge 2010b; Boellstorff 2008; Hagström 2008; Nardi 2010; Tronstad 2008), we can speculate that movement outsiders will take note of how a social movement represents itself to others. This seems to be a potential area for research.

*Multiperspectivality* allows for users to create multiple avatars which potentially allows a member of a virtual world social movement to select avatars to be part of a movement campaign. An important question for researchers is to understand why members may choose to log into one avatar for a campaign over the other avatars they have within the movement. Virtual worlds allow avatars magic-like behaviors (Blodgett and Tapia 2010), hence for a particular campaign a user may choose to use one avatar over another based on the magical capabilities of that particular avatar (Ducheneaut et al. 2006a). A user may also be able to
create a common character across multiple virtual worlds (Kozinets and Kedzior 2009), and thus get involved in a campaign across multiple worlds, potentially increasing awareness of the movement. Users may also use other campaign techniques such as gender swapping (Boellstorff 2008; McKenna et al. 2011a) as a strategic tactic for a movement campaign (Ryan 2009). This concurs with Tarrow (1994) that NSMs often employ pre-planned and highly dramatic forms of demonstration, often with costumes and other symbolic representations, however in ways not possible in the real world. Therefore, not only does a researcher need to understand the virtual world, they also need to consider new forms of interactions and ways of expressiveness which may have no counterpart in the real world (Kozinets and Kedzior 2009).

6.6. Conclusion
As social movements move into the virtual arena, a greater understanding of the relationships between social movements and virtual worlds is required. In this paper we presented a multi-dimensional research framework designed to address the major issues relating to the study of virtual world social movements. The purpose of this framework is to address the major differences in studying social movements in the virtual world versus the real world. Past research has argued that virtual worlds are a proxy to studying real world social phenomena, however we disagree with this and argue that there may be similarities as well as differences between the two, (2011a).

Researchers addressing this issues presented in this framework have a variety of methodological approaches they can utilize. For a discussion of potential virtual world methodological approaches, see Schultze & Orlikowski (2010).

Of course, we do not claim to have addressed all of the current key issues in this area, however, the issues listed here are based on our review of the literature in the areas of sociology, virtual communities, and virtual worlds research. We believe our proposed framework is a potential starting point for researchers wanting to understand the relationships between social movements and virtual worlds.

6.7. References


Article IV
7. ARTICLE IV – SOCIAL MOVEMENTS IN WORLD OF WARCRAFT

Abstract
Virtual worlds provide new forms of social interaction. They offer alternative spaces where social functions can be carried out in online three-dimensional virtual environments. In this paper we explore how collective action on a global scale is enabled by these virtual worlds. We used qualitative research to examine the organization of one social movement in World of Warcraft (WoW), the most widely used massively multiplayer online role playing game in the world. Using New Social Movement Theory, our paper suggests that there are a number of differences between real world and virtual world social movements, namely in their (a) locality, (b) issues, (c) periods of activity, (d) hierarchies, and (e) membership.

Keywords
Virtual Worlds, Social Movements, Organization, New Social Movement Theory.

7.1. Introduction
Virtual worlds enable millions of people to interact with one another through avatars in online three-dimensional worlds. These online worlds are often constructed to look much like the real world and contain mountains, trees, oceans, and wild creatures (Castronova 2007). A virtual world can be defined as “a synchronous, persistent network of people, represented by avatars, facilitated by networked computers” (Bell 2008 p. 2). Virtual worlds offer IS researchers opportunities to study virtual organizations, teams (Assmann et al. 2010; Schultze and Rennecker 2007), social innovations and social movements (Bainbridge 2009).

Historically, humans have employed many tactics to bring about change (Goodwin and Jasper 2003). Since social and political change is usually difficult if not impossible to achieve alone, people have often banded together with others to pursue common goals. This collection of people is called a social movement. Social movements are an important means of bringing out cultural and political changes through collective action (Staggenborg 2011). Protests can be in the real world (e.g. as seen most recently in Egypt) or in the virtual world (Blodgett 2009; Blodgett and Tapia 2010; Castronova 2005b; Robinson 2008).

A social movement typically has a lifecycle with periods of growth, maintenance, and decline (Staggenborg 2011). The objective of this study is to explore how social movements in
virtual worlds organize themselves for collective action. To explore our research question: *How do virtual worlds affect the organization of social movements?* we examine a virtual world social movement in *World of Warcraft* (WoW) and analyze this movement using New Social Movement Theory (Melucci 1989; Pichardo 1997; Scott 1990).

### 7.2. World of Warcraft

WoW, made by Blizzard Entertainment, is the most popular massively multiplayer online role playing game (MMORPG) with over 12 million players globally (Blizzard 2010b). A player in WoW assumes the role of a hero as they explore this virtual world. Players create a character (an avatar, or a toon) and can interact with thousands of other players in the same world to adventure together or fight against others. Players can form friendships, create alliances, and compete against enemies (Blizzard 2010a). WoW provides a system where players group together into guilds. Guilds consist of several players with similar interests within one of the two in-game factions (Alliance or Horde), who provide opportunities for assistance with quests, social interactions, and protection from rival factions (Brignall and VanValey 2007).

### 7.3. Social Movements

Social movements may seek political or economic liberation, or fight for lifestyle changes (Staggenborg 2011). Social movements are collective actions of certain levels of organization and duration which employ non-institutionalized methods to bring about social change (Staggenborg 2011), or increase social awareness (Vegh 2003).

New Social Movement (NSM) Theory emphasizes new types of social movements, which have emerged in advanced capitalist societies. Examples of new social movements include women’s, student, gay, lesbian, environmental, and peace movements (Staggenborg 2011). NSMs are focused on the collective search for identity. Individuals seek new collectivities and social spaces to define their collective identity where they can experience and define novel lifestyles (Johnston et al. 1994). NSMs take collective action based on culture, ideology, and/or politics, and define collective identities through alternative sources such as ethnicity, sexuality, and gender (Buechler 1995).

NSMs break from earlier industrial era movements that focused on the redistribution of wealth, and now focus on concerns for forms of alternative lifestyles (Habermas 2008; Pichardo 1997). They promote direct democracy, self-help groups, and collaborative styles of
social organization (Pichardo 1997). NSM tactics tend to remain outside of normal political
channels and use disruptive tactics to influence public opinion. They also employ pre-planned
and highly dramatic forms of demonstration, often with costumes and other symbolic
representations (Tarrow 1994). NSM organizational structure also differentiates them from
earlier industrial era movements. NSMs tend to organize themselves in a fluid non-rigid style.
They tend to vote communally on issues, rotate their leadership, and employ temporary ad
hoc organizations. Thus, NSMs create open, decentralized, non-hierarchical structures that
are responsive to the needs of individuals (Pichardo 1997).

NSMs emphasize action in the cultural sphere or civil society as the arena for collective
action (Cohen 1985; Melucci 1989), while stressing the important of strategies which
promote self-determination and autonomy (Rucht 1988). Rather than conflicts over material
resources, NSMs tend to emphasize post-materialist values of collective action (Inglehart
1990), while their grievances and ideologies are social constructed, rather than constructed
from a groups structural location (Johnston et al. 1994; Klandermans 1992). NSMs also
present temporary, latent, and submerged networks which underlay collective action, rather
than assuming that collective action emerges from centralized organizations (Melucci 1989).
Scott (1990) discusses the organizational form of new social movements, they: (1) are locally
based, or centered around small groups; (2) organize around specific or local issues; (3) are
characterized by cycles of movement activity and mobilization, i.e. periods of high or low
activity; (4) have fluid hierarchies and loose systems of authority; and (5) have shifting
membership and fluctuating members.

7.4. Methodology
This study examined a social movement in WoW and used a qualitative research method
called netnography, which is a form of ethnography for studying online communities
(Kozinets 2010; Myers 2009). The collection of data in netnographic studies usually involves
participant observation and interaction with community members (Myers 2009). Netnographic researchers must be active in some part of the community and not be invisible
to the people under investigation, but nor should they lead the community (Kozinets 2010).

One of the researchers joined a social movement inside WoW. The researcher participated in
movement activities such as an in-world parade and dance party, and carried out participant
observation of movement members. Field notes were taken during involvement with the
movement: this involved screen captures (WoW provides the ability to record the game in movie files), and note taking. The researcher also extracted data from the social movement’s discussion forums. The researcher has three characters in the movement. The data for this study is based on participant observation and an analysis of approximately one hundred discussion forum posts. The fieldwork lasted for six months. Data analysis involved coding of discussion forum posts and field notes based on the major themes addressed by NSM.

7.5. The Social Movement
The social movement used for this study is a Lesbian, Gay, Bisexual, and Transgender movement, hereafter referred to as the LGBT movement. LGBT established itself in WoW in 2005 and has over 5,000 members (players) in WoW and has over 15,000 characters (it is possible for one player to add multiple characters). LGBT consists of one main guild and several smaller guilds. The movement has been profiled in a number of gay and lesbian magazines and in a prominent WoW blog website. LGBT is a global social movement with members from many countries. LGBT also maintains a website with discussion forums, has in-game socializing, and has activities such as an annual parade, dance parties, and group photographs.

7.6. Findings
In this section we present data based on our participant observation and involvement within the LGBT movement inside WoW.

7.6.1. Location
WoW enables players from all around the world to interact with one another. The LGBT is a global movement, as is illustrated by Figure 7.1 obtained from the LGBT movement’s website. Each pin on the map represents an individual member of the LGBT movement.
The group may have a global distribution within the real world, but within WoW it is “locally” (or server) based. WoW contains many different servers. Each server is an individual copy of the game, and players can only interact with other players on the same server. Another aspect of localization for LGBT is that it a Horde based group. WoW has two main factions (Horde and Alliance) who are at war with each other. Therefore, for NSMs based in WoW, there are two categories of localization to be considered. The first is the global distribution of players, the second is the local distribution of characters.

7.6.2. Issues

NSMs are organized around local or specific issues. The goal of this movement is “to better service the LGBT community and offer a safe, inclusive place to game for members of any sexual orientation or gender identity.” (LGBT movement website, 2010). Alongside general LGBT issues such as safe havens for members, the movement also contains various other LGBT related issues, often related to the real world geographical location of individual members. Due to the global distribution of players, these LGBT issues may vary. Some members may come from countries (or states) where governments ban homosexual acts, while others may come from countries that allow same sex marriage. This brings a wide range of real world issues into the movement. Some of the issues discussed in the movement include:

- Gay marriage;
- Cures for HIV;
- Support for shelters for LGBT youth;
- Gays in the military;
- Local politics/elections.

Not only does the movement deal with real world issues, but also issues inside the game. For example, WoW provides the functionality of allowing players to join group events to kill powerful monsters. Often this brings many different players together. One member of the LGBT movement discussed issues relating to homophobic language in these events:

“[…] we have expanded outside of our little community in our day-to-day gametime and not everyone is as familiar with the <server name omitted> customs of...
politeness. How do you respond when someone uses "gay" or "fag" offensively?"
(Forum post, 26 December 2010).

This resulted in a discussion with other members during which various responses were offered. One member said he now says nothing because once when he did speak up against the homophobic language he was kicked out of the group. Another member said that he openly complains about the homophobic language in the group and then leaves, stating that it is just a game and should be a fun event so does not want to deal with this kind of language.

Another example of an in-game issue related to the design of the actual game. The game consists of pre-defined conversations with non-player characters (NPC). A player can click on an NPC and then a dialogue box will appear displaying some text said by the NPC. One member commented on how one of the NPCs makes a homophobic joke: "Homogenized? No thank you, I like the ladies". Another member jokingly responds that this is discrimination. Although this post was meant to be light-hearted, it demonstrates that the virtual world itself contains potentially discriminatory comments predefined by the designers of the game.

7.6.3. Periods of Activity

Similar to real-world LGBT movements, the LGBT movement in WoW periodically holds virtual world events. In June 2010, and for the sixth year running, the movement held a pride parade inside the game. The parade was attended by a large number of players (the exact number is only available to Blizzard). At the end of the parade various other activities took place such as a model competition named “Azeroth’s Next Top Model”. Some players temporarily changed the gender of their character, and most players performed spells that created lighting and sparkling effects around their character. In July 2010, the movement held a dance party in the city known as Shattrath. In October 2010, the movement had a guild photograph. Figure 7.2 illustrates these activities.
The movement also holds real world meet ups for members of the community. A section of the movement’s website is dedicated to organizing these meetings. Members have organized meetings in Australia, Canada, and the United States.

7.6.4. Hierarchies

Fluid hierarchies and loose systems of authority characterize NSMs. However, this fluidity can be constrained to some extent in virtual world social movements. A technical requirement of WoW is that a guild must have a leader. The leader has administrative control over operations in the guild including giving individual members certain ranks and privileges (such as access to the guild bank), as well as adding and removing members.

The LGBT movement has a guild leader and officers. Officers (there are currently 19 officers) deal with the day to day running of the movement’s activities: some are charged with organizing social events, while others deal with disciplining members who break the guild charter. However, the actual hierarchy of the movement is based on issues relating to gaming, as well as doing service to the movement. Hence the actual hierarchy of the movement is more structured than what would be found in a real world social movement. The organizational hierarchy of the LGBT group is as follows:

- Guild Leader;
- Officer;
- Member of Distinction;
- Member in good standing;
- Member under administrative discipline, no bank withdrawals, guild chat is allowed;
- Member under administrative discipline, no bank withdrawals, no guild chat.
The majority of members are ranked as members in good standing, which means the member has access to guild chat and guild bank. If a member breaks the guild charter for some reason, for example if they are rude to other players, they may be demoted to either of the lower ranks. Whenever a member is promoted (or demoted), an announcement is automatically made within the guild chat. Any players currently online will see the change.

7.6.5. Membership

Membership is open to all members of the LGBT community as well as heterosexual members (as long as they do not discriminate). LGBT consists of eight guilds. As of January 2010, LGBT had a total of 5,737 unique members, which makes it the second largest guild in WoW. Each guild has its own guild chat channel that allows members of each guild to have discussions in game. Due to the technical requirements of the game, this means that members of another guild (even an affiliated guild) cannot share a guild chat channel. To overcome this, the LGBT movement created an add-on for the game that joins the chat channels for multiple guilds, thus allowing all eight guilds to combine their chat channels as though it were one channel.

An important aspect influencing the organization of the movement is the technological requirements of the virtual world. This was evident in October 2010 when Blizzard announced that it would cap the size of guilds to 600 members prior to the release of the next expansion pack, Cataclysm. Obviously this had a large impact on LGBT which far exceeded this number. The guild leader sent a message to all members outlining the problem:

“[...] Blizzard is instituting a 600-person hard cap on guild size starting in patch 4.0.1, which we expect to be released next week. [...] larger guilds will be 'completely supported', but they will not be able to invite new members. This is clearly a serious situation for us and we have been discussing this both amongst ourselves and with the larger LGBT population [...] If you want a toon in the <LGBT> guild, NOW is the time to get your invite, as we won't be able to add anyone else to <LGBT> once the patch goes live.” (Message from guild leader, 6 October 2010).

Over the next week, a large number of players added new characters to the guild. Blizzard later announced that the cap would be increased to 1020 members. A month later the guild leader again posted a message with more information about the changes.
“[…] all guilds are now capped at 1020 characters, [...] LGBT had about 6200 characters in it. Those characters were allowed to remain in the guild, but we are not able to invite any new characters to LGBT. [...] we are making some changes designed to eventually bring LGBT down below the cap without inconveniencing most of our members. These changes include: Actively removing toons that haven’t been played in 90 days or more, [...] and opening up a few more LGBT guilds and asking for people to voluntarily move [...]. We will begin by reopening <LGBT sub-guild>, and when Cataclysm hits we will be opening a new guild called <LGBT sub-guild 2>, [...].” (Message from guild leader, 19 November 2010).

As a result of these actions, by late January 2011 the main LGBT guild had 3,500 players (down from 6,200). Inactive members were removed and many players volunteered to move their characters from the main guild to one or more of the sub-guilds. Later that same year, however, one of the sub-guilds disbanded from the LGBT movement altogether.

“[…] I’m sorry to report that <name of sub-group> will be disbanding on Monday and with it comes the end of our raid group as we know it today.” (Forum post, 9 October 2010).

Despite this apparent fragmentation, many of the members who disbanded continued to leave characters in the LGBT movement. This illustrates that within virtual world social movements individual members can create multiple characters within a group and move them around as they see fit. Memberships between guilds can be fluid.

7.7. Discussion

Real world NSMs are locally based (Johnston et al. 1994; Klandermans 1992; Scott 1990). However virtual world movements differ in some respects. The first dimension, locality, has two key differences to be considered when a social movement becomes virtual. The first difference is that virtual worlds enable members who would not normally become active in social movements to participate. This is in line with research on social movements on the Internet (Postmes and Brunsting 2002; Salter 2003). The second key difference is that members of virtual worlds are constrained by the technological requirements of the human designers of that world. In WoW a social movement can exist only on one faction, and it is limited to certain virtual world spatial locations. It is possible that a social movement could create a movement on the opposite faction, even with the same players, however they cannot interact in the virtual world unless the players log back in as characters on the same faction.
Table 7.1 summarizes the organizational differences between real world and virtual world social movements.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Real World</th>
<th>Virtual World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Locality</strong></td>
<td>Locally based.</td>
<td>Potential for global distribution of players, but local distribution of characters.</td>
</tr>
<tr>
<td><strong>Issues</strong></td>
<td>Specific or local issues.</td>
<td>Potential for members to bring their own local issues to the virtual arena, thus a hybrid of local, global, and in-world issues</td>
</tr>
<tr>
<td><strong>Periods of Activity</strong></td>
<td>High/low periods of activity.</td>
<td>High/low periods of activity. Activities could include both virtual and real world activities. New methods of expressiveness.</td>
</tr>
<tr>
<td><strong>Hierarchies</strong></td>
<td>Fluid hierarchies. Loose systems of authority.</td>
<td>Stronger hierarchies, influenced by the (current) virtual world technological requirements. Immediately visible methods of promotion/demotion.</td>
</tr>
<tr>
<td><strong>Membership</strong></td>
<td>Shifting membership and fluctuating members.</td>
<td>Highly influenced by changes to virtual world by designers. Players may have multiple characters, which can move between groups, thus higher levels of membership fluctuation.</td>
</tr>
</tbody>
</table>

Table 7.1 Organizational differences between real world and virtual world social movements

Grievances in real world NSMs are socially constructed, and not based on a group’s location (Johnston et al. 1994; Klandermans 1992). For virtual world movements, grievances may indeed be socially constructed from the real world, but then these issues are collectively aggregated into the virtual world. Therefore, the second dimension, *issues*, is different for virtual worlds in two ways. Firstly, when a social movement such as the one presented in this study offers membership to large numbers of individuals, there is the chance for individual members to bring issues relating to their own real world locality into the virtual world movement. Virtual worlds also allow multiple people from different backgrounds to come together (Papargyris and Poulymenakou 2008; Quandt and Wimmer 2008). This implies that rather than only local issues (Scott 1990), virtual world movements bring issues related to the users’ real world location. The second difference is related to the construction of the virtual world itself. Virtual worlds are created by a team of designers and developers who create elaborate story lines for players. As was illustrated in this study, some portions of that design may be considered discriminatory by members of a community. Hence players experience a hybrid of issues, from the game world itself, through to local and global issues (Papargyris and Poulymenakou 2008).
The third dimension, *periods of activity*, has similarities and differences to real world social movements. The similarity is that the activities performed by the social movement are characterized by periods of high and low activity, for example a virtual protest (Blodgett 2009; Blodgett and Tapia 2010; Castronova 2005b; Robinson 2008). A virtual world social movement may also hold regular events, such as the pride parade and dance party held annually by the LGBT. This is similar to real world social movements which stresses the importance of self-determination, autonomy, and self-expression (Inglehart 1990; Rucht 1988). NSMs often show highly dramatic forms of demonstration (Tarrow 1994), the difference however, is that virtual worlds also allow players to express themselves in ways not possible in the real world, such as gender swapping (Boellstorff 2008).

The fourth dimension, *hierarchies*, is quite different in virtual worlds. NSMs are characterized by fluid hierarchies and loose systems of authority (Pichardo 1997; Scott 1990), and often temporary, latent, or submerged networks (Melucci 1989). In virtual worlds, however, social movements are restricted by the technical requirements of the virtual world. WoW for example, requires any individuals planning to form a long-term group to create a guild. Each guild must have one leader, although the leader can delegate certain leadership roles to other members. All guilds are then listed on the WoW website which makes them visible to anyone seeking this information. In-world, the guild name that a character belongs to is displayed about the players head which increases movement visibility. Although a real world social movement may consist of multi-headed leadership (Gerlach and Hine 1970), the hierarchy of a virtual world social movement is constrained by the technical requirements of the virtual world. Hence there are hybrid hierarchies in the social and virtual world (Blodgett and Tapia 2010).

The last dimension, *membership*, is also highly influenced by the technological requirements of the virtual world. As we have seen, the size of the LGBT movement was impacted by changes made by the designers of WoW. As a result of changes enforced by Blizzard, LGBT was forced to reorganize. This is something that is quite different to real world social movements that have no technological requirements constraining their actions. Castronova (2005c) says that the designers of virtual worlds are gods and users of these worlds must follow whatever decisions they make. Movements have periods of growth and decline (Staggenborg 2011), and changes made by designers may force a virtual world movement to decline prematurely. Of course, WoW is a product of Blizzard Entertainment (Nardi 2010). However, we found that the LGBT movement was able to overcome some of the
technological limitations imposed by Blizzard. LGBT created an add-on to the game (Taylor 2008) to enable communication between all of the LGBT guilds. Lastly, it is important to consider the differences between players and characters. One player may create multiple characters (Bainbridge 2010b; McKenna et al. 2010b), with only some of those characters being members of the movement, and often those characters move between sub-groups of the same movement. Real world movements have fluctuating membership (Scott 1990), however this effect may be stronger in virtual world movements.

7.8. Conclusion

Researchers of social movements consider that social movements are ubiquitous in society, with some arguing that we live in a “movement society” (Meyer and Tarrow 1998) or a “movement world” (Snow et al. 2003). This paper has examined how social movements are now organizing themselves via virtual worlds. The use of virtual worlds enables social movements to engage in collective action on a global scale. Specifically, we have looked at the organizational aspects of new social movement theory and applied this theory to a virtual world social movement. We found a number of differences and similarities when this theory is compared against real world and virtual world social movements.

We have seen, on the one hand, how social action in a virtual world is constrained by the designers and controllers of that world. We have also seen, on the other hand, how the members of a social movement can try to overcome the limitations of that world. Sometimes people can use the virtual world in a totally different way from what the designers intended. The most notable example of this is shown by some of the activities of the LGBT movement: WoW is a game where the whole point is ostensibly to fight against others, but LGBT uses parades and dance parties to promote “a safe, inclusive place” for members of the movement.

We recognize that there are a number of limitations to this study. Firstly, we acknowledge that this study is based entirely on WoW, and as such some of the concepts presented here are very WoW reliant. Our second limitation is that this study has presented only one social movement. Future studies could examine how social movements are organized in other virtual worlds which may have different technological requirements, and further explain the relationships between virtual worlds and social movements. Further research could also determine if virtual world movements have any influence on real world movements.
7.9. References


Article V

Abstract
Virtual worlds enable new forms of social interaction. They offer alternative spaces where people can meet in online three-dimensional virtual environments. One social phenomenon which has moved into the virtual world is the social movement. Social movements are an important means of bringing about social, cultural and political change through collective action. Using netnography, a modified version of ethnography, we studied one social movement that operates within the largest virtual world created so far. Through our fieldwork we discovered that, although the designers of virtual worlds are almost like gods in that they set the rules within which the members of the virtual world live, the social movement itself was able to adapt and change. This article therefore explores not just the evolution of the IT artifact (the virtual world), but also its co-evolution with the social phenomena (a social movement).

Keywords
Virtual Worlds, Social Movements, Co-Evolution, Actor-Network Theory, Netnography, Interpretive Research

8.1. Introduction
Virtual worlds have the potential to change the way in which organizations and social groups organize (Castronova 2005c; Castronova 2006). Virtual worlds are large scale IT artifacts that enable millions of people to interact with one another through avatars in online three-dimensional worlds. These online worlds contain mountains, trees, oceans and wild creatures, and are made to look something like the real world (Castronova 2007). Users of virtual worlds create an avatar which offers the affordances of a ‘real’ body (Schultze 2010), and enter a highly immersive world where they can interact visually, verbally and textually with other avatars. Virtual world users find the avatar experience far more appealing than using Facebook and Twitter, where users are limited to reading about what others are doing (Wasko et al. 2011). Schultze and Orlikowski (2010) say that virtual worlds enable globally distributed work, project management, online learning, and real-time simulations. The virtual world itself becomes like an ecosystem, with social activities happening in this world. The
One important social phenomenon which has moved into the virtual world is the social movement. Social movements are large, informal groups of people that aim to pursue common goals and bring about social, cultural and political change through collective action (Staggenborg 2011). Examples of social movements are the American civil rights movement, the feminist movement, and the charismatic movement within established Christian churches. Historically, humans have employed many tactics to raise awareness for their cause (Goodwin and Jasper 2003) or to lobby for social change. In the virtual world there have been virtual protests in Second Life (Blodgett and Tapia 2010; Robinson 2008), in World of Warcraft (Abalieno 2005; McKenna et al. 2011b), and various other virtual worlds (Blodgett 2009; Blodgett and Tapia 2011; Castronova 2003a).

A major problem that social movements face when they enter a virtual world is that they have very little control of the virtual world itself. The designers of virtual worlds are almost like gods in that they set the rules and continually update the environment within which the members of the virtual world live. As the ecosystem is altered by a company and its designers, the users (or avatars) and any social movements “living” within this ecosystem must adapt to the new technological configurations imposed on them. During our fieldwork the social movement we studied was forced to reorganize several times due to changes implemented by the designers of the virtual world. However, the social movement successfully adapted to these changes and changed its modus operandi accordingly. It was also successful in petitioning the company to change some of the design rules at various times.

Hence, in line with the call to theorize the IT artifact by Orlikowski and Iacono (2001), we suggest there is a need to theorize about virtual worlds, and in particular how virtual worlds change over time. A virtual world may constantly evolve as designers make modifications, often in the form of a patch, expansion pack, or terms of service (Roquilly 2011). However, instead of focusing solely on the IT artifact itself, as Roquilly (2011) does in his study of the methods that game companies use to control virtual worlds, in this article we explore how the IT artifact evolves along with the social phenomena and its users (the social movement).

In biology co-evolution is defined as ‘the change of a biological object triggered by the change of a related object’ (Yip et al. 2008). The term co-evolution has been used in
technology fields, for example the co-evolution of object orientated software design and implementation (D’Hondt et al. 2000), the co-evolution of technology and methods in the mobile phone industry (Funk 2009), and the co-evolution of technology and society (Geels 2005). In our study we discovered that changes in the social movement were triggered by changes in the virtual world, but the direction of influence was not always one way.

Hence, the research question addressed in this study is: how does the technological artifact (the virtual world) and the social world (the social movement) co-evolve? To answer our research question, we use two theoretical perspectives to help interpret and explain our data. First, to examine the IT artifact itself, we use an approach called the biography of artifacts (BoA) as suggested by Williams and Pollock (2012). This approach examines how an IT artifact evolves over time and space. Second, to help explain the specific mechanisms by which the co-evolution of the IT artifact and the social movement took place, we use actor-network theory (Walsham 1997). Williams and Pollock (2012) suggest using actor-network theory in conjunction with the BoA approach.

The study took place over three years. One of the authors conducted netnographic research - a form of online ethnography using the Internet (Kozinets 2010; Myers 2009) – to study and engage with a social movement in a virtual world. He conducted an interpretive field study and became immersed in the movement’s regular activities (Klein and Myers 1999b). The movement studied was the Lesbian, Gay, Bisexual, and Transgender (LGBT) movement within the World of Warcraft (WoW). WoW, a game made by Blizzard Entertainment, is currently the world’s most-subscribed massively multiplayer online role playing game with over 12 million players globally (Blizzard 2010b).

This paper is organized as follows. First, a literature review related to virtual worlds and social movements is presented. Second, we review the two theoretical perspectives relevant to our study. Third, we describe our research method. The next sections describe the virtual world we studied (WoW), the social movement (LGBT), and tell the co-evolution story. The final section is the discussion and conclusions.

8.2. Virtual Worlds

A virtual world can be defined as “a synchronous, persistent network of people, represented by avatars, facilitated by networked computers” (Bell 2008 p. 2). Virtual worlds include social virtual worlds such as Second Life and gaming virtual worlds such as WoW.

Virtual worlds differ from more traditional social networking technologies because they
provide a richer and more immersive experience. They can be deeply engaging because of the ability to engage visually, verbally and textually with other avatars (Wasko et al. 2011). Millions of people invest their time and energy into using these virtual worlds, creating characters, meeting new people, and engaging in new forms of social interaction. Schultze and Rennecker (2007), Assmann et al. (2010), and Schultze and Orlikowski (2010) say that virtual worlds are of interest to IS researchers for both their business and social aspects (Messinger et al. 2009). Virtual worlds have the potential to be used by social scientists to observe individual and collective patterns of online behavior in order to test social theories (Papargyris and Poulymenakou 2008) or to become laboratories where experiments in social science can test new norms, values, and institutions (Bainbridge 2010a). Virtual worlds also have the potential to be proving grounds for real world social innovations, cultures, and social movements (Bainbridge 2009) as well as substituting for social institutions in the real world (Williams 2006).

Virtual worlds are usually seen as reflections of their creators (Wasko et al. 2011). Creators of virtual worlds have been described as “gods” whereby users of these worlds must follow whatever decisions they make (Castronova 2005c). Roquilly (2011) says that game companies create, modify, design, and control virtual world games. The designers control what users of these virtual worlds can and cannot do within these worlds.

However, while we agree with Roquilly (2011) and some other IS researchers that virtual world designers are almost like gods, this does not mean that the inhabitants of these worlds are completely powerless. The users of these worlds are able to adapt and change. Hence, we focus not just on the evolution of IT artifact itself, but also on the evolution of the social movement within the game. Our study looks at specific impacts of design changes on end users (in our case a social movement) and also at the impact of the social movement on the game (see Figure 8.1). We look at the interaction between them and the co-evolution of both.
8.3. Social Movements

Social movements are large, informal groups of people that band together to pursue common goals and achieve social or political change (Goodwin and Jasper 2003). Social movements often protest against the current social order to bring about cultural and political change through collective action (Staggenborg 2011). Some social movements create formal organizations, some use informal networks, while some others use more spontaneous actions such as riots (Goodwin and Jasper 2003).

While earlier industrial era social movements focused on the redistribution of wealth (e.g. the trade union movement), new social movements (NSMs) focus mostly on concerns for forms of alternative lifestyles (Habermas 2008; Pichardo 1997). They promote direct democracy, self-help groups, and collaborative styles of social organization (Pichardo 1997). NSM tactics tend to remain outside of normal political channels and use disruptive tactics to influence public opinion. They also employ pre-planned and highly dramatic forms of demonstration, often with costumes and other symbolic representations (Tarrow 1994).

NSMs emphasize action in the cultural sphere of civil society as the arena for collective action (Cohen 1985; Melucci 1989), while stressing the importance of strategies which promote self-determination and autonomy (Rucht 1988). Rather than conflicts over material resources, NSMs tend to emphasize post-materialist values (Inglehart 1990). Scott (1990)
says that new social movements tend to have fluid hierarchies, loose systems of authority, and a shifting membership with a fluctuating list of members.

In recent years social movements have started to take advantage of the Internet’s capabilities for supporting social activism (Leizerov 2000). Postmes and Brunsting (2002) point out that the Internet enables mass communication which allows many more people to become politically involved.

Blodgett and Tapia (2010) suggest a number of differences between real world and virtual world protests. First, a virtual world allows more distant participants to become involved in a protest. Second, the establishment of a hierarchy changes as hierarchies are now encoded into access and control rights. Third, using a virtual world enables the organizers to contact a broader audience. Last, building solidarity through technology allows the size of personal networks to grow and allows distant strangers to find commonalities. Virtual worlds become a place where social movements can promote themselves, recruit new members and conduct activities related to the movement (McKenna et al. 2011b).

One theory that we do not use explicitly in this particular paper, but nevertheless provides the backdrop to our research, is new social movement theory in sociology (Buechler 1995). The LGBT movement that we studied can be classified as a new social movement in that it is almost entirely focused on gaining acceptance for alternative lifestyles. However, NSM theory completely ignores technology. Therefore we do not use NSM theory in this particular paper, but instead employ two other theoretical lenses to help us to understand the co-evolution of the social movement with the technology (the virtual world). These two theories will now be described.

8.4. Theory

8.4.1. Biography of an Artifact

To understand the technical evolution of a particular technology, it is necessary to examine how its configuration has changed over time. Therefore we have employed the biography of artifacts (BoA) approach, as suggested by (Williams and Pollock 2012), to study the biography of the virtual world. Williams and Pollock (2012) advocate understanding the biography of an information system by following it through time and space. Their approach attempts to study an information system over multiple frames of analysis, through extended longitudinal studies. These biographies compare systems at different moments in the lifetime
of the system and capture linkages between different actors over time. To get an understanding of how the virtual world has evolved over time, we analyzed patch data. WoW regularly releases patches which “upgrade” the game and change its nature. Each time a patch is released it also comes along with patch notes which describe the changes to the system.

Williams and Pollock (2012) recommend using actor network theory (ANT) as a theoretical lens along with the BoA approach, and hence this is what we do. The use of ANT enables us to look in more detail at the actors which use the system, the system itself, as well as the mechanisms of change.

8.4.2. Actor Network Theory

To examine the co-evolution of the social and the technology we use ANT (Callon 1986a; Callon 1986b; Callon 1999; Latour 2005; Law 1992; Walsham 1997). ANT is an appropriate tool for socio-technical research (Callon 1986a) and is useful because of its ability to examine the co-evolution of society and technology (Callon 1986a). It can be used to understand a systems biography, or how a system is shaped over multiple time frames and settings (Williams and Pollock 2012). Table 8.1 briefly explains some key concepts of ANT. For a more detailed description see Walsham (1997).

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actor (or actant)</td>
<td>‘Both human beings and non-human actors such as technological artifacts’ (Walsham 1997).</td>
</tr>
<tr>
<td>Actor-network</td>
<td>‘Heterogeneous network of aligned interests, including people, organizations and standards’ (Walsham 1997).</td>
</tr>
<tr>
<td>Translation</td>
<td>‘Process of alignment of the interests of a set of actors with those of a focal actor’ (Callon 1986b; Rodon et al. 2008).</td>
</tr>
<tr>
<td>Problematization</td>
<td>‘First moment of translation in which an actor frames a problem or an opportunity and attempts to persuade other actors in the network that the problem/opportunity is worth dedicating resources to its solution’ (Callon 1986b; Rodon et al. 2008).</td>
</tr>
<tr>
<td>Interessement</td>
<td>‘Second moment of translation in which ‘other actors become interested in the solution proposed. They change their affiliation to a certain group in favor of the new actor’ (Callon 1986b: p211).</td>
</tr>
</tbody>
</table>

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Enrolment  ‘Third moment of translation that concerns ‘the group of’ multilateral negotiations, trials of strength and tricks that accompany the interrecessions and enable them to succeed’ (Callon 1986b: p 211).

Mobilization  ‘Last moment of translation that consists of stabilizing the actor-network by making durable and irreversible relations’ (Callon 1986b; Rodon et al. 2008).

Spokesperson  An actor who speaks on behalf of other actors (Walsham 1997).

Obligatory passage point  ‘Situation that is fixed during problematization, in which any actor with a stake in the network would have to pass through in order to attain his objectives’ (Rodon et al. 2008: p 99).

Inscription  ‘Process whereby translations of one’s interests get embodied into technical artifacts. That is, the way physical artifacts embody patterns of use’ (Rodon et al. 2008: p 99).

Black-boxing  ‘Process whereby an ‘assembly of disorderly and unreliable allies is…slowly turned into something that closely resembles an organized whole. When such a cohesion is obtained we at last have a black box’ (Callon 1986b: p131).

Irreversibility  ‘Concept that captures the accumulated resistance of an actor-network against change; irreversibility also reflects the strength of inscriptions’ (Rodon et al. 2008: p 99).

Table 8.1 Key concepts of actor-network theory

Using ANT we can analyze how the social movement actor-network was created and how it evolved within WoW. When a patch is released, we can follow actors through the network and determine how they were affected by the release of the patch.

8.5. Research Method

The research method we used was a qualitative research method called netnography, which is a form of ethnography for studying online communities (Kozinets 2010; Myers 2009). The collection of data in netnographic studies involves participant observation and interaction with community members (Myers 2009). Netnographic researchers immerse themselves in the online community using participant-observation and various data collection methods.
They must not be invisible to the people under investigation, but nor should they lead the community (Kozinets 2010).

It is important to note that the unit of analysis in this study is the collective rather than the individual. Social movements by their very nature are a collective group of individuals with a collective identity. Hence we focused on the social movement as a whole, not the individual members within.

8.5.1. Field Site

The field site selected for this study is entirely virtual and takes places in World of Warcraft. Players create a character (an avatar, or sometimes called a toon) and can interact with thousands of other players in the same world to adventure together or fight against others. WoW was selected as a field site for several reasons. First, WoW has a large user base and it is easy to identify active participants. Second, a few social movements operate within WoW, of which the movement we studied was just one (although it is one of the largest within WoW). Third, there have been calls for more IS researchers to study virtual world games, given that few IS researchers have studied virtual world games so far (Assmann et al. 2010; Schultze and Rennecker 2007).

8.5.2. Data Sources

The lead researcher entered WoW and spent a large amount of time playing, reading WoW websites, and learning the intricacies of the game. The lead researcher became proficient in WoW and was invited to become a beta tester in 2010 before the release of an expansion pack to the game called Cataclysm (the role of beta tester is highly sought after by serious WoW players). This gave him the chance to test Cataclysm before it went live to the general public. It was also an opportunity to test out new features of the game and submit bug reports to Blizzard. It is during beta testing that Blizzard identifies errors in the implementation of the game, or becomes aware of issues which might affect large numbers of people.

Over time, he became aware of certain special interest guilds in WoW, and one of the largest of these was the Lesbian, Gay, Bisexual, and Transgender (LGBT) movement. Hence the researcher joined LGBT and began to participate in their virtual world activities. Field notes were taken during involvement with the movement: this involves screen captures (WoW provides the ability to record the game in movie files), and note taking. Data was obtained
from discussion forums from the social movement’s website. Other primary and secondary sources of data were obtained, and are described in Table 8.2.

In total the lead researcher spent over 1,600 hours doing fieldwork i.e. playing the game. However, field notes based on participant observations took a different form than traditional ethnographic studies. The researcher did not actively take field notes during interactions with members of the social movement, but rather chose to record details with movie screen cams. If you are participating in an activity within the virtual world, you need to control your own avatar’s movements with a keyboard and mouse. This means that your hands are not free for active note taking. Hence it made more sense for the researcher to use one of the technological features of the virtual world i.e. the ability to record movie screen cams of the activities – rather than try to take field notes in the traditional way. The ability to automatically record activities allowed the researcher to continue participating in these activities.

To examine the co-evolution of the virtual world artifact and the social movement, it is necessary to examine the evolution of each at various points in time. To examine the evolution of the virtual world, patch notes were used. WoW regularly releases patches which change the way in which the game operates, which in turn changes the way the movement is instantiated within the virtual world. Often these changes are minor, but sometimes a major change occurs which may affect the social groups within the virtual world. Changes made to the virtual world were compared with changes in the social movement by examining the history of the social movement (using the discussion forums and participant observations), especially around the time in which patches were released.

<table>
<thead>
<tr>
<th>Source of Data</th>
<th>Nature of Data Collected</th>
<th>Total quantity of data collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant Observation</td>
<td>Field notes; movie screen cams from movement activities.</td>
<td>Several hours of movie files collected. At least 50 screenshots.</td>
</tr>
<tr>
<td>Discussion Forum Posts</td>
<td>Discussion posts from social movement website.</td>
<td>128,773 posts dating back to 2006.</td>
</tr>
<tr>
<td>Chat Logs</td>
<td>Chat logs from movement in-game chat channels.</td>
<td>Approximately 1.5 years’ worth of chat logs.</td>
</tr>
<tr>
<td>Social movement website</td>
<td>Textual information relating to background information about the movement and rules of membership.</td>
<td>Approximately 20 pages of information.</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>WoW Patch Notes</td>
<td>List of changes made to WoW through patches released. Available from WoW website.</td>
<td>Patches dating back to 2006, in total 114 patches.</td>
</tr>
</tbody>
</table>

**Table 8.2 Data Sources**

Each patch released by Blizzard comes with a list of patch notes, which detail the changes to the system implemented by the patch. Table 8.3 illustrates the patch notes for patch 4.0.1. Patches are implemented as code designed to alter the game in some manner, and for games such as WoW are often wrapped around myths and storylines. Krzywinska (2006) claims that to better understand a virtual world, it is essential to understand the underlying stories and myths, which helps a player to achieve a sense of belonging. Therefore it was necessary for the researcher to differentiate between a storyline and an actual change to the system’s configuration, although it was often difficult to separate them analytically.

**User interface:**

- The World Map button has moved to the upper-right corner of the minimap rather than around the edge of it.
- The Social button has been moved to the upper-left of the chat window.
- On the Character Select Screen, characters now perform an attack animation appropriate to their class (spell casting or melee) every 30 seconds.
- Character stats are on a separate display that must be revealed on the right of the character screen.
- New Guild UI and cap of 1000 members have been implemented.

**Table 8.3 An example of a patch note, from patch 4.0.1.**

Text: ©2004 Blizzard Entertainment, Inc. All rights reserved.

**8.5.3. Data Analysis**

Due to the differing nature of the data types collected, we employed multiple methods of data analysis. The discussion forum data proved problematic due to the large amount of data collected. It was necessary for the researchers to find a way to filter out the data which was not needed for answering the research question. This involved multiple steps.
Firstly, we examined the patch notes. We read the patch notes of all 114 patches over the
course of our research project in an attempt to discover which patch had an impact on the
social movement. After analysis of the patches, we discovered three patches which had a
strong influence. Second, we had to discover the impact that these patches made on the
movement. Often the patch notes are released before the patch is implemented into the game.
Therefore we were able to filter the data from the discussion forum by extracting only those
posts made about a certain patch before and after the patch was released. We also performed
keyword searches using keywords from our theoretical approaches along with keywords
based on our knowledge of the game and the impacts from analyzing the patch notes.
Therefore we were able to disregard most of the posts, which gave us a final count of 405
posts. The chat logs also proved to be difficult to extract useful data. Having collected 1.5
years of chat logs, the data set was massive. Using the same criteria as explained above we
were able to extract useful text excerpts from the chat logs.

The textual data was loaded into NVivo and theoretically coded. Themes were created along
theoretical constructs relating to ANT. We also loaded the data into another qualitative
analysis software package called Leximancer, because we found it was better at content
analysis of large qualitative data sets. Leximancer creates a conceptual map and presents the
main themes contained within the text, and information about how those themes are related.
The themes are heat-mapped to indicate their importance. Therefore, the ‘hottest’ (most
important) themes appear in red, and the next most important theme in orange, and so on.
Leximancer allows the researcher to extract the actual pieces of text which were used to
create the themes. Data from manual coding in NVivo and the concepts created from
Leximancer were compared against each other.

The other main data source was the movie screen cams. Where we saw something interesting
we paused the movie and took a screenshot. This approach of using images as a data source
has long been used in anthropology and advocated in IS by Andrade and Arthanari (2009).
We then coded the screenshots using NVivo.

We will now describe the virtual world we studied (WoW), the social movement (LGBT), and
tell the co-evolution story.

8.6. World of Warcraft
Blizzard Entertainment®, established in 1994 and based in Irvine, California, is a developer
and publisher of several popular games including World of Warcraft®, StarCraft® and
Diablo®. It also maintains one of the largest online-game services, Battle.net®, which has millions of active users. In 2011, Blizzard’s parent company, Activision Blizzard reported a profit of $1.08 billion on revenues of $4.76 billion (Gamespot 2012). Blizzard employs more than 250 designers, producers, programmers, artists, and sound engineers (Blizzard 2013a). Blizzard’s mission statement is “dedicated to creating the most epic entertainment experiences...ever” (Blizzard 2013b).


World of Warcraft (WoW), the massively multiplayer online role playing game version in the Warcraft series, was released in 2004. Since then WoW has evolved with various expansion packs: The Burning Crusade® in 2007; Wrath of the Lich King™ in 2008; Cataclysm® in 2010; and the latest expansion Mists of Pandaria® in 2012. All versions of the game are set in the same Warcraft Universe, which has an elaborate storyline, some of which have been written into novels, and is carried throughout all versions of the game.

Some important characteristics of WoW are as follows. When a player starts a new character in the game, they first have to decide what server to play on. A server (also called a realm), is the game world which exists for several thousand players within it. Every server in the game has exactly the same copy of the software; however each server has its own characters (players) who are tied to that server. It is possible for avatars to interact directly with other player’s avatars on one’s own server, but not with players on other servers (although simple chat between servers is possible).

The world in which WoW is set is named Azeroth, which is divided up into zones (similar to countries). Each zone is suited to characters of a certain level. Once a character is created, they can then be “born” into the world. Each new character starts at level 1. One of the most important activities in WoW is leveling a character. To achieve a higher level, the character must perform quests and kill in-game monsters which reward experience points. Once a character has earned enough experience points, they will “level up”. Leveling up increases the strength and power of the character, and allows them to learn new spells and abilities which may only be available once a character has achieved a certain level. Leveling is also important because it allows a character to travel around Azeroth. Each zone has a certain
level range, for example 10-20, which means players below level 10 are not yet strong enough and may easily die if they enter, while players over level 20 will not earn many experience points if they remain in that zone. Rettberg (2008) and McKenna et al. (2010c) have described quests and leveling in more detail.

WoW provides a system where players group together into guilds. Guilds consist of several players with similar interests within one of the two in-game factions (Alliance or Horde), who provide opportunities for assistance with quests, social interactions, and protection from rival factions (Brignall and VanValey 2007). If any group in WoW wishes to form a long term group, they must form a guild.

8.7. The Social Movement

The social movement we studied is the Lesbian, Gay, Bisexual, and Transgender movement, hereafter referred to as LGBT. LGBT aims to create awareness for LGBT issues, both inside the game and out. To preserve anonymity, all names in the following sections are pseudonyms. By early 2013 LGBT had over 7,800 members (players) in WoW and had over 15,000 characters (it is possible for one player to have multiple characters). LGBT was established on a WoW server in October 2006 to “better service the LGBT community and offer a safe, inclusive place to game for members of any sexual orientation or gender identity” (LGBT movement website, 2010). The server where LGBT is located has become the un-official LGBT-friendly server. Blizzard initially disallowed LGBT-guilds as they saw it as a form of discrimination. Eventually, after complaints from LGBT players, Blizzard allowed these guilds to exist. As a result, the LGBT movement within WoW began to grow.

LGBT within WoW consists of one main guild and several smaller sub-guilds. Each sub-guild has varying membership sizes, however in 2010 sub-guild 1 had the most characters. When discussing the structure of LGBT, it is important to distinguish between players and characters. A player can have multiple characters within LGBT and they could be spread out across multiple sub-guilds. When a player becomes a member LGBT, they can choose which sub-guild they want to belong to. Most players chose to join sub-guild 1, as it had the most members. Membership of these sub-guilds fluctuates greatly as individual players have the ability to move their characters between the sub-guilds as they see fit.
LGBT has a guild leader and officers, who are responsible for the day to day running of LGBT’s activities, such as creating invitations for new members, or disciplining members who break the guild charter. Due to the multiple sub-guilds, all officers must be an officer within each sub-guild so that they can all manage each sub-guild, and process invitations.

LGBT has been profiled in a number of gay and lesbian magazines and in a prominent WoW blog website. LGBT is a global social movement with members from many countries. LGBT also maintains a website with discussion forums. LGBT holds many regular activities inside WoW such as an annual pride parade with floats, model competitions, dance parties, group photographs, and events for Valentine’s Day. These events are generally organized by the leaders of LGBT, often with input from members via the discussion forum. They also organize member meetings in the real world, and have had meetings in Australia, Canada, and the United States. LGBT also has a sister guild called The Light on the same server.

8.8. The Co-Evolution Story

This section will discuss the biography of WoW and its co-evolution with the LGBT movement. We present four major changes in the social movement that were triggered by changes in the virtual world. These changes affected the structure and/or functioning of the LGBT movement within WoW and were triggered by patches or by other players within the game (non-members of LGBT). However, as we will see, the direction of influence was not always one way.

8.8.1. Change 1: Recruitment

Recruitment is a vital part of social movements, and LGBT is no exception. The first part of the recruitment process occurs outside of WoW. When a player wishes to become a member of LGBT, they must first make an application on the LGBT website. This application involves the player (non-member) reading and agreeing to the guild charter. The charter is a document which lists all the rules for being a member of LGBT, such as respecting all members of the community, and acting with respect as an ambassador of the guild by not bringing down the guilds reputation within the greater WoW community. Once the application is complete, a guild officer will review it and make a determination to accept or reject the application. If the application is accepted, an email is sent to the applicant informing of the next steps to receive a formal invitation to a guild. The guild invitation process is a technical requirement of joining any guild in WoW, and is not LGBT specific. It is the formal procedure to become part of any guild.
The second stage of the recruitment process takes place within WoW. Once a non-member’s application is approved, their status changes to an approved member, who must then log into WoW with the character he or she desires to join into LGBT. Before an approved member can become part of the in-game guild, they must receive an invite from the guild officers. The character must join a specific in-game chat channel called #LGBTInvite which was set up for members to wait for an invite. A guild officer also joins #LGBTInvite, and will have a brief chat with the approved member confirming that they agree to the terms and conditions of being a member of LGBT. The officer’s character will then create the formal invite. Once the approved member accepts the invite, then the approved member becomes a member of the guild. A new member may request to join one of the specific sub-guilds of LGBT.

The invite chat room was a feature of LGBT for many years, but over time many non-members with illegitimate intentions became aware of #LGBTInvite and spammed it. Problematization had been occurring for some time as the chat channel within WoW was constantly being discovered by another actor, non-members. Officers of LGBT struggled to distinguish between legitimate new LGBT members and non-members, so essentially LGBT lost control over the chat channel, and the use of it disintegrated. This culminates with the definition of the obligatory passage point. Leaders became aware that they would have to change their recruitment procedures in order to maintain the viability of the movement and continue growing membership.

Methods of translation began as leaders attempted to stabilise the network, with the aim of enrolling a new actor into the network, an external website chat system. On September 1 2010 the use of the existing in-game chat room had to be abandoned altogether. Interessement occurred as the leaders announced to the LGBT members the new invite procedures. The leader of LGBT announced the changes to the invite procedure to current members:

Leader: “In an effort to make our invite process smoother and more secure, we are revamping the way the invitations are handled. We will no longer be using an in-game channel such as LGBTInvite or LGBTlobby as our invite queue. We will instead be using the website chat feature, currently called "Invite Waiting Room", which can be found in the upper left section of the site. As before, this is not meant to be an
immediate invite feature, but rather a place where you can queue up to let officers know that you would like a character invited.”

The procedure for enrolling a new member into LGBT now consists of a different translation process. Problematization occurs as a non-member attempts to persuade other actors in the network (LGBT leaders) that they are worth dedicating resources to (leaders approving membership). In this instance, non-members wish to become members, while leaders wish to grow LGBT while ensuring that new members agree to the charter of the guild. Interessement occurs as the non-member makes an application on the website, which an officer must approve, thus creating an agreement between the non-member and the rules which govern LGBT. Following this the enrolment stage begins. An approved member must simultaneously log into both the website chat room, and log into WoW with their character. An officer will be in the website chat room and will have a brief chat with the approved member confirming that they agree to the terms and conditions of being a member of LGBT. After the approved member agrees, the officer (who must also be logged into WoW), uses his or her character to send the in-game invite to the approved members character. Once the approved member accepts the invite, then he or she becomes a member of the guild.

In this instance we see that the main recruitment process moved from within the virtual world to an external website, which had a chat feature installed. Therefore, the mobilization of the actor-network means that members now submit applications on an external website, rather than in-game. The recruitment process became a black box in that the process which was disrupted was reorganized and now resembles an organized whole.

At the time this change occurred it was possible for a new member to choose which sub-guild they wanted their character to be invited into. However, this soon changed, as we will now describe.

8.8.2. Change 2: Structure (Guild Sizes)

Patch 4.0.1 was released by Blizzard on 12 October 2010. This patch had a major impact on the structure of the LGBT movement within WoW. During beta testing of the expansion pack called Cataclysm, Blizzard became aware that the size of the guilds must be capped. Blizzard was implementing new systems to manage guilds, which contained complex systems which track the (gaming) contributions that an individual guild member makes to the guild. Larger guilds would place more strains on these systems. Therefore in order to allow the system to
run smoothly, they found that capping the size of guilds was necessary (problematization). Blizzard made the following announcement about the guild size caps.

“This new guild cap is being enforced for several reasons, but they all factor into a need to control guild sizes in light of new guild systems [...] powered by a series of complex systems that track the contributions of all guild members. The larger the guild, the bigger the impact on these systems. We found it necessary to determine a maximum guild size to ensure continued performance now and into the future. The new cap of 600 members is fully supported in the new guild system and that means that everyone will be visible in the UI [...]. We have pulled a large number of statistics to get to the 600 member cap for guilds and we are happy to say that this value covers more than 99.9% of all the active guilds in World of Warcraft.”

One week before the patch was due to be released: Blizzard announced to players that they would implement a hard cap on guild sizes at 600 members. Previously, there had been only a soft cap on guild sizes, with many guilds going over this limit. Once the patch went live, all guilds which exceeded this cap could no longer add new members until their number falls below the cap.

Patch 4.0.1 created problems for the LGBT movement because the main LGBT guild had over 3,500 players as of late January 2011. The LGBT leadership therefore needed to communicate with members about Blizzard’s changes to the system, and make the necessary translations to the structure of LGBT so it could continue to exist within the new technological ecosystem. The leadership of LGBT acted on the behalf of LGBT members to allow LGBT to remain as a “family” within the context of the changes imposed by Blizzard. The obligatory passage point is formulated as LGBT needing to evolve its organizational structure to take into account new technological configurations.

Blizzard gave only one week’s notice about this change. Blizzard justified the new guild size cap by saying that these changes to the system would affect only a small minority of the total player population. But this change would have large impact on LGBT which far exceeded the allowed number of guild members. This incident illustrates the power that Blizzard has over LGBT and other large guilds. The guild leader sent a message to all members outlining the problem.
“[..] Blizzard is instituting a 600-person hard cap on guild size starting in patch 4.0.1, which we expect to be released next week. [...] larger guilds will be 'completely supported', but they will not be able to invite new members. This is clearly a serious situation for us and we have been discussing this both amongst ourselves and with the larger LGBT population [...] If you want a toon [character/avatar] in the <LGBT> guild, NOW is the time to get your invite, as we won't be able to add anyone else to <LGBT> once the patch goes live.”

Following the announcement, members became very worried about the impact the member cap would have on LGBT. The leadership of LGBT initially thought they could get as many members who wanted to be in the sub-guild 1 invited before the patch went live, as afterwards adding new members would not be possible. The leadership believed that this translation approach was the key to getting around the problem. The leadership attempted to get members interested in joining their characters into sub-guild 1, as there were gaming benefits for doing so. Most players preferred to have their characters within sub-guild 1, since it had the highest player population, and was therefore easier to do game related activities. Over the next week, enrolment processes orientated around LGBT assigning officers to manage the large number of members who wanted their characters invited to the sub-guild.

Member: “I must say this makes me very tempted to throw all my toons in <sub-guild 1> now i REALLY dont like the fact that our LGBT family might missout on guild perks that another part of our guild has earned”

The discussion forum became very active with many members voicing their opinions on the potential impact this would have on LGBT. Staying together as a LGBT family was seen as indispensable to the vast majority of members. Many members began speculating on the changes which may happen. For example, some were thinking about alternative translation processes, such as splitting up LGBT, and what this would mean for gaming activities. Others started thinking about the characters they would like in sub-guild 1, and what they should have in other sub-guilds. However, many members thought it would be tedious to have characters in multiple sub-guilds, and attempting to discover which sub-guild other members may be in. Some members decided that they would move all of their characters from sub-guild 1 to one of the smaller sub-guilds. However, the main burden for coping with this change in structure was placed on the guild officers who took on the task of inscribing
certain programs of action. They spent a lot of time discussing how to handle the change, including chatting to the leaders of other large guilds (Chaos Legion, and Twilight Legacy).

Officer: “Right now we're focused on logistical planning, both in anticipation of the patch going live sooner rather than later.”

Officer: “Right now, we're really focused on getting our resources together, being engaged with the other major-uber guilds (notably Chaos Legion and Twilight Legacy) and ensuring we are not left out of the conversation with Blizzard.”

Officer: “We've actually been in contact with Twilight Legacy through the day, they are getting their arms around this issue as we speak.”

Many members took the opportunity to speak on behalf of other members and offered suggestions to the officers. The vast majority of suggestions were about splitting up LGBT into more sub-guilds, and many offered enrolment suggestions on how to do this. Some suggested sub-guilds based on the types of characters (warlock, hunters etc), while others suggested sub-guilds based on the physical world location of players, for example separate sub-guilds for members in Asia or Oceania. Members were also concerned about the large number of alternative characters (often called alts) within LGBT, and how they should be managed.

Member: “A few options that can be implemented could be a split between areas. An oceanic guild "LGBT Ocean" [...] maybe* or only one toon per account can be in <sub-guild I> and alts in {other} sub guilds? or a clean out of inactive toons?”

Member: “The best option would be to keep the existing LGBT guild (and everyone in it is lucky!) and setup a second guild and link them once again [using Chat2Chat]. That's the least hassle, anyway”

A lot of members were emotional about this change, and some were angry with Blizzard, especially given the short amount of notice given. Many members had the feeling that no matter the solution, LGBT would still remain like a family.

Member: “Just wanted to post some words of support for our Horde family...since this decision by Blizz has been so sudden, and has taken a lot of the larger guilds by surprise. LGBT - your leadership and Officers absolutely are listening to you, I know they labor over pretty much every decision that impacts your guild, and they will
definitely be working non-stop to come up with the best plan for the future of you all. We love you guys, and know that no matter what LGBT will still be the single largest LGBT guild in game for years to come -- have confidence in the folks who keep it organized, they've got your back.”

There was even some talk about members taking strike action against Blizzard (a social movement within a social movement). Players were also encouraged to post feedback to Blizzard.

Member: “Do you think to make Blizzard think if they do go through with this to call for us to do a one month suspension of WoW to show them how much we are concerned. Lets say it is 2,000 active accounts, if we even got half of them to do it we would hit them with a loss of %15,000. Not sure if they would feel it or not but its saying something.”

There was also some speculation about Blizzard’s true reasoning behind the change. There were also reports from players involved in the beta testing (of which the lead researcher was part of) that if a guild goes beyond 1,000 characters the user interface will crash.

Member: “I have heard two theories that make sense to me. 1) The cap is in place to prevent hundreds of people from joining large guilds simply to reap the benefits of joining, or to prevent guilds from randomly inviting as many people as possible to have as large a pool of perk-holders as possible. 2) The cap is in place to prevent overhead issues that have arisen with the new guild UI. This strikes me as essentially lazy, but I am not on Blizzard's dev team and therefore can't really make educated statements about their priorities.”

Member: “it's been proven in the current beta environment that guilds begin to see UI bugs and guild XP/perk issues at or around the 1000 member mark -- so yet again, this likely boils down to Blizzard's code not being ready for large member groups and the time it would take to re-write said code. Looking at it from a financial perspective, they want Cataclysm out for the holidays so that Activision gets the full impact of their investment in Blizz, as a result - large guilds get put on the back-burner [...] My worry for LGBT is, he's already calling large guilds 0.1% of the affected WoW population [indirectly via his statement "we are happy to say that this value covers more than 99.9% of all the active guilds in World of Warcraft" -- if that's the mindset they are
taking, if any guild XP or perks problems do exist for guilds currently over 600 when 4.0.1 goes live, how much attention will they get? IMHO, [...] Blizz owe LGBT, Twilight Legacy, Chaos Legion and all of the other larger guilds in game a better explanation on how this will impact existing over 600-member guilds when 4.0.1 does hit.”

LGBT and other large guilds argued to Blizzard that this change was not necessary and unfair. Blizzard initially refused to backtrack on their decision and in response posted the following announcement:

Blizzard: “While some players have used options including mods and custom chat channels to support large player and guild alliances that number multiple thousands, groups of that size aren't ideally suited to our design philosophy.”

However, following further complaints from LGBT members and others, Blizzard later announced that the cap would be increased to 1020 members.

A month after patch 4.0.1 went live, the leadership of LGBT realized that the initial translation approach of getting as many characters in the main sub-guild as possible had failed. The guild leader posted a message with more information about more organizational structural changes to be implemented.

Leader: “[...] all guilds are now capped at 1020 characters, [...] LGBT had about 6200 characters in it. Those characters were allowed to remain in the guild, but we are not able to invite any new characters to LGBT. [...] we are making some changes designed to eventually bring LGBT down below the cap without inconveniencing most of our members. These changes include: Actively removing toons that haven’t been played in 90 days or more, [...] and opening up a few more LGBT guilds and asking for people to voluntarily move [...] We will begin by reopening <LGBT sub-guild X>, and when Cataclysm hits we will be opening a new guild called <LGBT sub-guild Y>, [...].” (Message from guild leader, 19 November 2010).

It also became problematic to move characters around the sub-guilds after the patch went live. As each individual character reputation is tracked by the guild system, if a player moves their character to another sub-guild, the reputation measure is reset to zero, so the character is not be able to benefit from the rewards of having a high reputation. This had the potential to disintegrate LGBT, which forced LGBT to consider changes to its structure
(problematization). They began a new method of translation which involved inscribing the vision of LGBT leadership’s solution to the problem onto the general LGBT members. It was important for the LGBT leadership to realize the interests of the entire guild, not just individual members who may have voiced an opinion about the solution. Therefore they began to remove characters who were inactive for 90 days (i.e. had not logged into the game with that character). As a result of these actions, by late January 2011 the main LGBT guild had 3,500 characters (down from 6,200). Inactive characters were removed and many individual players began to speak on behalf of LGBT and volunteered to move their characters from sub-guild 1 to one or more of the other sub-guilds. By late October 2012, the main LGBT guild had 932 members, which brings it just below the guild size cap. By late May 2013 it had 881 characters. The number of sub-guilds increased from six to eleven. Recruitment of new characters was closed to sub-guilds which are above or near to the cap.

The restructuring of the sub-guilds solved the problem started by Blizzard’s implementation of Patch 4.0.1, but this now led to another problem: that of communication between the guilds. This new problem and its solution by LGBT is discussed next.

8.8.3. Change 3: Chat

One of the technical limitations of the chat feature provided with WoW is that members of one guild (even an affiliated sub-guild) cannot communicate with the members of a different guild. Hence one side-effect of Patch 4.0.1 is that the members of one LGBT sub-guild would no longer be able to communicate with the members of LGBT is another sub-guild. This “side-effect” actually threatened the viability of LGBT within WoW in its current form.

This is when the LGBT movement decided to adapt a different feature of WoW to its own advantage. WoW allows players to create and use third party add-ons to the game. Any player at their discretion may also install add-ons to assist with aspects of game-play. Many of these add-ons are freely available to download online and can easily be installed into the WoW client and configured for usage. Add-ons are used for a wide amount of reasons, for example assisting a player to navigate quests and raids, display extra map features, help players to auction of virtual goods, or to help players fight monsters.

To overcome the problem of communication within the various LGBT guilds, the movement developed an add-on for the game that joins the chat channels for multiple guilds. The new add-on, called Chat2Chat, enables all the guilds and sub-guilds to combine their chat channels as if they were one channel. Chat2Chat was developed by a member of LGBT and
is unique to LGBT, i.e. it is not used by other guilds within WoW. If a member is interested in seeing the chat of other sub-guilds, they must install Chat2Chat. Figure 8.2 illustrates how Chat2Chat functions.

![Figure 8.2 Sub-guilds cannot chat to each other (left), sub-guilds can chat to each other facilitated by the chat add-on Guild2Guild (right).](image)

In a nutshell, LGBT enrolled new technical actors into the network by creating several more sub-guilds to cope with the re-structuring efforts, increased the number of sub-guilds from six to eleven, and enrolled Chat2Chat to link together eleven guild chats.

Unfortunately, however, Chat2Chat ceased to work well after a new patch (Patch 4.1) was implemented by Blizzard. The leadership of LGBT was forced to find a new solution to link the chats of all eleven sub-guilds together. This was announced as follows (problematization):

Leader: “As you are all aware, the Chat 2 Chat (C2C) mod that we have been using to link all 11 of our guilds in a single guild chat has been pushed to its breaking point, and sometimes past it. We’ve all seen the echos, the repeats, and the relay switch loops. Hopefully, all of this is about to change.

We have been doing some limited testing on a mod [called GreenWall] that was originally developed by <Twilight Legacy> to bring together their 9 guilds. Our initial testing has shown great promise, and we would like to move toward the next step of getting our guild members to download this mod in anticipation of a guild-wide test sometime late next week.

We are hopeful that this mod will significantly improve guild chat and remove most, if not all, of the things we hate about C2C. C2C has served us well for quite a while now, and I would like to thank all of the LGBT members who have helped support it. We just
feel that GreenWall offers a more stable method of cross-guild communications and will serve us better moving forward."

LGBT thus enrolled another technical actor into the network, a new chat add-on called GreenWall, which was developed by another large guild within the game. The final point of this re-structuring process (including the restructuring process from the guild size cap to the chat add-on) is mobilization where the structure of LGBT becomes stable. LGBT was successfully split into sub-guilds, and all sub-guilds are now below the membership cap, but recruitment for new members into those sub-guilds with a high population has stopped. A new chat add-on was enrolled into the network to facilitate inter-guild chat, which LGBT has been using ever since. Therefore the current structure of LGBT becomes like a black box, as it now once again resembles an organized whole. The network has also become irreversible since after the patches go live, it is impossible for LGBT to revert back to its previous structure.

8.8.4. Change 4: Parades

LGBT periodically holds in-game social events. One of these is the annual pride parade. For the pride parade, some players temporarily change the gender of their character, and most players perform spells that create lighting and sparkling effects around their character. In July 2010, the movement held a dance party in the city known as Shattrath. In October 2010, the movement had a guild photograph. See Figure 8.3 for an illustration of these activities.

One interesting aspect of the pride parade is that both LGBT and its sister group participate. The sister group is from the opposing in-game faction to LGBT, and hence within the game they are supposed to be enemies. However, during the parade the two groups come together and march side by side. Although the ostensible purpose of WoW is for players to fight
various monsters and other enemies, during the parade members of LGBT are asked not to participate in fighting! In fact, fighting during the parade is frowned upon and grounds for expulsion from the parade. Similar requests are made during the dance party. Often non-members of LGBT come to watch the parade. During the dance party, an online radio station streams music through to participants. The first dance party we observed lasted for about six hours.

However, Patch 4.0.3a, nicknamed ‘The Shattering’, had a significant impact of LGBT’s pride parade. To fully understand this patch, it is necessary to understand some of the mythology incorporated into it. The following quote was extracted from the patch notes, and gives some background information (fictional mythology) to explain why the patch was implemented in the manner that it was.

“Without warning, the corrupted Dragon Aspect, Deathwing, erupted from the stone heart of Deepholm, the domain of earth within the Elemental Plane. Jagged fissures were torn across the earth, and monstrous waves pummeled coastal regions. From Thousand Needles to the Blasted Lands, the surface of Azeroth was reforged through violent upheavals. Now, the Horde and the Alliance must defend their homes against Deathwing and his minions, burdened by the unsettling fact that the world as they know it has changed... forever.” [Source: Introduction from Patch 4.0.3a notes].

This patch drastically altered the landscape of Azeroth. Some regions became flooded, while in others giant canyons were formed. This patch was part of a series of patches to implement the expansion pack Cataclysm. The patch notes for the changes to the landscape are in Table 8.4.

- Azeroth Shattered
  - Deathwing's return has had an immeasurable impact throughout the Eastern Kingdoms and Kalimdror. Players will notice drastically altered terrain, thousands of new quests from levels 1-60, and updated level ranges for some zones to improve the questing flow.

<table>
<thead>
<tr>
<th>Table 8.4 Patch 4.0.3a change</th>
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</table>

Until now the annual LGBT parade had taken place in the zone known as The Barrens, and begins at a small village called Camp Taurajo. It then marched north-east towards the town known as Ratchet. Here, the parade boarded a boat which took them across the ocean to a port town known as Booty Bay. Upon implementation of patch 4.0.3a, however, the land was
destroyed. Blizzard inscribed its designs into the game, saying that a large powerful dragon called Deathwing caused earthquakes, volcanic eruptions, and floods which reshaped the entire virtual world. This caused problematization for LGBT as the changes to the virtual landscape occurred in the same location as the pride parades.

The obligatory passage point becomes a question of how can LGBT evolve its parade procedures in order to continue to hold those parades in light of the altered landscape? The village where LGBT used to hold the starting location for the parade was destroyed, and the parade route which previously passed through flat plain lands became a deep canyon with flowing lava. Figure 8.4 illustrates how the land changed after the patch was implemented.

Since the parades are indispensable for LGBT, as these types of activities are for most social movements, the process of translation began as LGBT prepared to move the parade to a new location. The interessement of finding a new location was very high among all members of LGBT, and also came with some excitement. LGBT knew in advance that the parade in 2010 would be the last time in that virtual location, as the release date of The Shattering patch was well known. Enrolment processes were easily established, as LGBT had no choice but to find a new parade route, and all members were keen for this annual event to continue. A new parade route was discussed, and agreed upon by the leadership with consultation with LGBT’s sister guild, as they also participate in the parade.
For the parade in 2011, an entirely new parade route was *mobilized*. The parade route was established, and all members informed of the new route prior to the parade taking place. Figure 8.5 shows the old parade route compared with the new parade route. The new parade began at a small village known as Mor’shan Rampart. LGBT and its sister guild met at the Crossroads and then marched together south-east towards Ratchet, before taking the boat to Booty Bay. The annual parade took place in this location twice.
However, on May 21, 2013, Blizzard implemented Patch 5.3 which again forced LGBT to change its parade route. With the previous change in route, the parade remained within the same zone, and the finish location of the parade did not change. However, with patch 5.3 the change was more drastic. The zone now only allows level 90 players to battle in the area where the parade takes place, which causes problems for low level characters attending the parade. Therefore LGBT had to enroll an entirely new parade route. For the parade which took place on 23 June 2013, the parade started at the northern gates of Orgrimmar (one of the main cities in WoW) and marched through the city to the southern gate. From here the parade participants took a portal to transport them to The Shrine of Two Moons in the Vale of Eternal Blossoms, and from here marched towards Mogu' Shan Palace where they met up with the sister guild for the dance party. One key point of difference with this new patch is that LGBT and its sister guild no longer marched together, they only met at the end point of the parade for the dance party.
These parades are one of the most well-known activities of LGBT and hence *problematization* occurred over time as the popularity of the parades increased. As more players were attending the parades, it was placing an increased load on the servers which support the operation of the game. During the parade, a larger than normal number of players are logged into the server, and this creates a load on the server which causes delays and lags. Therefore a separate *translation* process had to begin in order to keep the parades running successfully. The *obligatory passage point* becomes: how does LGBT continue to hold its pride parade without causing the system to lag or crash? The leadership of LGBT proposed to members that the use of spells and other effects be limited and kept to a minimum in order to reduce the load on the server. The use of spells is especially discouraged when the parade waits at Ratchet to board the boat to Booty Bay. With such a large number of players present, with many simultaneously casting spells, it puts pressure on the game system, which causes significant lags, and occasionally the boat itself “crashes” due to overloading the system. This was no longer a problem from patch 5.3 as the boat is no longer used.

LGBT leadership proposed that players follow a few tips to make the parade better for everyone. They were asked to reduce the number of spells, turn off any non-essential game add-ons as some of them require a lot of memory, and reduce the video settings on the player’s own computer so it also does not struggle or crash with the intense load on the game servers. Although this is not a strict rule imposed on members, many of them became interested in the proposed solution, as they want the parade activity to be seamless, and do not want to cause lags for other participants. Therefore many members enrolled in this strategy and ceased using methods of expressiveness which cause these problems. These strategies themselves become *inscribed* into the parade process. Also, in a sense LGBT became the *spokesperson* for Blizzard. If a server crashes at any time, Blizzard has to spend resources to get it back online. If LGBT can reduce the load on the server by making a few changes to its processes, then ultimately this in turns helps Blizzard.

The parade process is *mobilized* and becomes a stable process, as the parade now takes place within a new virtual location. The parade looks like an organized whole, with the new virtual parade route. The parade route is *irreversible* (in the sense that LGBT members cannot use the old route which no longer exists) but the methods of expressiveness are not and the recommendations from the leadership failed to mobilize them, as members felt the need to express themselves in the easiest way possible within WoW. There are still a few parade participants who use spells, either because they do not care, or they did not read the
guidelines. During the parade, some leaders make general announcements in guild chat to reduce spell usage if they see it happening, but this is often unsuccessful. Members often feel excited during the parade, and tend to let off spells to express themselves.

8.9. The Evolving Network

The examples of the translation processes provided above illustrate how the artifact (WoW) has evolved over the course of this study. Figure 8.6 indicates a timeline of events throughout this study. Items above the axis indicate changes to the technological system, while items below the axis indicate LGBT specific social movement events which took place (specifically, those which the lead researcher attended).

![Figure 8.6 Timeline of events](image)

Figures 8.7 and 8.8 illustrate the evolving actor-network and show how the social movement changed over a period of three years (from the beginning of our study to the end). The network has evolved significantly, since the researcher first began interaction with LGBT. Changes from the previous actor-network are indicated by greyed out actors, dashed lines, or cross marks. One interesting feature is the increasing complexity of the actor-network over time, both within the virtual world and outside of it (the LGBT website).
Figure 8.7 Actor-network at the beginning of the study

Figure 8.8 Actor-network at the end of the study
8.10. Discussion and Conclusions

IT artifacts are complex and are constantly changing over time. Large scale IT artifacts co-evolve with their various users (Orlikowski and Iacono 2001). WoW is a large scale IT artifact which frequently undergoes changes in its configuration. These configuration changes via patches then change the way the system is used.

8.10.1. The Biography of WoW

As mentioned earlier, the Biography of Artifacts (BoA) approach was used to understand the evolving biography of WoW and how this shaped the social fabric of activities acting within this technological ecosystem. The virtual world that is WoW changed many times over the course of our study. Table 8.5 illustrates how the constructs of the BoA approach were applied in this study.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Biographical Approach</th>
<th>This Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>1. Multiple time frames of analysis</td>
<td>1. Patch history</td>
</tr>
<tr>
<td></td>
<td>2. Longitudinal studies</td>
<td>2. Netnographic (3 years)</td>
</tr>
<tr>
<td></td>
<td>3. Novel forms of study</td>
<td>3. Follow a social movement in a virtual world</td>
</tr>
<tr>
<td>Space</td>
<td>1. Multiple locales</td>
<td>1. Players are geographically dispersed, but virtually same location</td>
</tr>
<tr>
<td></td>
<td>2. Overlapping arenas</td>
<td>2. In-game (WoW), and external website</td>
</tr>
<tr>
<td>Actors</td>
<td>1. Theoretical and empirical understandings</td>
<td>1. NSM, ANT, empirical data</td>
</tr>
<tr>
<td></td>
<td>2. Follow through time and space</td>
<td>2. Follow the actors within the virtual world, and over time</td>
</tr>
<tr>
<td>Technological Field</td>
<td>1. Intermediaries and experts</td>
<td>1. Add-ons</td>
</tr>
<tr>
<td></td>
<td>2. Study the social fabric and how it changes over time</td>
<td>2. Changes in technology influence changes in SM</td>
</tr>
<tr>
<td></td>
<td>3. More systematic study with the possibility of generalization</td>
<td>3. Generalize to other: Virtual worlds, social/business activities in virtual worlds.</td>
</tr>
</tbody>
</table>

Table 8.5 The BoA approach used in this study

The BoA approach is highly influenced by time, and particularly how a system evolves over various time points. In this study we explored how the system changed between system patches which were implemented at various times throughout the life of the system.

In the BoA approach, geographical space is used to examine system implementation across multiple implementations. In this study, the basic installation of WoW is the same no matter which server is being used and no matter how geographically dispersed the users may be. The
physical location of players is almost irrelevant. However, the virtual location of players is very important. For example, access to certain virtual places (zones) depends on the level attained by a player. Also, we saw that LGBT had to alter its virtual parade to a new virtual space after the implementation of a patch.

To understand the co-evolution of both the artifact and the social movement, it is necessary to understand the various actors involved within this context, and how they are impacted when changes are implemented. Although we have not used new social movement theory explicitly in this paper, we have focused our story around some key themes in NSM theory such as recruitment, social structure, communications and events (Buechler 1995; Melucci 1989; Pichardo 1997; Scott 1990).

The final construct of BoA is the technological field. Here we observed that members of LGBT became experts keeping LGBT alive and running within the virtual world. We saw that some members of LGBT helped to create game add-ons which helped LGBT to survive. We also observed how changes in the technology had a very strong influence on the way in which LGBT existed within the virtual world.

The biography of WoW reveals that it is constantly evolving. But as the technology changed, LGBT was forced to adapt and change as well. ANT helps us to explain the specific mechanisms by which the co-evolution of the IT artifact and the social movement took place.

8.10.2. Co-Evolution through cycles of translation

If we use the language of ANT, the co-evolution of the virtual world and the social movement can be viewed as cycles of translation. Following Rodon et al.’s (2008) example, we present each translation process in Figure 8.9. The translation goes through four phases (Callon 1986b), which begins with problematization. For example, the recruitment problem began with non-members spamming the in-game recruitment chat channel. The focal actor, LGBT leaders, proposed to move the chat channel outside of the game to an external website. In this case the translation process succeeded as the LGBT leaders were able to alter the recruitment process.
### Article V

#### Recruitment

<table>
<thead>
<tr>
<th>Problematization</th>
<th>Interessement</th>
</tr>
</thead>
<tbody>
<tr>
<td>P: Non-members spamming invite channel.</td>
<td>* Members are sympathetic towards the leadership's problems with chat spam.</td>
</tr>
<tr>
<td>S: Move invite channel out of the virtual world to an external website.</td>
<td></td>
</tr>
</tbody>
</table>

**Mobilization**

* Members now submit applications and chat to officers on the website.

**Enrolment**

* Close down virtual world invite chat room.
* Open up website chat.

#### Mobilisation

**Problematisation**

P: Guild size cap implemented.
S: Recruit as many new members as possible until patch goes live.

**Interessement**

* LGBT leadership encourages members that now is the time to get invites to the main sub-guild.

**Mobilisation**

Failed

**Enrolment**

* Large number of players enrolled their characters into the main sub-guild.
* Officers working overtime to invite characters in main sub-guild.

### Patch 4.0.1 - Impact: Guild Structure

<table>
<thead>
<tr>
<th>Problematization</th>
<th>Interessement</th>
</tr>
</thead>
<tbody>
<tr>
<td>P: Guilds will not receive the full benefits of the guild systems if their membership size stays above the cap.</td>
<td>* LGBT convinces members that something else needs to be done for members to receive guild benefits from new systems.</td>
</tr>
<tr>
<td>S: Reorganize the structure of the guild family.</td>
<td></td>
</tr>
</tbody>
</table>

**Mobilisation**

* Guild is reorganized.
* Chat2Chat is used to combine chat channels of sub-guilds.
* LGBT leaders inscribe the ideas of Blizzard into the LGBT membership so that LGBT can continue to exist.

**Enrolment**

* Ask LGBT members for potential solutions.
* Close recruitment for guilds with membership above guild cap.
* Begin character removal.

### Patch 4.0.3a - Impact: Parades

<table>
<thead>
<tr>
<th>Problematization</th>
<th>Interessement</th>
</tr>
</thead>
<tbody>
<tr>
<td>P: Changes to virtual landscape preventing parade from using original route.</td>
<td>* LGBT knew in advance of pending changes to the virtual landscape.</td>
</tr>
<tr>
<td>S: Alter the parade route.</td>
<td>* Excitement during 2010 parade as it would be the last time at that virtual location.</td>
</tr>
</tbody>
</table>

**Mobilisation**

* 2011 parade takes place in new virtual location.

**Enrolment**

* Decide on new parade route.

### Problematization

P: Server crashing or lagging during parade.
S: Reduce spells and turn off non-essential game add-ons.

**Mobilisation**

Failed

**Enrolment**

* Cease using spells as a method of expressiveness.
If a translation approach succeeds it becomes irreversible, so that it becomes difficult to revert back to prior instances (Rodon et al. 2008). It is possible however that a translation approach may fail. There were two examples of this that we observed. The first was in patch 4.0.1 where the initial solution proposed by LGBT leaders in response to the guild size cap was to get as many members to join the main sub-guild as possible before the patch went live. After the patch was implemented, LGBT realized that they could not keep the membership level above the cap due to the new technical configuration. The second translation approach which failed was asking members to use fewer spells during the parades. From a social movement perspective, the leaders’ request went against the methods of expressiveness which are commonly seen in social movements. Members often feel excited and express these feelings. In a virtual world these are expressed through spells and other effects.

### 8.10.3. The Co-Evolution of the “Social” and the “Technology”

During problematization, an obligatory passage point (OPP) must be created in order to satisfy the interests of all the actors (Callon 1986b). In this study we have defined the OPP as evolution. By passing through the OPP, each actor within the network can avoid certain obstacles. For example, Blizzard’s goal is to “create the most epic entertainment experiences…ever”. To do this, it must constantly improve (“upgrade”) its game, in this case WoW. If the game does not evolve, then it faces the potential loss of profit and/or players.

As is shown in Figure 8.10, multiple evolutionally pathways may occur in response to each other. For example, in order to continue to make a profit, Blizzard needs to ensure that WoW maintains or increases its player base. Therefore it is in the interests of Blizzard to continue to evolve WoW, which is implemented through patches or expansion packs. However, in response to Blizzard evolving WoW, the LGBT guild was forced to pass through an OPP.

---

**Figure 8.9 Translation cycles through the co-evolution. Adapted from Rodon et al. (2008).**

<table>
<thead>
<tr>
<th>Problematization</th>
<th>Interessement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chat</td>
<td>P: Chat add-on (Guild2Guild) struggling to connect eleven sub-guild chats together.</td>
</tr>
<tr>
<td>Mobilization</td>
<td>S: Consider a new chat add-on to connect all sub-guilds together.</td>
</tr>
<tr>
<td>Enrolment</td>
<td>* Guild2Guild is turned off and Greenwall is now only recognised chat add-on.</td>
</tr>
<tr>
<td>P: Problem</td>
<td>* Ask users to install Greenwall.</td>
</tr>
<tr>
<td>S: Solution (which relates to the obligatory passage point)</td>
<td></td>
</tr>
</tbody>
</table>

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Co-evolution occurred as changes in the social movement were triggered by changes in the virtual world, and these changes were needed to ensure its survival.

Castronova (2005c) says that the designers of virtual worlds are gods and users of these worlds must follow whatever decisions they make. However, as we have seen, LGBT was able to overcome virtually all of the technological limitations imposed by Blizzard by co-evolving its practices. We saw that for LGBT to survive as a cohesive social movement within the virtual world, they had to pass through multiple OPPs by evolving their organizational structure and enrolling new actors into the network. The LGBT movement did so successfully and continues to survive and prosper to this day within WoW.

In summary, our study of the co-evolution of a technological artifact (the virtual world of WoW) and a social movement (LGBT) has demonstrated the following: First, virtual world changes (i.e. when a new patch is released) often lead to changes being triggered in a social

Figure 8.10 The OPP, some of the actors, their goals and the obstacles to avoid (based on Callon, 1986, and Rodon, 2008).
movement. The social movement may need to adapt to ensure its survival. Second, social aspects or social forces within the virtual world may also force the social movement to adapt and change. We saw this when the LGBT chat was spammed by non-LGBT members, forcing the movement to adopt new recruitment procedures. Third, although the designers of virtual worlds are almost like gods, social movements can sometimes overcome the decisions imposed on them by the designers. In our case this involved the LGBT movement creating add-ons or marching in a different location and changing the rules for the march. Fourth, the inhabitants of a virtual worlds can petition the gods (the designers) to change their mind about forthcoming changes to the virtual world. Although most of the time the designers may ignore the petitions, occasionally they listen, particularly if the petitions are loud enough. This was the case in our study, when Blizzard agreed to increase the cap on guild size initially proposed from 600 to 1020 (a 70% increase). Fifth, the virtual world may be used in ways which the designers did not originally intend. This is seen most clearly with the pride parade. Although the ostensible purpose of WoW is for players to fight various monsters and other enemies, during the parade members of LGBT are asked not to fight each other. In fact, during the pride parade enemies within WoW march together side by side.

We recognize that there are a number of limitations to this study. Firstly, we acknowledge that this study is based entirely on WoW, and hence the results may not necessarily generalize to other virtual worlds. A second limitation is that this study presents only one social movement. A third limitation is that Blizzard declined to participate in this study. Therefore, we have no input from them about their reasoning behind some of the changes they have implemented into the game. The only information we have from Blizzard is the information they have made public. Future studies could try to gain access to Blizzard, although this has proved difficult for other researchers (Nardi 2010). Future studies could also examine social movements in other virtual worlds to further deepen our understanding of this phenomena.

8.11. References
Article V


9. CONCLUSION

This thesis has explored social movements and virtual worlds through four main research questions, framed within the conceptual framework presented in section 1.9. The four research questions are presented in Table 9.1. This chapter will summarize the key findings using the conceptual framework, which was constructed through the five original articles presented in this thesis. Next this chapter will present an evaluation of the overall study. Then an evaluation of the methodological approach applied to this study will be presented, which is based on a set of netnographic criteria proposed by Kozinets (2010). I will also apply the set of principles for assessing interpretive research proposed by Klein and Myers (1999a). Next, the contributions of each individual article will be summarized, and finally the limitations of this research and directions for future research will be proposed.

<table>
<thead>
<tr>
<th>RQ1</th>
<th>How can we explain differences in player experiences?</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ2</td>
<td>What are the key issues when studying virtual world social movements?</td>
</tr>
<tr>
<td>RQ3</td>
<td>How do virtual worlds affect the organization of social movements?</td>
</tr>
<tr>
<td>RQ4</td>
<td>How do the technological artifact (the virtual world) and the social world (the social movement) co-evolve?</td>
</tr>
</tbody>
</table>

Table 9.1 Summary of research questions

9.1. Conceptual Framework

Qualitative research often begins with broad research themes, which set out the main areas of interest. As the researcher’s knowledge increases throughout the course of the research, these themes are refined (Carroll and Swatman 2000). This approach is evident within the conceptual framework, presented in Figure 9.1.
9.1.1. Stage 1: Explore the Virtual Arena

The research began with the simple premise of exploring virtual worlds. We entered a virtual world, WoW, with no preconceived research hypotheses or propositions. The purpose of this stage was simply to explore WoW. After some time interacting with the general player population we eventually arrived at a research question which centered broadly around player experiences. The research question in this stage became:

*Research Question 1:* how can we explain differences in player experiences?

This research question was addressed in Article II. This paper suggested that Chaos Theory can be applied to a virtual world such as of WoW. Although WoW has rules and is defined by the limits of its programming, the introduction of human players into the game extends the limits of the game and introduces a range of play experiences. Social behavior is often hard to predict and hence virtual worlds such as WoW may be inherently chaotic.

Interactions in WoW take many forms, from a solo player completing a quest and interacting with the environment, to raids where players must cooperate together. We believe that these interactions are inherently chaotic, in the sense that the game experience is significantly different from player to player. Game scenarios vary depending upon play style and how groups are coordinated. Every player who logs into WoW is likely to experience the game differently from any other player and ultimately arrive at different outcomes.
Conclusion

We became aware that the limits of the game can be extended by introducing social behavior into the game. This further motivated us to explore what other limits to the game may be extended beyond that which the designers intended.

9.1.2. Stage 2: Understanding Social Phenomenon

During stage 1, we became aware of social activities taking place in WoW. One of those social phenomena is social movements. WoW is designed as a game to kill monsters and fight against your enemies. However we observed that the game is being used in other ways. We became aware of several social movements which were operating within WoW. For example we found a Christian social movement which meets in-game and prays together before going out to kill monsters. There are other make believe religious movements which exist only within WoW. Through a literature review of virtual worlds, virtual communities, and social movements, we answered our second research question.

**Research Question 2:** What are the key issues when studying virtual world social movements?

As social movements move into the virtual arena, a greater understanding of the relationships between social movements and virtual worlds is required. In Article III we presented a multi-dimensional research framework designed to address the major issues relating to the study of virtual world social movements. The purpose of this framework is to address the major differences in studying social movements in the virtual world versus the real world. Past research has argued that virtual worlds are a proxy to studying real world social phenomena; however we disagree with this and argue that there may be similarities as well as differences between the two.

9.1.3. Stage 3: Specific Examples

After we explored the virtual arena (stage 1), and conceptually understood the social phenomenon (stage 2), we explored specific examples of the conceptual framework presented in stage 2 within the virtual arena described in stage 1. Firstly we set out to explore the organizational differences between real world and virtual world social movements. Our research question became:

**Research Question 3:** How do virtual worlds affect the organization of social movements?
Article IV examined how social movements are now organizing themselves in virtual worlds. The use of virtual worlds enables social movements to engage in collective action on a global scale. Specifically, we have looked at the organizational aspects of NSM and applied this theory to LGBT. We found a number of differences and similarities when NSM is compared against real world and virtual world social movements.

We have seen, on the one hand, how social action in a virtual world is constrained by the designers and controllers of that world. We have also seen, on the other hand, how the members of a social movement can try to overcome the limitations of that world. Sometimes people can use the virtual world in a totally different way from what the designers intended. The most notable example of this is shown by some of the activities of the LGBT movement. WoW is a game where the whole point is ostensibly to fight against others, but LGBT uses parades and dance parties to promote “a safe, inclusive place” for members of the movement. It was during this immersion in the virtual world social movement that the researcher became aware of a constant struggle between the technical ecosystem (WoW), and the social activities occurring within it. Often LGBT had to make changes to its structure or processes as the virtual world it was acting within evolved. We set out to explore how the social and the technology co-evolve. As the technology is altered by its designers and new configurations implemented, this sometimes forces the social groups acting within the technological ecosystem to co-evolve with the technology. We found that the social movement was forced to change the way it acted within the virtual ecosystem multiple times over the course of this study. This encouraged us to formulate a new research question.

**Research Question 4:** how do the technological artifact (the virtual world) and the social world (the social movement) co-evolve?

Combining NSM with ANT, alongside a BoA approach, Article V examined the concept of co-evolution by addressing the issue of how changes in technical configurations of virtual worlds impact the social fabric of activities which occur within these technological ecosystems.

**9.1.4. Methodological Approach**

Underlying the conceptual framework and Articles II-V is the methodological approach used in this thesis. As the methodology underlies the entire conceptual framework, it does not
contain a specific stage in the conceptual framework. Article I explained the netnographic approach employed in this thesis.

Article I suggested a new research method called netnography as being appropriate for the study of virtual worlds. This article presented a modified version of netnography which we think better fits exploratory studies within this new form of media. The key modification was the addition of an initial stage to the research process, which we have called *enter the virtual arena (setting the context)*, which matches to Stage 1 of the conceptual framework. This enables the researcher to have a strong understanding of the context for the study. We believe that this modified process can also be applied to other forms of social media, not just virtual worlds. For example a researcher examining Facebook, or YouTube, should become a user of these sites to gain a full understanding before any research questions are developed.

Article I also discussed the new forms of digital texts (Urquhart and Vaast 2012) available to a research, in particular we discussed the use of images as a data source (Andrade and Arthanari 2009). Virtual worlds are highly graphical, and we believe that a study which does not use images as a data source may overlook some important phenomenon. Information Systems researchers do not commonly use images, but we concur with Andrade and Arthanari (2009) they should play an important role during research projects, and authors should consider using images alongside their written text.

Article I also discussed the use of automatic qualitative data analysis software, Leximancer. As the quantity of textual data in online forms is increasing, we need to find new ways to manage and analyze this data. We presented our approach to this problem by using machine learning software to automatically discover key themes in vast quantities of text.

As we have employed a netnographic approach to this study, the next section will conduct an evaluation of this study using the netnographic evaluation criteria proposed by (Kozinets 2010).

**9.2. Evaluation of this Study**

It is important for researchers to have a set of guidelines to which they can judge the quality of their research. An evaluation of this research project is provided below.
9.2.1. Evaluation of Netnography

This study has presented a netnographic study of social movements in virtual worlds. Therefore, we will evaluate the larger study against the netnographic criteria proposed by (Kozinets 2010). A summary of these criteria are presented in Table 9.2.

<table>
<thead>
<tr>
<th>Criterion Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coherence</td>
<td>Interpretations are free from contradictions and present a unified pattern</td>
</tr>
<tr>
<td>Rigor</td>
<td>The text should adhere to the procedures and standards of netnographic research</td>
</tr>
<tr>
<td>Literacy</td>
<td>The text recognizes relevant literature</td>
</tr>
<tr>
<td>Groundedness</td>
<td>The theoretical representation is supported by data and links between data and theory are clear and convincing</td>
</tr>
<tr>
<td>Innovation</td>
<td>The text provides creative ways of understanding systems, structures, experience, or actions</td>
</tr>
<tr>
<td>Resonance</td>
<td>A personalized and sensitizing connection with the social phenomenon is gained</td>
</tr>
<tr>
<td>Verisimilitude</td>
<td>A sense of believable and lifelike cultural and communal contact was achieved</td>
</tr>
<tr>
<td>Reflexivity</td>
<td>The text acknowledges that the role of the researcher is open to alternative interpretations</td>
</tr>
<tr>
<td>Praxis</td>
<td>The text inspires and empowers social action</td>
</tr>
<tr>
<td>Intermix</td>
<td>The text takes into account the interconnection of various modes of social interaction – online and offline – the community member’s daily lived experiences.</td>
</tr>
</tbody>
</table>

Table 9.2 Netnographic evaluative criteria (Kozinets 2010 p. 162)

These criterion were used to analyze my research project as a whole. My evaluation of these criterion is presented in in Table 9.3.

<table>
<thead>
<tr>
<th>Criterion Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coherence</td>
<td>Articles II-V present a coherent story within the context of the conceptual framework. There are no contradictions about social interpretations throughout the articles.</td>
</tr>
<tr>
<td>Rigour</td>
<td>The study was conducted with the standards of netnographic research. Article I proposed an updated netnographic approach which adds value to the original netnographic methodology.</td>
</tr>
<tr>
<td>Literacy</td>
<td>A thorough literature review was undertaken in chapters 2 and 3 of this thesis which presented literature based on social movements and virtual worlds. This literature review was carried through all the articles.</td>
</tr>
<tr>
<td>Groundedness</td>
<td>Articles II, IV, and V were empirical works. Theoretical findings were presented alongside the participant observations, and rich textual and image data support the multiple theoretical underpinnings of this research.</td>
</tr>
<tr>
<td>Innovation</td>
<td>Articles I-V have presented multiple contributions to theory, methodology, and practice.</td>
</tr>
</tbody>
</table>
Conclusion

<table>
<thead>
<tr>
<th>Resonance</th>
<th>The researcher has joined LGBT, followed their activities for three years, and has become familiar with their activities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verisimilitude</td>
<td>The text is written in such a way that the reader can understand a lifelike representation of the reality of LGBT in WoW.</td>
</tr>
<tr>
<td>Reflexivity</td>
<td>The researcher considered multiple interpretations. Please refer to section 9.2.2.6 for more details of the principle of multiple interpretations by Klein and Myers (1999a).</td>
</tr>
<tr>
<td>Praxis</td>
<td>This researcher has strived to provide the reader with an understanding of how virtual worlds can impact social movements, and in some circumstances, make them have atypical social movement characteristics (see Article V).</td>
</tr>
<tr>
<td>Intermix</td>
<td>This research has not considered the intermix of the online world and the offline world of LGBT members. However, we acknowledge that this could be an interesting avenue for future research.</td>
</tr>
</tbody>
</table>

As can be seen, I believe my research project meets all of the criteria for netnographic research proposed by (Kozinets 2010).

9.2.2. Evaluation of Interpretive Research

The purpose of this section is to evaluate the larger study using the principles of interpretive field research by Klein and Myers (1999a). This section will review the entire study as a whole, but will provide examples from the individual articles. The principles of Klein and Myers (1999a), are summarized in Table 9.4.

<table>
<thead>
<tr>
<th>Principle</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Fundamental Principle of the Hermeneutic Circle</td>
<td>This principle suggests that all human understanding is achieved by iterating between considering the interdependent meaning of parts and the whole that they form. This principle of human understanding is fundamental to all the other principles.</td>
</tr>
<tr>
<td>The Principle of Contextualization</td>
<td>Requires critical reflection of the social and historical background of the research setting, so that the intended audience can see how the current situation under investigation emerged.</td>
</tr>
<tr>
<td>The Principle of Interaction Between the Researchers and the Subjects</td>
<td>Requires critical reflection on how the research materials (or “data”) were socially constructed through the interaction between the researchers and participants.</td>
</tr>
<tr>
<td>The Principle of Abstraction and Generalization</td>
<td>Requires relating the idiographic details revealed by the data interpretation through the application of principles one and two to theoretical, general concepts that describe the nature of human understanding and social action.</td>
</tr>
<tr>
<td>The Principle of Dialogical Reasoning</td>
<td>Requires sensitivity to possible contradictions between the theoretical preconceptions guiding the research design and actual findings (“the story which the data tell”) with subsequent cycles of revision.</td>
</tr>
</tbody>
</table>
The Principle of Multiple Interpretations
Requires sensitivity to possible differences in interpretations among the participants as are typically expressed in multiple narratives or stories of the same sequence of events under study. Similar to multiple witness accounts even if all tell it as they saw it.

The Principle of Suspicion
Requires sensitivity to possible “biases” and systematic “distortions” in the narratives collected from the participants.

Table 9.4 Principles of Interpretive Field Research (Klein and Myers 1999a p. 72)

In the following sections, each of these principles will be discussed in relation to this study.

9.2.2.1. The Fundamental Principle of the Hermeneutic Circle
Hermeneutics is the underlying philosophical assumption of interpretive research (Boland 1985). This principle suggests that a thorough understanding of human activities is achieved by considering the interdependent meanings of parts and the whole that they form (Klein and Myers 1999a).

The hermeneutic circle refers to the relationship between the understanding of the whole text, and the understanding of its parts (Gadamer 1976). Article II presented some individual parts of WoW, i.e. questing, raiding, factions, cities, zones (friendly/unfriendly), PvE, PvP. Without these individual parts, we would not have a full understanding of the pride parade presented in Articles IV and V. We would have no idea what it means (in the game) to have two opposing factions marching side by side in the parade. In a gaming sense these players should be fighting each other, however for the purposes of the parade, and to promote the greater cause (gay rights), they refrained from usual gaming activities. Similar activities happened for the dance party.

The analysis of specific social movement activities, as presented in Article III, enabled us to understand specific examples of issues which impact social movements in virtual worlds. Simply just looking at the whole social movement in a virtual world is not enough analytically, although it provides us a glimpse at social phenomenon within virtual worlds. To gain a full understanding of this social phenomenon it was necessary to examine what specific parts of social movements are impacted by virtual worlds. We examine specific issues such as strategies and campaigns, movement organization, and recruitment processes. An analysis of these individual parts of a social movement was necessary to gain a full understanding of the whole social movement phenomenon.

The use of ANT in Article V also helped us to achieve a hermeneutic understanding. ANT helps the research to examine an entire actor-network from minute detail as well as the
network as a whole. For example in Article IV we can look at LGBT as a single guild. We can also examine the individual actors which make up LGBT. For example the sub-guilds, players, recruitment processes, guild chat, add-ons, parades, and other social events. This enabled our interpretations of the research problem to be analyzed at a fine level of detail. It is not enough to just consider LGBT as a whole. As the technology changed, it was necessary to consider the individual parts of LGBT which were forced to change, for example the re-organization of the guild structure. We can then return to interpreting LGBT as a whole to see how it operates within WoW after changes have been implemented.

9.2.2.2. The Principle of Contextualization

The hermeneutic concept of historicity implies that our interpretation of a text is based on historical context (Myers 2004). Furthermore, it suggests that an interpretive researcher needs to be aware of the historical context of the phenomenon being studied. The context needs to be made explicit, and should aid in sense making for the story (Myers 2013). In this study, we have focussed on LGBT which is a gay rights movement. In section 1.3 we defined the scope of this study, which included a description of the gay rights movement. We provided a brief history of the movement, discussed some issues around gay and lesbian rights, and then presented a world-wide perspective by listing the counties where homosexual acts are legal or illegal. Finally, we presented what is the most current issue of the gay rights movement, marriage equality. This study also considered the research by Cabiria (2008) who explored how virtual worlds can act as safe havens for gays and lesbians, and other marginalized people where they can develop positive coping skills, and explore their identities. The concept gave us the backdrop to the whole study.

The hermeneutic concept of autonomisation and distanciation also helped with this principle. Autonomisation means that once speech is inscribed into text, it has an autonomous, objective existence which is now independent of the author. Once something is in the public domain, or has been published, it is often difficult to take it back (Myers 2013). Distanciation refers to the distance that occurs between time and space from when the text was spoken or inscribed, to the readers of the text. It is never possible to fully understand the author of the texts true meanings, the goal of hermeneutics is to make the interpretation of the text our own (Myers 2013). As this study did not include interviews as a data source, the interpretation of text was taken solely from data collected through participant observations, or through material collected from online sources such as discussion forums or chat logs. With particular
reference to the latter, this material, once written cannot be taken back. This is particularly true with chat, as once something has been said, it cannot be unsaid. Discussion forum posts were collected back to 2006, which is prior to when the researcher joined LGBT in 2010. Therefore careful interpretation had to be done to ensure the researcher presented a true interpretation of reality (in this case history). This was achieved by aligning discussion forum posts with events in the history of WoW and LGBT, such as chat logs.

The interpretation of the text had to be “made our own”, particularly because Blizzard refused to participate in this research. Below is their response to the request for Blizzard’s assistance with this research:

“Thank you for your inquiry. Please understand that we receive a large number of requests for research assistance, and unfortunately we do not have the resources available to provide this help.

We wish you the best on this project, and thank you for wishing to include us in this research.” (From Blizzard Public Relations office, 22 September 2010).

We are not the only researchers to have trouble gaining access to Blizzard, similar requests by Nardi (2010) also resulted in refusal. In this case we had to make do with the data that we had available. As we had no input from Blizzard, we were forced to rely solely on our own interpretations of the text.

9.2.2.3. The Principle of Interaction between the Researchers and the Subjects

One of the difficult tasks of interpretive research is the task of accessing other people’s interpretations, filtering them, and reporting on these interpretations to others, sometimes even back to the research participants (Walsham 1995). Therefore, an interpretive researcher must decide on their own role in this complex human process. Walsham (1995) considers two roles, that of the outside observer and that of the involved researcher. However, both of these roles consider the subjectiveness of the researcher. Walsham (1995) suggests that the choice of either role be consciously made by the researcher dependent on the advantages and disadvantages of each role. Walsham (2006) changes his opinion slightly on this and now sees it as more of a spectrum, which may change over time.
Ethnographic research, with its participant-observation approach, tends to fall within the involved researcher side of the spectrum. However we took the spectrum approach recommended by Walsham (2006). While still at the involved researcher side, this research is not at the hard end of this spectrum. This allows us to balance off some of advantages and disadvantages of either approach. By moving slightly towards the outside observer side of the spectrum, we did not have the problem of participants being less open and honest with us as researchers. This approach also allowed us to not become too closely socialized with the views of the participants which gave us the ability to have a fresh outlook on the phenomenon.

This exploration of social movements in virtual worlds applied the interpretive approach for analyzing and using qualitative data obtained during the longitudinal immersion and participant-observation with LGBT. This allowed for an in-depth understanding of the phenomenon, which provided the foundations for this exploratory study of the interactions between the social movement and the technological ecosystem in which LGBT is “living” in. The interpretive stance has the assumption that reality is socially constructed and cannot be studied in isolation of the social actors involved in its construction. Therefore this study focused on these actors (users, and technology) as a source of evidence about the phenomenon. The in-depth understanding in this study was formed by our subjective interactions with LGBT within WoW.

The hermeneutic process of appropriation implies that we only come to understand the meaning of a text if we make it our own (Myers 2013). Appropriation is essential for understanding to take place (Myers 2004). Meanings emerge from the researcher being engaged with the text, and as this engagement unfolds both the reader and the meaning of the text are changed. The process of critical engagement with the text is crucial (Myers 2013). For example, during the mid-stages of this research we began to question our own assumptions about Blizzard. Initially, when we discovered that Blizzard was imposing changes on the virtual world which affected LGBT, we interpreted this in a negative way. We thought that Blizzard was being unfair to LGBT and even discriminatory towards them. However, as we engaged more with the text, and particularly with the responses from Blizzard and their public announcements, we began to see their point of view. Blizzard is there to make a profit, and to not lose its player base. The changes it made to WoW were done not to discriminate against LGBT, but to keep the general player population excited so
they don’t switch to a new game. The implications that these changes had on LGBT were side-effects of the changes, rather than acts of discrimination.

9.2.2.4. The Principle of Abstraction and Generalization

According to Klein and Myers (1999a), field studies should be carefully related back to theoretical abstractions and generalizations so that readers can follow how theoretical insights were gained by the researchers. According to Walsham (1995), there are four types of generalization from interpretive research: the development of concepts, the generation of theory, the drawing of specific implications, and the contribution of rich insight.

Theories in interpretive research are used differently than theories in positivist research. Interpretive researchers do not aim at “falsifying” theories, but tend to use theories as a “sensitizing device” which allows the researcher to view the world in a particular way. In Information Systems, interpretive researchers tend to use social theories such as structuration theory or actor-network theory rather than generalizing to philosophically abstract categories (Klein and Myers 1999a).

The usage of theory in this research has taken the approach of Klein and Myers (1999a) by using theory as a sensitizing device, which in turn gave us rich insights into the social phenomenon. This research has employed multiple theoretical perspectives. In Article II, Chaos Theory was used to describe the way they game is played. In this study, Chaos Theory was used as an initial guide to designing the study and data collection. Data was collected based on the theoretical constructs well known in Chaos Theory. Article IV was similar in that it used the ideas of New Social Movement Theory (NSM) to describe the aspects of social movements. Similarly to Walsham and Sahay (1999), our theoretical perspective evolved over time. In article V the theoretical perspective used NSM as a base; however we considered other theoretical combinations of structuration theory (Giddens 1984; Orlikowski 2000), social informatics (Kling 2000; Kling et al. 2005), and sociomateriality (Orlikowski and Scott 2008), before finally settling on actor-network theory (Callon 1986b; Latour 1987). They key choice of theory relates to the best match or fit with the research problem under investigation (Myers 2013).

9.2.2.5. The Principle of Dialogical Reasoning

The hermeneutic concept of prejudice suggests that prejudice, pre-judgement, or prior knowledge is important to our understanding. Researchers should be aware of the social
conventions, rules of grammar, and vocabulary to have an understanding of what should be said or not said (Myers 2013). To confront the prejudices held by the researcher, he spent some time speaking with members of the gay community in New Zealand (personal friends of the lead researcher). The lead researcher constantly sought clarification from these members, to become aware of the important social conventions of the gay community and becoming familiar with the terminology used by the gay community. This included understanding what gay rights movement events happen in New Zealand, such as the annual Big Gay Out (a fair day held in Auckland), and the Hero parade (a pride parade), which recently returned in 2013 after being cancelled in 2001. The use of technology by the gay community was also discussed, for example Grindr (pronounced: grinder) which is a gay dating app for iPhone and Android.

9.2.2.6. The Principle of Multiple Interpretations

This principle requires that the researcher document multiple viewpoints within the social context being explored (Klein and Myers 1999a). In Article IV, we presented how some members of LGBT come from countries (or states) where governments ban homosexual acts, while others may come from countries that allow same sex marriage. This brings a wide range of real world issues into the movement. Some of the issues discussed in the movement include:

- Gay marriage;
- Cures for HIV;
- Support for shelters for LGBT youth;
- Gays in the military;
- Local politics/elections;

Not only does the movement deal with real world issues, but also issues inside the game. For example, WoW provides the functionality of allowing players to join group events to kill powerful monsters. Often this brings many different players together. One member of the LGBT movement discussed issues relating to homophobic language in these events. Another example of an in-game issue related to the design of the actual game. The game consists of pre-defined conversations with non-player characters (NPC). A player can click on an NPC and then a dialogue box will appear displaying some text said by the NPC. One LGBT member commented on how one of the NPCs makes a homophobic joke: "Homonized? No thank you, I like the ladies". Another member jokingly responds that this is discrimination.
Although this post was meant to be light-hearted, it demonstrates that the virtual world itself contains potentially discriminatory comments predefined by the designers of the game.

In Article V, we presented how members of LGBT presented different solutions to the change in guild size caps. Originally, and based on the first piece of information supplied by Blizzard, LGBT leaders proposed certain solutions, while other members proposed other solutions. Later, after Blizzard implemented the patch, LGBT leadership realised their original solutions were unviable, and therefore chose a different path to solve the problem.

9.2.2.7. The Principle of Suspicion
The idea behind the principle of suspicion is the researcher’s discovery of “false preconceptions” which requires a critical analysis of the text (Klein and Myers 1999a). However, Klein and Myers (1999a) also acknowledge that there is disagreement among interpretive researchers concerning the extent to which social research can (or should be) critical. Therefore, they leave it open that some interpretive researchers do not choose to follow this principle in their research. We have taken this approach in this research, as we did not examine the text from a critical standpoint. However, we acknowledge that there is a potential in this research for critical analysis of the phenomenon, which could be addressed in future research.

9.3. Contributions
This study has attempted to explore the phenomenon of social movements in virtual worlds, and has made multiple contributions to theory and methodology, as well as practical contributions towards game designers, game users, and to social movements. These contributions were mentioned in each of the individual articles, and will be summarized here.

9.3.1. Contributions to Theory
This study has made multiple contributions to theory. In Article II we suggested that Chaos Theory (Gregersen and Sailer 1993; Kellert 1993; McBride 2005; Pickover 1994; Williams 1997) can be applied to a virtual world such as of WoW. Although WoW has rules and is defined by the limits of its programming, the introduction of human players into the game extends the limits of the game and introduces a range of play experiences. Social behavior is often hard to predict and hence virtual worlds such as WoW may be inherently chaotic.

Interactions in WoW take many forms, from a solo player completing a quest and interacting with the environment, to raids where players must cooperate together. We believe that these
interactions are inherently chaotic, in the sense that the game experience is significantly different from player to player. Game scenarios vary depending upon play style and how groups are coordinated. Every player who logs into WoW is likely to experience the game differently from any other player and ultimately arrive at different outcomes.

In Article III, we examined the issues as social movements move into the virtual arena to provide a greater understanding of the relationships between social movements and virtual worlds. The first dimension in the framework presented three main issues of social movements: mobilization and recruitment of individuals (Edwards and McCarthy 2003; Jenkins 1981; McCarthy and Zald 1977; Staggenborg 2011; Tilly 1978); social movement organization (Pichardo 1997; Scott 1990; Tarrow 1994); strategies and campaigns (Goodwin and Jasper 2003; Staggenborg 2011; Tilly and Wood 2009). The second dimension in the framework presented three characteristics of virtual worlds re-worlding, re-embodiment, and multiperspectivity (Kozinets and Kedzior 2009). The multi-dimensional research framework was designed to address the major issues relating to the study of virtual world social movements. Of course, we do not claim to have addressed all of the current key issues in this area, however, the issues listed here are based on our review of the literature in the areas of sociology, virtual communities, and virtual worlds research. We believe our proposed framework is a potential starting point for researchers wanting to understand the relationships between social movements and virtual worlds.

In Article IV we further explored some of the key issues which were addresses in Article III. Researchers of social movements consider that social movements are ubiquitous in society, with some arguing that we live in a “movement society” (Meyer and Tarrow 1998) or a “movement world” (Snow et al. 2003). Specifically, we have looked at the organizational aspects of NSM and applied this theory to a virtual world social movement. We found a number of differences and similarities when this theory is compared against real world and virtual world social movements.

In Article V we further explored virtual world social movements by combining our analysis with ANT and a BoA approach. This article has contributed to the theoretical understanding of virtual worlds. It examined the concept of co-evolution by addressing the issue of how changes in technical configurations of virtual worlds impact the social fabric of activities which occur within these technological ecosystems. This study contributes a theoretical understanding of how the technological artifact itself (WoW), and the social phenomenon...
(LGBT) co-evolves over time. This article sets out some important implications for business as new forms of organizing are enabled by virtual worlds. We saw what changes in technology, or limitations with technology caused LGBT to have atypical social movement characteristics, such as the way methods of expressiveness became an issue during the parades. For organizations which operate within virtual worlds, these findings could begin to shed some light on the issues faced when operating within virtual worlds, and suggests that organizations need to be willing to co-evolve with any technological configurations imposed on them.

In line with the call to theorize the IT artifact by Orlikowski and Iacono (2001), we further theorized about virtual worlds, and in particular how the evolution of a virtual world (i.e. how the system changes over time), impacts the people who use it. This study contributed a theoretical understanding of how the technological artifact itself (the virtual world) and the social phenomena (a social movement) co-evolves over time.

9.3.2. Contributions to Methodology

This study has adapted the netnographic approach to studying new forms of social media. The key contribution to this was the addition of a preliminary stage, which sets out to explore the virtual arena which is under investigation. This helped us to understand the context of the virtual arena under investigation, as is recommended by Urquhart and Vaast (2012). Virtual worlds are an entirely new form of online media, and to understand the social dynamics of these worlds, it is important to first understand the broader context of the virtual world (Boellstorff 2012). Therefore, this initial stage in the updated netnographic approach acts as a precursor to the stages which follow it and sets the foundations and context for the remainder of the studies.

Another key contribution of this adapted netnographic approach is the identification of online communities before defining research questions. This allows the researcher to identify research questions which are based on online communities, rather than attempting to force the identification of online communities to fit the research questions. The adapted netnographic approach also allows for the iteration of defining new research questions after the researcher has engaged with the online community. Therefore, research questions can be further developed and refined as new information is gained from engagement with the online community.
We also contributed methodologically in two other ways. Firstly, we provided further examples of using images as a data source (Andrade and Arthanari 2009), which is not something that Information Systems researchers are familiar with. Secondly, we advocated for the use of Leximancer as a data analysis tool, which is useful for automatically coding large data sets. We provided examples of how we have used multiple data sources and analysis techniques to tell the story of virtual world social movements.

This study discussed several challenges when ethnographies move into virtual environments:

- Data collection: researchers are able to collect vast amounts of data;
- Data analysis: new methods to analyze and code vast amounts of data;
- Visual nature of the environments encourages the use of images as a data source;
- Combining multiple data sources to tell a convincing story.

9.3.3. Contributions to Users of Virtual Worlds

Our study may have some important implications for business as new forms of organizing are enabled by virtual worlds. For example, we can generalize some of our findings to organizations operating within virtual worlds. In fact, Greenpeace (a social movement organization) has protested the killing of penguins within WoW. For organizations which operate within virtual worlds, these findings could begin to shed some light on the issues faced when operating within virtual worlds, and suggests that organizations need to be willing to evolve if they want to continue operating in these virtual environments which may constantly be evolving.

9.3.4. Contributions to Social Movements

We saw what changes in technology or limitations with technology have caused the social movement to have atypical social movement characteristics, such as the way methods of expressiveness became an issue during the parades.

In particular, Articles III-V discussed some important issues for virtual world social movements. If a social movement wants to begin using virtual worlds to advance their cause, it is necessary for the movement leaders and members to be aware of virtual world characteristics which they could use to their advantage, or be aware of characteristics which could potentially be a hindrance to their cause. Social movements also need to be aware of the type of social movement their might use, i.e. a social virtual world, or a gaming virtual
world, as depending on the type, different limitations or affordances might affect the movement.

The use of virtual worlds enables social movements to engage in collective action on a global scale. The LGBT is a global movement, as is illustrated by Figure 9.2 obtained from the LGBT movement’s website. Each pin on the map represents an individual member of the LGBT movement. Virtual worlds could become a tool for further gaining distant members, as was discussed by Blodgett and Tapia (2010).

![Location of members of LGBT group](image)

**Figure 9.2 Location of members of LGBT group**

We are also aware of other social movements that have used WoW. For example in 2011, there was an event called ‘Running of the Gnomes’ which was used to raise awareness for breast cancer (Blizzard 2011). In 2008, there was a political rally in WoW for then presidential candidate Ron Paul (Holisky 2008). The findings from this research could provide further information to events like these.

### 9.3.5. Contributions to Game Designers

We concluded in Article II by emphasising that we do not consider chaos to be a negative aspect of virtual worlds. In fact, it is chaos which makes MMORPGs fun and enjoyable for players. Slight changes in initial conditions for a character ensure that every time the game is played the possible end points can be vastly different. We suggest that this may have contributed to the success of WoW. The practical implications of this paper is that it suggests developers of MMORPGs should ensure games remain fun and interesting by ensuring that game experience differs between players and characters each time the game is played.

### 9.4. Limitations and Future Work

This section will summarize the limitations and future directions of the research that were presented in the individual articles.
Firstly, we acknowledge that this study is based entirely on WoW, and as such some of the results presented are very WoW reliant. A second limitation is that this study presents only one social movement. Future studies could examine other social movements in the same and/or other virtual worlds to further deepen our understanding of the relationships between virtual worlds and social and political change. A third limitation is that Blizzard refused to participate in this study. We therefore could get no feedback from them about why they chose to implement changes into the game in the manner that they did. A fourth limitation is that we were not able to undertake any interviews with LGBT members. Interviews are often used to cross check observations (Boellstorff 2008; Hine 2000; Nardi 2010). However, we believe we have successfully overcome this limitation by using other data sources such as discussion form posts and chat logs to cross check our observations.

We acknowledge that there are other theoretical perspectives that could be applied to this phenomenon. There are many theoretical approaches used in IS research. Three common theories are: sociomateriality (Orlikowski and Scott 2008); structuration theory (Giddens 1984; Orlikowski 2000), and actor-network theory (Callon 1986b; Latour 1987). Walsham (2006) recommends against choosing a theory simply because it is fashionable, therefore the choice of theory relates to the best match or fit with the research problem under investigation (Myers 2013). We believe the ANT is the most suitable theory for answering the research questions in this study. Future research could apply these theoretical approaches to the social movement phenomenon presented in this study.

Future studies could also examine the text from a critical perspective (Myers and Klein 2011). This research has not considered the intermix (Kozinets 2010) of the online world and the offline world of LGBT members. However, we acknowledge that this could be an interesting avenue for future research, including that of other social movements. Future research could also further extend the findings of this study to how virtual worlds affect organizations or government which may have a presence in virtual worlds.

LGBT has a presence in other virtual world games as well. These include, Star Wars: The Old Republic, Guild Wars 2, Wildstar, and Elder Scrolls Online. We also think it is important to look at LGBT as it operates in other virtual worlds. In fact, as this research was coming to a close, LGBT created a new website to combine all its virtual world games together into one site.
In this study we have focussed on only a selection of the macro, meso, and micro issues of social movements presented in section 2.3 of this thesis. Future research could examine other selections of issues. In particular, this study did not focus on micro issues, or why a social movement member decides to become involved in a social movement. Future studies could examine in further detail why someone chooses to become involved in a virtual world social movement, and if that has any impact on equivalent real world social movements.

This study has performed qualitative research on the internet using discussion forums, chat, and images to name a few. As more social activities are taking place online, we see it is important for IS researchers to understand how to leverage this information for organizations, competitors, for society, or for other online behavioral studies. More work is required on understanding online behavior, and particularly with multiple types of data.

9.5. Final Remarks

This chapter served to conclude the study. It concluded how we have explored the four main research questions framed within the conceptual framework. It then presented a methodological evaluation, and an evaluation of the interpretive nature of this research. Following this it summarized the contributions of each article. Finally, this chapter discussed the limitations of this research and presented some future research directions.

We have presented a thorough exploration of how a gay and lesbian social movement has used WoW, and seen how WoW is being used in a way which differs to what it was originally designed for. Instead of fighting each other, LGBT members are promoting peace to advance the real world gay rights movement. We have also seen how LGBT was forced to reorganize itself as Blizzard forced changes on the system. However, these changes were not always one-way as we saw how LGBT managed to petition Blizzard to increase the guild size caps. It is interesting to see the constant struggle between the designers of the game, and the users who act within it.

Finally, we can conclude that social movements, no matter what their cause, are finding new methods to express themselves or to raise their concerns on a local or global scale mediated by technology. Humans have always found ways to express their concerns, and we have reached the era where virtual worlds and social media are being used as tools for social movements. Going forward, we expect to see a greater number of social movements using a broader range of technologies for demonstration or raising public awareness for their causes. We might also see virtual social movements beginning to have an influence on policy
makers, or have stronger influences on the real world equivalents of these movements. As Snow et al. (2003) say, we live in a “movement world”, which as we have seen now includes virtual worlds.
# APPENDIX ONE

<table>
<thead>
<tr>
<th>Code</th>
<th>Supporting Text</th>
</tr>
</thead>
</table>
| Another Gay Guild | - I used to be in Stonewall Champions till about 2007 when I stopped playing WoW to focus on school/my career. I started playing again with a rl friend on Azuremyst in 2009 and recently transferred my character back to Proudmoore for Cataclysm and to reconnect with old guildies. Glad to be back and yeah, that's me in the pic.  
- The Alliance Guild your website was on their List of other LGBT Guilds  
- From Hofer when I was in Stonewall Family  
- From the Stonewall Family website.  
- It's been so long ago that I don't remember but heard about you through Stonewall Champions somehow.  
- from my alliance-side guild La Familia De Stonewall  
- realized there was a different between horde and alliance and that stonewall wouldn't take my blood elf, and realized u know, horde is better anyway >=]  
- Through my friends Lovi and Kerindra  
- Long story short, I was once told I couldn't become to horde when I switched to Proudmoore, so I ended up in the Stonewall Family on Alliance side. Things changed (thank the universe) and after a year of raiding on the Alliance side, I decided to give Taint a try.  
- I'm in La Fam. de Stonewall alliance-side, and figured I should level a hordie just to see what it's like.  
- Officer in La Familia  
- Through the Stonewall Family, where I play Poxine.  
- ive been a member for a while but never played much on the server b/c i was main alliance. i just came back from about a 6 month wow break and found they now have faction changes so im on my way!  
- Friends in Stonewall.  
- Stonewall website  
- Friends in Stonewall who moved ova  
- The stonewall family  
- Through the Stonewall Family (which I am a member of as well)  
- alliance side.. stonewall guild  
- From the alliance friends of Stonewall Family of Course  |
| By mistake       | - Was visiting a friend on Proudmoore and saw in trade chat that this was where all the gay people were, Applied, transferred my main toons and dragged my BF along too.  
- I kinda just came upon it, I was like..I WONDER if there are LGBT realms in Wow, and it showed proudmoore having a pride parade and LGBT friendly, so it seemed right to leave my other world my 73 blood elf hunter =( and re roll onto this realm.  
- My main server has been down for 2 days and I was googling funny guild names when I saw "Spreading Taint"  
- I randomly xferred here to get away from stuff, and I saw many people with Taint in their guild tags, so I googled the site and here I
I was looking for a good realm to xfer too and came across Proudmoore. I figured it shouldn't be hard to progress and find decent groups in a guild with 5000+ members.

**Discussion forums**
- WoW Forums
- Official WoW forums
- From the WOW forums.
- Someone on shybi.com's forums mentioned it in a WoW thread
- Blizzard forums
- Forums
- Forums
- The Server forums by accident!
- Flippen thro wow forum posts /shrug
- WoW Forums, and a rl friend.
- Searching the WoW forums. Been sick of having to justify why "Gay" and "Noob" don't make good chat
- A discussion thread about WoW on a gay discussion forum.
- a random message board
- WoW forums
- Reading forums while bored at work.....
- Searching official WoW forums for gay guilds
- google > WoW forums > Taint that's how
- WoW forums mostly lol

**Facebook**
- I was poached from Facebook.
- Facebook group called "Gay Boys with Beards"
- Facebook

**Family Member**
- My brother

**Friend from other virtual world**
- A friend from second life
- Friends that have been or are currently in the guild

**Friend in Guild**
- A friend of a late Tainter.
- A friend of mine is in the guild.
- through Earthleaf
- My old roommate (and one of my closest friends) got into the guild and he said I'd like it. So I applied, and now here I am!
- Lickmy recruited me.
- One of my friends was a former guildie, so he led me here.
- I started the game, and told Todd about how I was playing. The reply e-mail said "Make a toon on hordeside proudmore. NOW!"
- Tunak
- Met a couple at Blizzcon and have a few RL friends as members.
- Two of my friends joined and suggested that I get Tainted
- A friend of mine told me about this guild and I'm so glad I server transferred and joined!
- Friend
- RL friends forced WOW back onto me after 2 years of being away and I switched servers (AGAIN)
- Friend
- Karbonix
- From a friend Jonathan, aka Portkey. He's a gay too. I thought I was the only gay in the village.
- Bob
- A member.
- Some friends.
- Several Tainted friends.
- Munchkin, he's been my best friend for over a decade.
- Through friends
- I found out about taint through real life friends Deveo, Syrelena, and Dorsidhion
- A friend of mine got me back into playing WOW and told me about Taint...
- From my friend in the guild Kamaili
- but it is my friend Thrak who convince me
- my friend sam
- Herd from by bf who herd from out friend Tiir
- Ternity is an IRL friend.
- Current member (Alchema)
- Friend from TI
- I heard about the Spreading Taint from a friend who is part of the guild. I believe his character is Buffcub.
- from a friend
- ) Vetali came over and told me I had to come over.
- Former guildies on my old server.
- was referred by someone in the guild
- Friend
- Hmm.. My friend Mike has a friend who said there was a gay guild and my ex said there was a gay guild on Proudmoore, so google pointed me to Taint.
- Mogey
- My good friends (xaalish and ryvaan)
- From Soybeans
- My former best friend (SluttyBob) who got me to join and then let me fend for myself
- a Taint Member
- A fellow Wow'er who got tired of me whine about homophobic pugs on Eonar.
- Very good RL friends with Cococow
- Through Tatsumi and Cubcake
- Good friend got me into WOW.... now onto this server, now part of the TAIN
T
- I am in a Masters program with a guildie. He mentioned you all and how great the guild is. I have been playing since the game came out
and have never found a good guild. I think I have found a home.

- My gay buddy
- Umm knew about the guild for a while but me and my friend were just recently plotting to come over here and maybe find him a man from my buddy safiel
- through a friend
- Dkmskin/Pottersdaddy
- Friends and am a member of The Stonewall Family
- My friend JT who is in the guild.
- my best friend joined
- A friend and his friends
- A couple friends from TI, Meetbag and Safiel
- My friend Nick (Angelustombo)
- Quite a few people, actually. More random friends that play WoW as well as gaygamer.net.
- The Great and talented and supersexy Mogey
- I'm RL friends with Taint member Pawtopsy.
- Friends in the guild
- Fallingfortruth
- A friend, Friedhamster.
- Friends
- A friend
- Friends
- A friend
- My RL friends Rydme and Ryderboy, plus some vids I found on xtube... >.>
- Through some friends way back in the day
- From my irl friend Ehrgeiz
- Actually long ago and far far away. Okays well maybe not that long ago and far away. Two of my closes friends that I introduced to WoW were in Taint. They have since left the game.
- Raimii is a friend of mine in real life. He seems to really enjoy the guild and turned me onto the idea of joining.
- Friend is in tha guild
- Ben told me about it when he was fuckin’ me.
- From my friend Justin
- Through friends
- Sebastian/Tim/Roy.
- My friend Bama introduced me to WoW and Taint
- Onakii, many moons ago
- Another member telling me how awesome it is.
- A friend told me about it, he is on the guild yet, but he is comming after his last deployment, he is in one of those Navy ships.
- Friend that joined TI
- A previous guildy mentioned an x-tube page.

<table>
<thead>
<tr>
<th>Gay Gaming Site</th>
<th>• another gay gaming forum.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• A gay-gaming website mentioned Taint and I thought &quot;Wow, that sounds pretty awesome.&quot; and applied right away</td>
</tr>
</tbody>
</table>
Appendix

<table>
<thead>
<tr>
<th>Internet Search for Gay Guilds</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Don't remember where I originally heard about Taint, but this time from googling gay wow guilds</td>
</tr>
<tr>
<td>• A google search for lgbt guilds in wow and voila</td>
</tr>
<tr>
<td>• Random &quot;gay warcraft&quot; google searches</td>
</tr>
<tr>
<td>• Google</td>
</tr>
<tr>
<td>• Google</td>
</tr>
<tr>
<td>• I searched the web and ran across a random site with the info. I was so happy to see an LGBT affiliation. We need more like this on other servers.</td>
</tr>
<tr>
<td>• Google search</td>
</tr>
<tr>
<td>• online research on gay guilds</td>
</tr>
<tr>
<td>• Researching Gay Guilds online!</td>
</tr>
<tr>
<td>• Google--searching for lgbt friendly guilds.</td>
</tr>
<tr>
<td>• I googled &quot; gay wow guilds &quot; and the wicked &quot; The spreading Taint &quot; site popped up.</td>
</tr>
<tr>
<td>• Google</td>
</tr>
<tr>
<td>• Lookin for a LGBT guild</td>
</tr>
<tr>
<td>• Around 5 years ago, I did a search for LGBT guilds in WoW and ended up finding out about OZ because of the controversy they were a part of with Blizzard. I joined them but didn't stay long as I was afraid of getting caught. I wasn't out yet and very scared of my</td>
</tr>
</tbody>
</table>

| • GayGamer article a while back                                                            |
| • I was a member of Rough Trade in COH (Fruit Fly)                                         |
| • Several places, but I first found out about you on a gay gaming forum.                    |
| • In the beginning, when the internet was chocked full of spam and pr0n and I had no boyfriend, no girlfriend and no ID90 silicone lube nearby to ease my pain. I joined up on tribe.net and found a Gaymers forum; amongst the other tattooed and shrappel imbedded lads into gaming, Krimon popped up and said "hey, we're from the Spreading Taint, if you play WoW, you should come check us out!" And lo... did I checketh out other Warcrack junkies on Proudmoore and it was good. |
| • gaymer.org a million years ago.                                                          |
| • www.gaygamer.net. I'm brewkeep over there for any other gg'ers.                          |
| • I heard about you all from gaygamer.net, and also a friend on another server. I thought I would make an alt here to see how full of awesome you all are, and I am very happy I did. |
| • through gaygamer.net and the stonewall family                                            |
| • through the gaymers group on Yahoo                                                      |
| • gaymer.org, la familia, the glbt channel on ally side,... basically everywhere I looked. |
| • GayGamer.net                                                                              |
| • GayGamer and searching the interwebz                                                      |
| • Gaygamer.net                                                                              |
| • Google, gaymer, WoW message boards, a bathroom wall off route 66...you people are everywhere! |
| • Gaymers                                                                                 |
family finding out I was gay. I also joined The Spreading Taint for a short time as well but also left them because I was scared. A lot has changed since then. I'm out, engaged, and disowned now.

- the all powerful Google
- Researching different realms because I was tired of the random pvp talk (LOL I PWND U LOL OL) and I wanted to be on populated realm, I looked into different places, mostly RP servers. I then heard and read about Proudmoore being very gblt friendly. From there it was a choice, Red or Blue? Guess what I picked?
  - teh googlez
  - Some forum/realm research
  - I spent a lot of time googleing for gay guilds... and first spent a number of months in stonewall (well prior to that on a role player server w/few homosexuals). I played alliance before trying taint casually and getting hooked on how much bigger the guild is (and n2f of course).
  - Browsing the web
  - Googled 'GBLT' and 'Proudmoore'
  - Searched Gay Warcraft guilds in google.
  - Google
  - I Googled gay guilds in World of Warcraft.
  - googled you - researching gay guilds...found the website and me and my BF Dorquil transferred yesterday from Tortheldrin.
  - I googled gay guilds in WoW and you guys came up right away.
  - Actually doing forum searches for GLBT community. Been playing for years. All my real life friends are burnt out playing -- no fun playing by yourself so i finally decided to pick up the mouse and search my brothers and sisters out!!
  - Your website. It was you know, a starting point.
  - google+gay+wow+guild=taint
  - Google search FTW
  - Google search
  - Google Search
  - A friend of mine got me into WoW recently, and one of the first things I did was find out where all the gays are.
  - Google
  - You know, the interwebs and stuff.
  - Google search
  - some Google action
  - I created a post on Zam.com trying to find a new server, and someone from Proudmoore told me about you guys.
  - I was looking up gblt guilds and this one was the best!
  - Google
  - I googled WoW gay guilds
  - Goolge
  - From my best friend Google!
  - Online. I was looking to see if there were GBLT friendly guilds in WoW and your name came up. A lot.
• The modern god, Google, gave me this guild quite a lot.
• google
• I think back in the day i googled "gay wow" or something along those lines when i was trying to find people like me in the game i love.
• when my friend tried to get me to start playing WoW again, i randomly looked up gay guilds and Blam-O!
• I googled "gay guilds wow" and Taint came up immediately
• a convoluted web search fro LGBT guilds in game. Seems I have been under a rock somewhere to have missed this!

Met other players in-game
• I was running the daily random on my main, got partied with 4 members of Taint for the best random I've ever been in and it was all over from there

Online
• Online somewhere, ages ago :-P
• The interwebs
• Online
• Just on the web
• Web
• Teh Interweb
• The Interwebs.
• I'm back into WoW and I found you guys online.
• The internet
• The internets
• Bouncing through various communities on LiveJournal and a few other websites.

Partner
• my bf ask me one day if i felt like possibly doing a server change
• My BFF Cubcake!
• My BF Rsky was looking for a good gay guild
• An EX He and I broke up before I joined. Distance is a killer and when u work overnite it is a b*tch.
• From an ex & gaygamer.net
• My BF applied like 2 years ago but I don't think we heard back, but then I met Divaprince and Ruckgabe and they recruited me.

Read Article
• I read an article on WoWWiki about the Proudmoore server
• Articles on WoW Insider
• WoW Insider
• I don't remember... WoW Insider maybe?
• I saw this thing on a bathroom wall . . . no, wait, that was Wow Insider.
• News articles and a few other people I know who play WoW.
• Wow.com
• WoWwiki and WoW.com
• From mm-champion, woo nerd!
• Milling around the Taint site for a really long time. Out Mag article >> Gay Gamer.net >> Taint.rtgc.org!!!
• The Advocate and my spouse
Appendix

- wow.com
- I read about you guys online.
- An article on wow.com a while ago and I had two friends server xfer over here as well.
- There was a wow.com article on a Proudmoore guild who did Gay Pride Parades, and I thought it was the coolest thing I'd ever heard about, especially when I read the comments and some people were offended. It made my day lol.
- I think I first read about you guys in DNA Magazine... otherwise, from being a member of The Stonewall Family.
- Wow wiki
- News article on WoW insider
- From an article on MMO-champion about last years gay pride. I knew you guys were around here somewhere! Lol
- Saw the blurb on wow.allakhazam.com about Pride, and knew this was where I needed to be, so I transferred my favorite toons to Proudmoore and joined up. Conveniently my old guild had just dissolved, so it wasn't even a hard decision.
- Weird shit happens when you're drunk search 'gay' on wowwiki and feel like moving servers...
- Allakhazam cover story on the parade lol
- I was bored with my old server, and one night stumbled on an online article about Taint. I was amazed by the size of the guild, how active it is, and it's diverse, accepting and laid back nature. I was immediately inspired to join.
- Proudmoore Pride article
- an article online
- I read about the guild on a blog somewhere. After a hiatus from WoW, I decided to start again and thought to check it out.
- Read a news article on one of the gaming sites about Taint's gay pride parade. Found the website and thought what I read was darn impressive -- not just b/c its a GLBT guild, but also because it was huge, well run, and had lots of social options.

| Recruitment Post | - Recruitment post on the Proudmoore forum. A friend and I were looking to transfer here and wanted a guild to call home. (Short answer anyways). Alternately, I've been playing on PM on and off as ally for about 4 years and remember seeing lots of <Taint>s go by so now that I saw the light and faction changed to horde...(long answer)
- I've been aware of you guys for years, but recruitment post for 'Taint Invaders' is why I'm here now.
- Saw an advertisement for Taint Invaders for a Resto Shaman on the guild recruitment forums. The LGBT/LGBT-friendly tag stood out. My previous guild was...shall we say...NOT friendly to anyone who is different. After talking with the TI officers, this seemed like a really nice place to be. So here I am.
- Saw a recruitment post for HoT and then found the whole of taint.
- Guild recruitment forums from Taint Invaders post |

| Reputation | - Everyone knows about Taint! |
You guys are legendary, I've heard all about you, but the first place I heard was from wow.com in a post about Proudmoore pride, that shit was epic.

- It's hard not to hear about Taint on Proudmoore.
- Who hasn't?
- Everybody knows Taint!
- over the years of being on proudmoore and hearing from the population what a great guild this is and how friendly the members are i decided to make the move
- Who hasn't?
- Taints rep precedes them.
- Who does not know about the Spreading Taint?
- You are EVERYWHERE!!! Friends, Websites, and just about anywhere you can find
- No idea, known about you guys for some time now but only recently swapped over
- Who on Proudmoore hasn't?
- Hasn't everyone?
- I've always known about you guys!
- ive know for a while it wasn't until most of my friends on my mains server went inactive till i decided to try something new :p

### Roomate
- My roommate told me.
- Housemates

### Saw guild in game
- How could I miss the taint all over the place!
- was alliance and was wondering who all these Taint people were
- You guys are hard to avoid on the server
- I seen some taint chars running around and it sparked an idea to join
- I've seen alot of Taint members on Proudmoore and asked one of the members how to join
- Seen you guys in game
- Met a couple of you guys while questing, needed a guild, applied and here I am!
- When I left Garona, and the really nice guild I was in on there, I was looking for a gay friendly guild that I might get lucky enough to be able to raid with... and Taint was ALL OVER THE PLACE LOL
- I have been on Proudmoore since I began playing, 3 1/2 years ago, before I knew about its GLBT reputation. I quickly realized it was here and learned about all the guilds. A couple months ago I faction changed my mage, and rerolled on Horde my warrior, and once he hit 80, I apped
- I came to Proudmoore with Zephyr and saw all these people in a guild called "Taint" and decided to check them out.
- people in game
- Watching all the other Taint members wandering around Proudmoore got me inquisitive.

### Saw video of parade
- I saw a video for last year's Proudmoore Pride and it actually took me like 4 months to decide to apply to the guild.
- I've been a follower for a while. Originally heard about you through the annual pride event in game.
- watched a youtube video for your pride parade and started researching
- Saw the 2009 Proudmoore Pride videos on YouTube last year, decided to catch the real deal this year.
- The Pride Parade!

| Trade chat | • trade chat slang from another battlegroup.  
|            | • Trade chat, hehe. I'm quite the troll sometimes  
|            | • Through late night trade chat discussions  
|            | • Trade chat. Lol |

| Word of mouth | • word of mouth, and then the website  
|              | • Word on the street!!  
|              | • Through other players  
|              | • A few friends and the web - Taint is all over gay gamer culture websites, of course.  
|              | • Life out  
|              | • I knew through Spectrum Rage on Garona a long time ago. I was an officer in that gblt guild for a good while, but I'm now in a real life friend's guild on that server.  
|              | • word of mouth and b) seeing so many members around online  
|              | • Mostly with my ears, but with a little help from Stonewall too.  
|              | • My rl best friend used to play on Proudmoore, and mentioned the guild.  
|              | • Well I was on a certain Adam site and I met a guy from The Stonewall Family and he told me about them and Taint and I was like that's awesome, so i came over here to check things out.  
|              | • A friend told me about you when he was looking for a LGBT friendly server/guild ... I couldn't resist  
|              | • Friend of mine told me about it  
|              | • Friend of mine told me about the server, did my research and came across the guild.  
|              | • IRL friends  
|              | • Friend looking up LGBT guilds  
|              | • I transfered over to proudmoore to join Emperium, but I don't think this was exactly what I was looking for, and I heard there was a GBLT guild on the horde side so i looked into it and found you guys.  
|              | • through the grape vine.  
|              | • Known about Taint for a long time now, but Wowwiki is what made me join.  
|              | • Grndr  
|              | • Word of mouth  
|              | • Word of mouth from another server  
|              | • other wow friends  
|              | • From a friend on my old server (Kul Tiras).  
|              | • A long time ago from an old friend.  
|              | • my old guild after i confronted them on calling me a fagot behind my back said if i want to play wow i should go play with all the other fags on Proudmoore, and so i did. and i never looked back.  

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| Work mate                       | • Worked with someone in The Stonewall Family who recommended Taint for my Horde toon  
|                                | • A few guys at work               |
## APPENDIX TWO

<table>
<thead>
<tr>
<th>Name</th>
<th>Hierarchical Name</th>
<th>Coded Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blizzard</td>
<td>Nodes\Blizzard</td>
<td></td>
</tr>
<tr>
<td>Blizzard</td>
<td>Nodes\Initial Ideas\Blizzard</td>
<td>Blizzard</td>
</tr>
<tr>
<td>Blizzard's reasoning</td>
<td>Nodes\Blizzard\Blizzard's reasoning</td>
<td>Blizzard says it imposed the limit to fit in with the new guild-associated content in Cataclysm.</td>
</tr>
<tr>
<td>Cap news spreading to outside sources</td>
<td>Nodes\Cap news spreading to outside sources</td>
<td>I had just sent a message to the guild leaders when I saw this thread. The news is spreading to</td>
</tr>
<tr>
<td>Cataclysm</td>
<td>Nodes\Initial Ideas\Cataclysm</td>
<td>Cataclysm</td>
</tr>
<tr>
<td>Communication with Blizzard</td>
<td>Nodes\Blizzard\Communication with Blizzard</td>
<td>Right now, we’re really focused on getting our resources together, being engaged with the other major-uber guilds (notably Goon Squad and AIE) and ensuring we are not left out of the conversation with Blizzard.</td>
</tr>
<tr>
<td>Communication with other large guilds</td>
<td>Nodes\Communication with other large guilds</td>
<td>I can tell you that a few people in AIE and Goon Squad are preparing in earnest with alts and hoping to race change, but that in itself causes problems due to possible deguilding through the change. I wish I had more answers for you. I’m trying to respond to those questions as I can to keep you updated, but please don’t equate a lack of replies from officers as anything other than we are working hard at a solution.</td>
</tr>
<tr>
<td>Communication with other large guilds</td>
<td>Nodes\Communication with other large guilds</td>
<td>I’m sure the officers are on top of it, but has anyone talked with the leadership of Alea or Goon Squad? I know both guilds have been vocal on the beta forums about the cap so far.</td>
</tr>
<tr>
<td>Communication with other large guilds</td>
<td>Nodes\Communication with other large guilds</td>
<td>We’re already talking to AIE about it.</td>
</tr>
<tr>
<td>Communication with other large guilds</td>
<td>Nodes\Communication with other large guilds</td>
<td>Looks like one of the officers from AIE are trying to contact our officers.</td>
</tr>
<tr>
<td>Communication with other large guilds</td>
<td>Nodes\Communication with other large guilds</td>
<td>Right now, we’re really focused on getting our resources together, being engaged with the other major-uber guilds (notably Goon Squad and AIE) and ensuring we are not left out of the conversation with Blizzard.</td>
</tr>
<tr>
<td>Communication with other large guilds</td>
<td>Nodes\Communication with other large guilds</td>
<td>We are conversing with the other large guilds. We’re not sure what can be done, but trust us that we’ll try to do it</td>
</tr>
</tbody>
</table>
Communication with other large guilds

We’ve actually been in contact with AIE through the day, they are getting their arms around this issue as we speak.

Continuance of Taint

Worry not, Taint is going to stay one big happy family no matter what we do.

Don’t whisper to officers in game

Also, it would be kind of nice if you didn’t barrage Officer’s with in-game whispers either. We are discussing this and will communicate any decisions we come to. Thanks...

Emotion

I’m just pissy with Blizz about this whole thing.

Emotion

this is certainly a shocking (and unwelcome) surprise that Blizz has thrown at us.

Emotion

But I will admit this is something that has made me very angry.

Emotion

But yeah, this is definitely frustrating. The most frustrating thing is how little notice they're giving.

Emotion

I just heard abt this and my head exploded with ideas.

Emotion

I must say this makes me very tempted to throw all my toons in main taint now i REALLY dont like the fact that our taint family might missout on giuld perks that another part of our giuld has earned also if they are keeping with the rep idea it makes it really hard to move around our own guild when every time you move you have to start a rep grind over again.

Emotion

Man this is such crappy news.

Emotion

Sad changes to say the least after i found my new home in taint several months ago. Hopefully Blizzard will respond in some way to all of our concerns. If the officers need any assistance, let me know.

Emotion

The only part of this that annoys me is that any new toons I roll will be in a different guild

Emotion

The thing I’m worried about, though, especially with how suddenly Blizz popped this on us, is what's to say that in the next few months the larger than 600 guilds won't be grandfathered in anymore?

Emotion

This is a huge fucking disaster.
<table>
<thead>
<tr>
<th>Emotion</th>
<th>Nodes\Emotion</th>
<th>Yeah this is going to be crap.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Express concern to Blizzard</td>
<td>Nodes\Reaction towards Blizzard\Express concern to Blizzard</td>
<td><a href="http://forums.worldofwarcraft.com/thread.html?topicId=27026327766&amp;sid=1&amp;pageNo=5">http://forums.worldofwarcraft.com/thread.html?topicId=27026327766&amp;sid=1&amp;pageNo=5</a> post here and express your concern. It seems a large number of AIE and Good Squad have already amassed there to talk about things.</td>
</tr>
<tr>
<td>Express concern to Blizzard</td>
<td>Nodes\Reaction towards Blizzard\Express concern to Blizzard</td>
<td>strongly urge everyone that's concerned to post on the thread in the official wow forums. They won't make any changes unless we are heard.</td>
</tr>
<tr>
<td>Express concern to Blizzard</td>
<td>Nodes\Reaction towards Blizzard\Express concern to Blizzard</td>
<td>I think one thing folks could be doing if they want is posting in that Blizzard thread about what Taint means to you. Be polite -- this isn't worth risking a forum ban -- but it can't hurt for them to see that</td>
</tr>
<tr>
<td>Express concern to Blizzard</td>
<td>Nodes\Reaction towards Blizzard\Express concern to Blizzard</td>
<td>I've thrown my voice in. It's here if anyone cares to read. I'm thinking that money is the best way to appeal to them. My dollars may just be a drop in the bucket to them, but drops add up, and I am</td>
</tr>
<tr>
<td>Express concern to Blizzard</td>
<td>Nodes\Reaction towards Blizzard\Express concern to Blizzard</td>
<td>Posted on the WOW forum thread. <em>shrug</em> The reason I came back after unsubbing was because I was coming back to Taint. *sending good vibes to</td>
</tr>
<tr>
<td>Express concern to Blizzard</td>
<td>Nodes\Reaction towards Blizzard\Express concern to Blizzard</td>
<td>The only way that will happen though, is for your voices to be heard on the Blizz forums -- and since only beta players can post on the beta forum, the thread currently in the &quot;Suggestions&quot;</td>
</tr>
<tr>
<td>Feel sorry for officers</td>
<td>Nodes\Officer\Feel sorry for officers</td>
<td>I really feel sorry for the officers with this mess.</td>
</tr>
<tr>
<td>Feel sorry for officers</td>
<td>Nodes\Officer\Feel sorry for officers</td>
<td>This whole thing seems like one hell of a doozie to drop on everyone in the weeks before it will effect us. My sympathies to the officers. Thank you for all you folks do.</td>
</tr>
<tr>
<td>Feel sorry for officers</td>
<td>Nodes\Officer\Feel sorry for officers</td>
<td>Well the Officers are going to go through yet another week of hell. Many hugs for all your efforts. Not only do they have to deal with this I'm sure invites are going to skyrocket in the next weeks. Best thing I think we can do as memebers</td>
</tr>
<tr>
<td>Fix - Alts</td>
<td>Nodes\Proposed Fix\Fix - Alts</td>
<td>Perhaps main Taint and alt Taint(s) is the bet route but I'll leave that to the pros.</td>
</tr>
<tr>
<td>Fix - Alts</td>
<td>Nodes\Proposed Fix\Fix - Alts</td>
<td><em>maybe</em> or only one toon per account can be in the main Taint and alts in sub guilds? or a clean</td>
</tr>
<tr>
<td>Fix - Alts</td>
<td>Nodes\Proposed Fix\Fix - Alts</td>
<td>And to help accomdate for the massive army of alts this guild does have perhaps requiring if you are in a sub-raiding guild to require all toons be</td>
</tr>
</tbody>
</table>
Appendix

<table>
<thead>
<tr>
<th>Fix - Alts</th>
<th>Nodes\Proposed Fix\Fix - Alts</th>
</tr>
</thead>
<tbody>
<tr>
<td>placed in it. With the guild perk system the sub-</td>
<td></td>
</tr>
<tr>
<td>raiding guild folks would of course be working</td>
<td></td>
</tr>
<tr>
<td>towards their alts. This would alleviate some but</td>
<td></td>
</tr>
<tr>
<td>not much of the tension. And we may wish to</td>
<td></td>
</tr>
<tr>
<td>institute either alt guilds or provide a cap on the</td>
<td></td>
</tr>
<tr>
<td>number of alts one is able to have in the guild</td>
<td></td>
</tr>
<tr>
<td>since space is limited.</td>
<td></td>
</tr>
<tr>
<td>Fix - Alts</td>
<td>Nodes\Proposed Fix\Fix - Alts</td>
</tr>
<tr>
<td>Hmmmm now might be the time to make decisions</td>
<td></td>
</tr>
<tr>
<td>about which characters we would ever want in</td>
<td></td>
</tr>
<tr>
<td>the main guild since it's still a free-for-all. This</td>
<td></td>
</tr>
<tr>
<td>does mean that there will be no Goblins in the</td>
<td></td>
</tr>
<tr>
<td>&lt;Taint&gt; proper doesn't it? Edited to add: Actually</td>
<td></td>
</tr>
<tr>
<td>no I am wrong about that, they can always be</td>
<td></td>
</tr>
<tr>
<td>race changed. I guess that means if you want a</td>
<td></td>
</tr>
<tr>
<td>Fix - character or class</td>
<td>Nodes\Proposed Fix\Fix - character or class</td>
</tr>
<tr>
<td>One thing that would suck with this is that any</td>
<td></td>
</tr>
<tr>
<td>new alts you add will be in different guilds, thus</td>
<td></td>
</tr>
<tr>
<td>will not receive any of the benefits of the guild</td>
<td></td>
</tr>
<tr>
<td>advancement that your main would have</td>
<td></td>
</tr>
<tr>
<td>contributed. The guild advancement stuff is the</td>
<td></td>
</tr>
<tr>
<td>Fix - Don't need to split</td>
<td>Nodes\Proposed Fix\Fix - Don't need to split</td>
</tr>
<tr>
<td>Note that we don't need to necessarily split up</td>
<td></td>
</tr>
<tr>
<td>Taint in its current form. The way the patch is set,</td>
<td></td>
</tr>
<tr>
<td>any guilds over 600 will be able to keep their</td>
<td></td>
</tr>
<tr>
<td>members, however we will not be able to add</td>
<td></td>
</tr>
<tr>
<td>any to that guild. So in essence, whomever is</td>
<td></td>
</tr>
<tr>
<td>already in Taint when the patch hits is able to stay</td>
<td></td>
</tr>
<tr>
<td>in Taint. Future members is the consideration we</td>
<td></td>
</tr>
<tr>
<td>are making, as well as how we are handling</td>
<td></td>
</tr>
<tr>
<td>raiding guilds, 10man achievements, the list goes</td>
<td></td>
</tr>
<tr>
<td>on and on.</td>
<td></td>
</tr>
<tr>
<td>Fix - Only deal with future new members</td>
<td>Nodes\Proposed Fix\Fix - Only deal with future new members</td>
</tr>
<tr>
<td>Note that we don't need to necessarily split up</td>
<td></td>
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<td>Taint in its current form. The way the patch is set,</td>
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<td>already in Taint when the patch hits is able to stay</td>
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<td>are making, as well as how we are handling</td>
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<tr>
<td>on and on.</td>
<td></td>
</tr>
<tr>
<td>Appendix</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Fix - real world geography split</strong></td>
<td>Nodes\Proposed Fix\ - real world geography split</td>
</tr>
<tr>
<td><strong>Proposed Fix</strong></td>
<td>Fix - real world geography split</td>
</tr>
<tr>
<td></td>
<td>A few options that can be implemented could be a split between areas. An oceanic guild &quot;Tainted Ocean&quot; or something could mean that Oceanic players get their own raiding times and such?</td>
</tr>
<tr>
<td><strong>Fix - real world geography split</strong></td>
<td>Nodes\Proposed Fix\ - real world geography split</td>
</tr>
<tr>
<td></td>
<td>do like the zone idea but since there are only 2-3 of us in Hawaii it would be a very lonely place.</td>
</tr>
<tr>
<td><strong>Fix - real world geography split</strong></td>
<td>Nodes\Proposed Fix\ - real world geography split</td>
</tr>
<tr>
<td></td>
<td>I do like the idea of one of those time zones being called &quot;Mountainous Taint&quot; [img:src=images/smilies/wink.gif] Actually it would be nice to have time zone subs. But the</td>
</tr>
<tr>
<td><strong>Fix - Social Aspects</strong></td>
<td>Nodes\Proposed Fix\ - Social Aspects</td>
</tr>
<tr>
<td></td>
<td>How about polling to see how many of the members are here purely for the social aspect and don’t have an interest in the guild achievements. If that number is significant, it might be easier to decide if/how to split up the guild to more manageable numbers. We could make a new social only Taint (or Taints if there are enough) for them, or keep the current Taint</td>
</tr>
<tr>
<td><strong>Fix - Split up guild</strong></td>
<td>Nodes\Proposed Fix\ - Split up guild</td>
</tr>
<tr>
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</tr>
<tr>
<td><strong>Fix - Split up guild</strong></td>
<td>Nodes\Proposed Fix\ - Split up guild</td>
</tr>
<tr>
<td></td>
<td>I actually agree with this one the most, We could just have all new members join a secondary guild, and once that one hits the cap, we could start running them through a third guild. Besides setting up like 10 separate guilds at the start it</td>
</tr>
<tr>
<td><strong>Fix - Split up guild</strong></td>
<td>Nodes\Proposed Fix\ - Split up guild</td>
</tr>
<tr>
<td></td>
<td>I for one will be happy to see the resurrection of Tainter Tots (still our best sub guild name ever), if</td>
</tr>
<tr>
<td><strong>Fix - Split up guild</strong></td>
<td>Nodes\Proposed Fix\ - Split up guild</td>
</tr>
<tr>
<td></td>
<td>looks like after 4.0.1 no more newbies in taint. but a separate guild could be made i guess</td>
</tr>
<tr>
<td><strong>Fix - Split up guild</strong></td>
<td>Nodes\Proposed Fix\ - Split up guild</td>
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<td></td>
<td>One thing that could help alleviate the large numbers is having separate subguilds for leveling characters (tainter tots was it?) and an entry guild where new recruits could be added and, given some time, decide if they like the guild as a whole</td>
</tr>
</tbody>
</table>

255
Appendix

Fix - Split up guild | Nodes/Proposed Fix/Fix - Split up guild
--- | ---
The best option would be to keep the existing Taint guild (and everyone in it is lucky!) and setup a second guild and link them once again. That's the least hassle, anyway.

Fix - Split up guild | Nodes/Proposed Fix/Fix - Split up guild
--- | ---
There's plenty of room in Taint Invaders. So long as you like to raid a lot and be awesome at it.

Fix - Split up guild | Nodes/Proposed Fix/Fix - Split up guild
--- | ---
Thread link So, do we know how this will affect Taint yet? Obviously we won't be able to add any new members, but are we gonna split up in to more new guilds to handle the new rules?

Fix - Split up guild | Nodes/Proposed Fix/Fix - Split up guild
--- | ---
To this end, and to keep things somewhat balanced, the method by which our leaders divide the guild is going to be a big deal. I feel that dividing the guild by seniority is not necessarily the way to go (it could appear elitist), nor is dividing by class or alts or race. Those methods would make things unbalanced for the achievements etc. that are coming. When it is determined how many sub guilds will be needed, I think the only fair way may be to sort officers

Fix - Split up guild | Nodes/Proposed Fix/Fix - Split up guild
--- | ---
What about: <Tainted Warriors> <Tainted Druids> <Tainted Paladins> <Tainted Hunters> etc etc? or.. <Goblin Taint> <Orc Taint> <Tauren Taint> ^.^ (I'd seriously *love* an <Oceanic Taint>

Goblin Issue | Nodes/Impact/Goblin Issue
--- | ---
We're aware of the goblin alt situation in Taint.

Guilds | Nodes/Initial Ideas/Guilds
--- | ---
guilds

Hope to get response from Blizzard | Nodes/Blizzard/Hope to get response from Blizzard
--- | ---
Hopefully Blizzard will respond in some way to all of our concerns.

Impact | Nodes/Impact
--- | ---
one of my largest concerns is the inability of teams to not be able to recruit effectively. By this I mean if the team members have to stay in Taint and new recruits who come to join us over time join a sub-guild; then we begin to lose out on our benefits and achievements together. We become severely hampered.

Impact | Nodes/Impact
--- | ---
When guild starts saying things like LFM need 2 tainter tot healers for BoT as it stands chopping us up into 600 member groups (about 10 different guilds) will divide us up and fester alot of resentment when say one guild starts leveling faster or earning rewards like mounts or what
ever and id REALLY hate to see people feel “stuck” in a sub guild with less active members I understand blizz wanting to do this so the 5 giants don’t have an unfair advantage (hello 10% of 6k players income in the guild bank oh.) but this feels really unfair and i DO NOT envy the officers trying to decide what to do on the topic

<table>
<thead>
<tr>
<th>Impact</th>
<th>Nodes\Impact</th>
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<tbody>
<tr>
<td>A big concern is getting guild rep. I don’t want to level a toon in one guild and lose all of my guild rep when I get to max level because I need to switch to another guild. Or if I start raiding on that toon and have to switch to another guild. I’m a huge altaholic right now and I adore that I can just stick all of my alts in Taint and they have access to leveling gear, crafting gear, etc. I do not</td>
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<tr>
<td>Here is my concern. As some of you know on Tues/Thurs I lead a 10 man from 5:30pm to 8:30pm server. I lead 1 25 man from 8 am server to 11 am server on weekends. On Saturdays I come back 2 hrs later to lead another one from 1pm to 4pm server. Every other week a lead a second 10 man on Sundays. Minus the occasional off raid I lead. SO... part of the guild leveling experience and a very large chunk of it is through raiding. What is the officers ideas to accommodate individuals like me who do Taint only raids or majority Taint-only raids that our collective team efforts will be able to be put together? How can you help us to have our team</td>
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<tr>
<td>Hmmmm now might be the time to make decisions about which characters we would ever want in the main guild since it’s still a free-for-all. This does mean that there will be no Goblins in the &lt;Taint&gt; proper doesn’t it? Edited to add: Actually no I am wrong about that, they can always be race changed. I guess that means if you want a goblin in &lt;Taint&gt; it would be wise to create an alt now that can be transmogrified later. That is if officers are ok with alts in the main guild.</td>
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<td>it also means that “guild groups” will be harder to come by when you constantly looking at which</td>
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<td>looks like after 4.0.1 no more newbies in taint.</td>
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<td>My concern is this: Will the “fixed” interface also credit the guild with the gold/achievements by</td>
<td></td>
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One thing that would suck with this is that any new alts you add will be in different guilds, thus will not receive any of the benefits of the guild advancement that your main would have contributed.

The only part of this that annoys me is that any new toons I roll will be in a different guild.

The problem will be is how will they have access to guild perks and when you reach a certain level you lose your guild experience by transferring to another guild.

This is a huge fucking disaster.

Thread link So, do we know how this will affect Taint yet? Obviously we won’t be able to add any new members, but are we gonna split up in to even more subguilds to handle the new rules?

We’re looking at all options and were preparing to make adjustments come Cataclysm with regard to guild achievements.

From what the leadership of AIE has commented about on the Blizz forums, and in beta -- it’s been proven in the current beta environment that guilds begin to see UI bugs and guild XP/perk issues at or around the 1000 member mark -- so yet again, this likely boils down to Blizzard’s code not being ready for large member groups and the time it would take to re-write said code.

Just wanted to post some words of support for our Horde family...since this decision by Blizz has been so sudden, and has taken a lot of the larger guilds by surprise. Tainters - your leadership and Officers absolutely are listening to you, I know they labor over pretty much every decision that impacts your guild, and they will definitely be working non-stop to come up with the best plan for the future of you all. We love you guys, and

Right now we’re focused on logistical planning, both in anticipation of the patch going live sooner.

And ETA: I don’t envy our officers right now.
<table>
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<tr>
<th>Looking up to officers</th>
<th>Nodes\Officers\Looking up to officers</th>
<th>Just wanted to post some words of support for our Horde family...since this decision by Blizz has been so sudden, and has taken a lot of the larger guilds by surprise. Tainters - your leadership and Officers absolutely are listening to you, I know they labor over pretty much every decision that impacts your guild, and they will definitely be working non-stop to come up with the best plan for the future of you all. We love you guys, and</th>
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<tr>
<td>Member offering help</td>
<td>Nodes\Proposed Fix\Member offering help</td>
<td>I'd be happy to devote time to help out for an Oceania-specific Taint</td>
</tr>
<tr>
<td>Members can help</td>
<td>Nodes\Impact\Members can help</td>
<td>Fortunately for us, we have some pretty spectacular Tainters who built T2T for us, so that alone gives us unique flexibility to weather this</td>
</tr>
<tr>
<td>Message from an officer</td>
<td>Nodes\Officers\Message from an officer</td>
<td>Also, it would be kind of nice if you didn't barrage Officer's with in-game whispers either. We are discussing this and will communicate any</td>
</tr>
<tr>
<td>Message from an officer</td>
<td>Nodes\Officers\Message from an officer</td>
<td>Guys, we're all trying to figure this out while not losing our day jobs. Please try to be a little bit</td>
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<td>Message from an officer</td>
<td>Nodes\Officers\Message from an officer</td>
<td>I think one thing folks could be doing if they want is posting in that Blizzard thread about what Taint means to you. Be polite -- this isn't worth risking a forum ban -- but it can't hurt for them to see that this is affecting a lot of their loyal customers. We have a week until the patch launches, and that's not a lot of time to try to figure out something. We have a LOT of ideas being thrown around and several other large guilds to reach out to. We're</td>
</tr>
<tr>
<td>Message from an officer</td>
<td>Nodes\Officers\Message from an officer</td>
<td>Just so you are aware, we began working on an action plan as soon as we heard about it which was sometime in the middle of the night in the US. We have officers collecting information, drafting letters, contacting the other major guilds, as well as formally responding to this change. We take into account our population at large, our raiding community, and yes- the 10man groups as well. Please keep in mind that this announcement came with little warning, and you have a officer</td>
</tr>
<tr>
<td>Move characters around</td>
<td>Nodes\Impact\Move characters around</td>
<td>I know I was just gonna move all my characters to Taint of Madness</td>
</tr>
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Appendix

Multi-guild member statistics

Nodes\Multi-guild member statistics

According to the Armory--
Taint: 5993 Taint
Invaders: 133 Raiders of da Lost Taint: 107 Taint
of Madness: 30 Heralds of Taint: 133 War Taint:

Multi-guild member statistics

Nodes\Multi-guild member statistics

Out of our 5,000 members. Do we have a count
to how many are taken up in the sub-raiding

Negative reaction

Nodes\Reaction towards Blizzard\Negative reaction

this is certainly a shocking (and unwelcome)
surprise that Blizz has thrown at us.

Negative reaction

Nodes\Reaction towards Blizzard\Negative reaction

just realized you’re the spriest columnist over
there! Anyway, yea, given 4.0.1 will probably
drop in a week, that’s awfully short notice. I
would have hoped they’d given us more time to

Negative reaction

Nodes\Reaction towards Blizzard\Negative reaction

Yeah, I just posted this on WoW Insider. This
really sucks all around given the short notice. :|

Not fussed

Nodes\Not fussed

See why are people all butthurt over alts and
guild advancement. I mean I would think people
should feel fortunate because this guild has so
many toons that we should blow right through
the guild advancements. I kinda just feel like a
few others here, if you are in now then lucky you,
if you are not then oh well...im not concerned

Note from Officer

Nodes\Officers\Note from Officer

Hey guys, The officers just found out about this
too, and we're discussing how we're going to
handle it. Worry not, Taint is going to stay one big
happy family no matter what we do. We'll post an
announcement to the guild as soon as we decide
what's going to happen. Feel free to post ideas

Note from Officer

Nodes\Officers\Note from Officer

We all just heard about this as well, but I assure
you that the officers will be URGENTLY discussing

Notify Officers

Nodes\Officers\Notify Officers

I had just sent a message to the guild leaders
when I saw this thread. The news is spreading to

Offer assistance to officers

Nodes\Officers\Offer assistance to officers

Hey anything I can do I will help with this

Offer assistance to officers

Nodes\Officers\Offer assistance to officers

I don't have a life and am at my computer all day.
If I can help in anyway know that at least part of
the TI raid leader team is at your disposal as

Offer assistance to officers

Nodes\Officers\Offer assistance to officers

I generally don’t speak out much, but I wanted to
put my two cents in. Officers I support you 100%
in this, if there is anything I can do to help please
do not hesitate to ask.

Offer assistance to officers

Nodes\Officers\Offer assistance to officers

I’m with Space and Wraeththu on this. If you guys
need anything from us, let us know.
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<td><strong>Officers actions</strong></td>
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<tr>
<td><strong>Officers considering multiple opinions</strong></td>
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<td><strong>Officers looking into problem</strong></td>
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<tr>
<td>Officers need to consider group leaders</td>
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<td>Officers request that people don't flame</td>
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<td>Officers thanks to encouragement</td>
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Offices seeking suggestions from guild members

We'll post an announcement to the guild as soon as we decide what's going to happen. Feel free to post ideas here, keeping in mind that we want to err on the side of fewer guilds rather than more guilds for the sake of the officers' sanity.

Offices seeking suggestions from guild members

We're looking at all options and were preparing to make adjustments come Cataclysm with regards to guild achievements. This new announcement obviously creates some challenges, which we are actively discussing. Again- feel free to keep ideas coming.

Other guild size numbers

http://forums.worldofwarcraft.com/thread.html?topicId=27026327766&sid=1&pageNo=5 post here and express your concern. it seems a large number of AIE and Good Squad have already amassed there to talk about things.

Offices seeking suggestions from guild members

Pulling more numbers, between warcraftrealms.com and the Armory--we're now the #2 guild in population. [img:src=images/smilies/smile.gif] Top 5 guilds (rankings from warcraftrealms, numbers from the armory): alea iacta est (Earthen Ring): 6776 Taint (Proudmoore): 5993 goon squad (Mal'ganis): 4699 It came from the Blog (Zangarmarsh): 1164 Ruinous (Kil'jaden): 606

Offices seeking suggestions from guild members

wow are there really only like 5 guilds over 600 members?

Other technical issues

I'm hoping T2T will still be compatible with the expansion.

Other technical issues

Good thing we have Taint2Taint. xD

Other technical issues

However, we do have T2T, so we won't miss out on raid calls, stoics, weeklies, or everyone's daily "im horneh" chatter. :

Other technical issues

Taint2Taint is based on Guild2Guild, which is freely available via Curse (and other places). T2T has had a lot more work put in to make it run better than G2G, however. We're also correcting the misconceptions in that post

Place blame on game related cause

It just occurred to me... Deathwing is probably at the bottom of this. He is going to divide Kalimdor. Now he is going to divide guilds. Damn you,

Positive Reaction

No matter what happens, we'll still be the preeminent LGBT guild in the world.
Possible strike action against Blizzard

Is it possible? Do you think to make Blizzard think if they do go through with this to call for us to do a one month suspension of WoW to show them how much we are concerned. Lets say it is 2,000 active accounts, if we even got half of them to do it we would hit them with a loss of %15,000. Not sure if they would feel it or not but its saying something.

I've thrown my voice in. It's here if anyone cares to read. I'm thinking that money is the best way to appeal to them. My dollars may just be a drop in the bucket to them, but drops add up, and I am only ~11 of Taint's >6200 "members". =P

The thing I'm worried about, though, especially with how suddenly Blizz popped this on us, is what's to say that in the next few months the larger than 600 guilds won't be grandfathered in anymore? It's only speculation, but I can see Blizz doing this as a first step to forcibly prune down the mega-guilds. [end TinFoil Hat]

A few options that can be implemented could be a split between areas. An oceanic guild "Tainted Ocean" or something could mean that Oceanic players get their own raiding times and such? *maybe* or only one toon per account can be in the main Taint and alts in sub guilds? or a clean out of inactive toons?

And to help accommodate for the massive army of alts this guild does have perhaps requiring if you are in a sub-raiding guild to require all toons be placed in it. With the guild perk system the sub-raiding guild folks would of course be working towards their alts. This would alleviate some but not much of the tension. And we may wish to institute either alt guilds or provide a cap on the number of alts one is able to have in the guild since space is limited.

I actually agree with this one the most, We could just have all new members join a secondary guild,
and once that one hits the cap, we could start running them through a third guild. Besides setting up like 10 separate guilds at the start it would be helpful to be in a new quickly growing guild, that way we wont have to be rationing people more then others.

**Proposed Fix**

I like the idea of one of those time zones being called "Mountainous Taint" ![wink](images/smilies/wink.gif) Actually it would be nice to have time zone subs. But the options here are going to be interesting I'm sure.

**Proposed Fix**

isn't there guild achievements for having a level 85 of each class. a level 85 of each class/race combination and then another achievement for having all of these? separating by class might not be the best thing but what about by alts like it

**Proposed Fix**

looks like after 4.0.1 no more newbies in taint. but a separate guild could be made i guess.

**Proposed Fix**

One thing that could help allieviate the large numbers is having separate subguilds for leveling characters (tainter tots was it?) and an entry guild where new recruits could be added and, given some time, decide if they like the guild as a whole and then moved to one of the other guilds that fits them (raiding/pvp/social/etc.).

**Proposed Fix**

One thing that would suck with this is that any new alts you add will be in different guilds, thus will not receive any of the benefits of the guild advancement that your main would have contributed. The guild advancement stuff is the only reason this is much of a problem. Otherwise we could just go back to the way we used to do it with the multiple small guilds.

**Proposed Fix**

The best option would be to keep the existing Taint guild (and everyone in it is lucky!) and setup a second guild and link them once again. That's the least hassle, anyway.
Proposed Fix

we really stick to our guns and may come to this we should have the word 'TAINT' attached to anything first if that the route we wish to go with therefore when toons are guild listed ingame we can see the word TAINT first and whatever funny expression after it. which will easier to recognize. it stand out clear bold and unified. exp. <TAINT invaders> <TAINT of war> <TAINT alts> <TAINT Hardcore raiders> <TAINT HappyEndings> etc. as you can see- the word TAINT pops out first for all to see visually. It may require some name adjustments n changes(or not) to others but it'll clearly visually keep us unified.

Proposed Fix

What about: <Tainted Warriors> <Tainted Druids> <Tainted Paladins> <Tainted Hunters> etc etc? or.. <Goblin Taint> <Orc Taint> <Tauren Taint> ^.^ (I'd seriously *love* an <Oceanic Taint> for the Kiwis/Aussies/Islanders!!)

Proposed Fix

When it is determined how many sub guilds will be needed, I think the only fair way may be to sort officers into each one of them first, then randomly allot members. Also it may be wise to impose a smaller cap than Blizzard's, say 550, to give some lea way. As it is, we can still chat together. That won't change.

Reaction

I must say this makes me very tempted to throw all my toons in main taint now i REALLY dont like the fact that our taint family might missout on guild perks that another part of our guild has earned also if they are keeping with the rep idea it makes it really hard to move around our own guild when every time you move you have to start a rep grind over again.
<table>
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<tr>
<th>Restrictions to Taint</th>
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<td>&quot;The small number of guilds that are over the 600 person cap will be able to keep their guilds intact (and fully supported in the new guild system), but they will not be able to add new members until they fall below the 600 member cap.&quot; so get your toons in taint asap?</td>
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<td>But yeah, this is definitely frustrating. The most frustrating thing is how little notice they’re giving us about it.</td>
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<td>Considering we do not know exactly when this patch will hit, we are working with the incredibly short headsup provided by Blizzard.</td>
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<td>I just realized you’re the spriest columnist over there! Anyway, yea, given 4.0.1 will probably drop in a week, that’s awfully short notice. I would have hoped they’d given us more time to get things in order before dropping it on us like that.</td>
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<td></td>
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</tr>
<tr>
<td>Please keep in mind that this announcement came with little warning, and you have a officer team that is very dedicated to keeping our unique culture and family intact through this unplanned announcement.</td>
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The thing I’m worried about, though, especially with how suddenly Blizz popped this on us, is what’s to say that in the next few months the larger than 600 guilds won’t be grandfathered in anymore?

This really sucks all around given the short notice. :|

I mean I always knew we were one of the biggest but I didn’t realize just how extremely large we really are!

From what the leadership of AIE has commented about on the Blizz forums, and in beta -- it’s been proven in the current beta environment that guilds begin to see UI bugs and guild XP/perk issues at or around the 1000 member mark -- so yet again, this likely boils down to Blizzard’s code not being ready for large member groups and the time it would take to re-write said code. Looking at it from a financial perspective, they want Cataclysm out for the holidays so that Activision gets the full impact of their investment in Blizz, as a result - large guilds get put on the back-burner [img:src=images/smilies/frown.gif] Yup, that’s all Mumper (the Blizz dev who seems to be the point man on this) has said. My worry for Tainters is, he’s already calling large guilds 0.1% of the affected WoW population [indirectly via his statement "we are happy to say that this value covers more than 99.9% of all the active guilds in World of Warcraft" -- if that’s the mindset they are taking, if any guild XP or perks problems do exist for guilds currently over 600 when 4.0.1 goes live, how much attention will they get? [img:src=images/smilies/frown.gif] IMHO, Mumper and Blizz owe Taint, AIE, Goon Squad and all of the other larger guilds in game a better explanation on how this will impact existing over 600-member guilds when 4.0.1 does hit.
I have heard two theories that make sense to me. 1) The cap is in place to prevent hundreds of people from joining large guilds simply to reap the benefits of joining, or to prevent guilds from randomly inviting as many people as possible to have as large a pool of perk-holders as possible. 2) The cap is in place to prevent overhead issues that have arisen with the new guild UI. This strikes me as essentially lazy, but I am not on Blizzard's dev team and therefore can't really make educated statements about their priorities. AFAIK, Blizzard has not stated anything about the 600+ member guilds except that 1) they will be "fully supported" by the guild UI and 2) they can't invite until they have fewer than 600 people.

And please don't use the "My main helped contribute so my alts should be warranted to the advancements also" because while this is true so to speak, You as well as everyone else know damn well that with the size of this guild it won't be like you are taking weeks of farming for guild advancements. In fact, I look at it quite the opposite, we are robbing Blizz of guild advancements because of our player size, and Blizz knows this, hence the reason they are incorporating a rule but allowing those that are already huge guilds stay as is, it makes sense to me, I can't blame Blizz. But seriously dude, who cares about future alts, be happy with what we have now.

Also, our membership is pretty awesome, because the things I had thought of concerning this, have all been mentioned already. Seems like there's not much for me to say, but I would like to offer my help.
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<td>Still a family</td>
<td>Nodes\Still a family</td>
<td>Please keep in mind that this announcement came with little warning, and you have a officer team that is very dedicated to keeping our unique culture and family intact through this unplanned announcement.</td>
</tr>
<tr>
<td>Still a family</td>
<td>Nodes\Still a family</td>
<td>We can still use Name2Face (I think my mouse’s right button has a short lifespan). We will still be a family. We will just be in different rooms of the house.</td>
</tr>
<tr>
<td>Still accepting new applications</td>
<td>Nodes\Still accepting new applications</td>
<td>We are still indeed accepting new applicants and processing them as fast as we can. *edited to add that we have a number of officers actively engaged in this right now.</td>
</tr>
<tr>
<td>Still accepting new applications</td>
<td>Nodes\Still accepting new applications</td>
<td>Well the Officers are going to go through yet another week of hell. Many hugs for all your efforts. Not only do they have to deal with this I’m sure invites are going to skyrocket in the next weeks. Best thing I think we can do as memebers</td>
</tr>
<tr>
<td>System</td>
<td>Nodes\Initial Ideas\System</td>
<td></td>
</tr>
<tr>
<td>Thanks to officers</td>
<td>Nodes\Officers\Thanks to officers</td>
<td>Also, our membership is pretty awesome, because the things I had thought of concerning</td>
</tr>
</tbody>
</table>

270
<table>
<thead>
<tr>
<th>Thanks to officers</th>
<th>Node\ Officers\ Thanks to officers</th>
</tr>
</thead>
<tbody>
<tr>
<td>this, have all been mentioned already. Seems like there’s not much for me to say, but I would like to offer my help. If there’s anything I can do, just let me know. Again, thank you all for trying your best to work this whole thing out.</td>
<td></td>
</tr>
<tr>
<td>Thanks to officers</td>
<td>Node\ Officers\ Thanks to officers</td>
</tr>
<tr>
<td>I generally don’t speak out much, but I wanted to put my two cents in. Officers I support you 100% in this, if there is anything I can do to help please do not hesitate to ask.</td>
<td></td>
</tr>
<tr>
<td>Thanks to officers</td>
<td>Node\ Officers\ Thanks to officers</td>
</tr>
<tr>
<td>Just wanted to post some words of support for our Horde family...since this decision by Blizz has been so sudden, and has taken a lot of the larger guilds by surprise. Tainters - your leadership and Officers absolutely are listening to you, I know they labor over pretty much every decision that impacts your guild, and they will definitely be working non-stop to come up with the best plan for the future of you all. We love you guys, and</td>
<td></td>
</tr>
<tr>
<td>Thanks to officers</td>
<td>Node\ Officers\ Thanks to officers</td>
</tr>
<tr>
<td>Kudos to the officers for managing yet another headache that comes with this giant gaggle of homos and homo-friends.</td>
<td></td>
</tr>
<tr>
<td>Thanks to officers</td>
<td>Node\ Officers\ Thanks to officers</td>
</tr>
<tr>
<td>Posted on the WOW forum thread. <em>shrug</em> The reason I came back after unsubbing was because I was coming back to Taint. <em>sending good vibes to the officers</em></td>
<td></td>
</tr>
<tr>
<td>Thanks to officers</td>
<td>Node\ Officers\ Thanks to officers</td>
</tr>
<tr>
<td>Thanks for all of your hard work, officers! I will be completely honest that when I first read the post I was concerned but seeing the subsequent posts from our officers I was immediately heartened! I have complete faith in Taint’s leadership (which is undeniably the best group of officers I’ve ever had) that this will all get worked out. Please let me know if I can help!</td>
<td></td>
</tr>
<tr>
<td>Thanks to officers</td>
<td>Node\ Officers\ Thanks to officers</td>
</tr>
<tr>
<td>This whole thing seems like one hell of a doozie to drop on everyone in the weeks before it will effect us. My sympathies to the officers. Thank you for all you folks do</td>
<td></td>
</tr>
<tr>
<td>Thanks to officers</td>
<td>Nodes\Officers\Thanks to officers</td>
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<td>Thanks to officers</td>
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<td>Trust in Officers</td>
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<tr>
<td>Waste of guild leaders prior work</td>
<td>Nodes\Officers\Waste of guild leaders prior work</td>
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APPENDIX THREE

Just Playing the Game
Group Photo
Parade
REFERENCES


References


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