

“Whimsical and Fun and Weird and Interesting”:

Prosocial Community in *Minecraft*

by

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Abstract

Over 700 million people worldwide are socializing and spending time, sometimes significant amounts, in online multiplayer games, and these social spaces can be important sites of community. Unfortunately, levels of civility, aggression, and mutual helping can vary significantly between game spaces. Given their ubiquity and importance in so many people's lives, it is critical to understand how a prosocial community can be created and maintained over time in these spaces for those who want them. This research uses virtual ethnography and interpretive phenomenological analysis to examine how moderation and community development strategies, game design elements, and player behaviours are experienced and can be influenced by players in prosocially-oriented online multiplayer *Minecraft* servers. It is clear that it is the prosocial orientation of players and the commitment, social skill, and integrity of server moderators that is most key to creating and maintaining a prosocial gaming environment and that although game design can support prosociality, game design factors appear to be much less important overall. Attracting the right players—and refusing entry to the wrong ones—is the most important concern.

Keywords: Minecraft; Community; Prosocial; Participant Observation; Ethnography; Interpretive Phenomenological Analysis

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Introduction

Play is a central, social, constructive, and transformative human activity, and formalized play in the form of games and game playing is a ubiquitous feature of twenty-first century social life. As of the end of 2013, 1.2 billion people worldwide play video games, or around 17% of the world's total population (Spil Games, 2013). Seven hundred million of those people play online with others. Research has found that, for the majority of players, the social aspects of multiplayer games are at least as important as the gameplay (Ducheneaut & Moore, 2005; Ducheneaut, Moore & Nickell, 2007; Wang & Wang, 2008; Chen, 2009; Ratan, Chung, Shen, Williams, & Poole, 2010; Whippey, 2010; Kaye & Bryce, 2012; Shaw, 2012; O'Connor, Longman, White, & Obst, 2015; Potts, 2015; Osmanovic & Pecchioni, 2016). Popular online multiplayer games function as the modern equivalent to pubs, parks, or community centers (Williams, Ducheneaut, Xiong, Yee, & Nickell, 2006; Ducheneaut et al., 2007). They are places where people can come together casually and find social learning (Ducheneaut & Moore, 2005; Banks & Potts, 2010; Ratan et al., 2010), social interaction, and even community (Cole & Griffiths, 2007; Ducheneaut et al., 2007; Poor & Skoric, 2014; O'Connor et al., 2015).

The concept of *community* is central to this research, but a universal understanding of the term cannot be assumed (Hillery, 1972). In this research, I use community to mean a social group in which members experience a pleasurable sense of belonging and significance (McMillan & Chavis, 1986). My use of the term assumes that both members and non-members perceive the group to be positive and supportive, and prosocial behaviours such as helping, donating, volunteering, and collaborating (Brief & Motowidlo, 1986) are common. Additionally, I assume that within a prosocial community, members resolve intra-community conflict peacefully and collaboratively rather than punitively. Within a prosocial online game community,

I expect to see players taking an interest in and socializing with each other, welcoming new players, sharing knowledge and resources, and achieving or adventuring together.

My site for this research has been publicly accessible, prosocial, community-oriented *Minecraft* multiplayer servers. *Minecraft* is both a deceptively simple game and a powerful gaming platform (Banks & Potts, 2010; Duncan, 2011; Lee-Leugner, 2013; Tremblay, Colangelo, & Brown, 2014), first launched in 2009. It is the second most popular video game software of all time (beaten only by Tetris), with over 100 million copies of *Minecraft* sold across all devices (Spanier, 2014; Callaghan, 2016). *Minecraft* has players on all continents (Callaghan, 2016) and it has a presence in every popular online social media space. Unlike many popular multiplayer games, *Minecraft* does not absolutely require violence. It is possible to play without ever having to fight or kill. Still, violent play is possible and is sometimes a necessary game mechanic. While some multiplayer servers prohibit violence between players, some multiplayer servers permit or even encourage it. I must emphasize that there is no singular *Minecraft* community or community experience. Some of the research on various *Minecraft* communities suggests that they can share a more prosocial value set than is common in other gaming communities (Shaw, 2012; Lee-Leugner, 2013; Potts, 2015; Osmanovic & Pecchioni, 2016; Riordan & Scarf, 2016), but this is likely not universal. The variety of community experiences, combined with the sheer size and scale of *Minecraft*'s player base and affinity space and its flexibility as a multiplayer gaming platform, make *Minecraft* multiplayer servers an excellent site for this and future research (refer to Appendix A for a short glossary of common *Minecraft* terminology).

Online gaming community spaces are important for many people of all ages and from all parts of the world, including myself. However, game social spaces range from supportive and kindly (Williams et al., 2006; Chen, 2009; Ratan et al., 2010; Whippey, 2010; Kaye & Bryce,

2012; O'Connor et al., 2015) to hostile, violent, and bullying (Yang, 2012; Fryling, Cotler, Rivituso, Mathews, & Pratico, 2015). Prosocial online multiplayer game communities should be available to those who desire them. This brings me to the question that is central to this research: *if it can be established that an online multiplayer Minecraft server offers a prosocial community experience, how and why is that prosocial community constituted?* This central question suggests three avenues of investigation grounded in the practical. First, how do the design of gameplay, server setup, and player interaction impact the prosocial community experience and to what extent can those design elements encourage altruism, empathy, and helping behaviours in players? Second, what community moderation practices or strategies make prosocial community more likely or more sustainable? Third, how important are individual players, their motivations, and their play styles to the prosociality of a community? To answer those questions, I have taken a qualitative, two-phase approach to both data collection and analysis, working within the interpretive paradigm. The first phase consisted of participant observation and virtual ethnography, using Schein's (2010) cultural analysis framework and Bartle's (1996; 2006) model of player types to assist data analysis. In the second phase, I used the knowledge gained in the first phase to guide interpretive phenomenological interviews with community members in order to gain a deeper understanding of how those players made sense of their participation and experiences within the community. By using both approaches sequentially, I have gained an understanding of the prosocial online game community experience that is both general and specific.

Given online games' centrality in the modern social landscape, the social tenor of those spaces is not a minor or fringe concern. Understanding how a prosocial community is created and maintained there is important, both for the individuals who spend their time and energy there,

and for society as a whole. My expectation for this research was that although player motivation would be an important factor in determining whether a server was prosocial in orientation, game design factors such as whether or not a game server preferred mob-killing over construction would also have a significant influence on the prosociality of a server. However, it is clear from this research that *it is the prosocial orientation of players and the commitment, social skill, and integrity of server moderators that is most key to creating and maintaining a prosocial gaming environment*. Although game design can support prosociality, game design factors appear to be much less important overall, as prosocially-oriented players make and model more prosocial choices regarding whether and how to engage with less prosocial game design factors and content. As a result, for individuals wishing to create prosocial Minecraft communities, it is attracting the right players—and refusing entry to the wrong ones—that is the most important concern. I have therefore also identified what criteria players use to evaluate servers when choosing where to play. I have also compiled a set of recommendations for game creators and game community founders (in Appendix B).

Literature Review

Introduction

There are three broad areas of existing scholarship that inform this research. First, I review the research into how playing games influences players' behaviour and interactions. Second, I consider the literature on how online communities form, develop and are experienced, both in general and with a specific focus on online games. Third, and finally, I note insights from studies on the ways that online multiplayer games offer opportunities for social learning. A synthesis of these three bodies of scholarship allows me to understand both how game content

and gameplay affect *Minecraft*'s social environment, and to recognize both the features unique to online communities and the features and characteristics of communities in general.

Game Effects on Personality Traits and Social Behaviour

For this research, I am particularly interested in the subtleties of interaction that make a game community more or less prosocial. A large body of psychological research strongly suggests that playing video games affects players' behaviour and personality. There has been a significant focus especially on the effects of violent or competitive games, though there is also a growing body of research on prosocial games. Both types of game effects have important implications for *Minecraft* communities, as *Minecraft* contains both aspects. However, neither research set has been without controversy. A short exploration of these criticisms will help to illuminate the relevance of game effects scholarship to this research.

Violent and competitive video game exposure effects. Consuming violent media or playing violent video games produces measurable increases in hostility, aggression, and violent behaviours in players (Anderson & Bushman, 2001; Bartholow, Sestir & Davis, 2005; Coeckelbergh, 2007; Anderson et al., 2010; Engelhardt, Bartholow, Kerr, & Bushman, 2011, Yang, 2012; Greitemeyer & Mügge, 2014) and decreases in empathy, perspective-taking, and prosocial behaviours such as helping (Anderson & Bushman, 2001; Anderson et al., 2010; Yang, 2012). In three major meta-analyses since 2001, including the results from over 250 research reports containing almost 170,000 participants, Anderson and Bushman (2001) asked the question of whether there is a "reliable association between exposure to violent video games and aggression" (p. 357). The result in all three meta-analyses was a resounding "Yes!" In each meta-analysis, experimental studies consistently showed a causal relationship between short exposure to violent video games and aggression in the period immediately after exposure.

Likewise, non-experimental studies consistently showed a correlation between being a player of violent video games and demonstrating increased aggression in non-digital life. There are several critiques of this consensus relating to cause and effect, effect size, generalizability, and the difficulty in separating the effects of violence in games from the effects of other factors such as competition and player frustration and I will briefly address many of these in a subsequent section. In response to these critiques, researchers in the field have progressively fine-tuned their research questions and methods to better understand the details of both the elements of games and gameplay that are producing the effects seen in earlier research and the details of what and how strong those effects are.

One specific critique of, especially, early research on gaming effects had to do with the chicken-and-egg problem of violent video games and player aggression. Essentially, critics questioned if the measured effects of those video games could be explained in terms of individuals with higher levels of aggression and hostility being more likely to play violent games. Bartholow et al. (2005) determined that individuals with higher levels of hostility and aggression were indeed more likely to play more violent video games but increased aggression after playing a violent game could be observed in all participants. Likewise, Möller and Krahe's (2009) longitudinal research demonstrated that player aggression was a result of play, rather than a precursor to play. Participants who had similar physical aggression scores at the start of the research, and who played more violent video games during the study period, had higher physical aggression scores and showed more acceptance of physical aggression as a conflict-solving strategy 30 months later (Möller & Krahe, 2009). These findings reinforce the multiple meta-analytic findings regarding the correlational long-term effects of violent video game use (Anderson & Bushman, 2001; Anderson et al, 2010; Greitemeyer & Mügge, 2014).

Several mechanisms have been proposed to explain the effects of violent game exposure, including cognitive—as in Social Cognitive Theory, proposed by Bandura (2001) and the General Learning Model, proposed by Anderson & Bushman (2002)—and affective and physiological. These mechanisms are not mutually exclusive. Social Cognitive Theory suggests that exposure to models that “legitimize, glamorize, and trivialize” (Bandura, 2001, p. 277) violence alters the internalized perceptions of social sanctions for violence and therefore weakens internal restraints. Using the General Learning Model, Bartholow et al. (2005) proposed that because players take an active and controlling part in executing violent acts when playing video games, this could explain why games appear to be better than other types of media at both creating and rehearsing aggressive patterns of thought and response. Another significant mechanism suggested by the research is desensitization, both affective and physiological. Multiple studies have shown that exposure to violent games decreases a player’s physiological and affective reactions both to physical pain stimuli and to depictions of real violence (Anderson & Bushman, 2001; Bartholow et al., 2005; Anderson et al., 2010; Engelhardt et al., 2011). I suggest that regardless of mechanism, repetition would intensify the effect, and repetition of action, violent or not, is something that video games very often require to a much greater degree than other media. This may help to explain why the increase in aggression and hostility seen as a result of exposure to violent video games is greater than that seen after exposure to violent television or movies (Anderson & Bushman, 2001; Greitemeyer & Osswald, 2010).

Increased aggression and well-practiced in-game violence may change the way that players act towards other players. Yang (2012) demonstrated that, especially for male participants, enjoying violent video games predicted a higher likelihood to either become a victim of cyberbullying, to perpetrate it themselves, or commonly, to do both sequentially. This

finding was echoed in Ballard and Welch's (2015) research on cyberbullying within online games. Ballard and Welch (2015) linked cyberbullying to in-game competition, and correctly predicted that social hierarchy—marked by player rank within the game—would be the most commonly cited focus for cyberbullying. However, it is not simply enacting violence in games that matters. Rothmund, Gollwitzer, and Klimmt's (2011) research suggests that players victimized in a violent game even by non-player characters (NPCs) can demonstrate a significant decrease in prosocial behaviour and generosity. In sum, violent and competitive games influence players to be more aggressive with each other. What then is the effect of playing video games that are prosocial in their orientation?

Prosocial game exposure effects. Multiple researchers have found that prosocial media exposure, including playing prosocial games, is associated with increases in prosocial behaviours (such as helping) and with increases in empathy, altruism, and perspective-taking (Gentile et al., 2009; Greitemeyer & Osswald, 2010; Greitemeyer & Osswald, 2011; Greitemeyer & Mügge, 2014; Prot et al., 2014; Vieira, 2014). Greitemeyer & Oswald (2010) showed that after only 8 to 10 minutes of playing, those that played prosocial video games were significantly more likely—in some cases, over twice as likely—to help experimenters in a variety of situations, as compared to those that played neutral video games. Vieira (2014) similarly found higher levels of trait empathy measured in both perspective-taking (a cognitive process) and sympathizing (an affective process) among participants who played more prosocial video games. Greitemeyer and Oswald's (2010, 2011) and Vieira's (2014) findings of increased helping behaviour are not unique. Prot et al. (2014) found that prosocial media consumption positively influenced the frequency of prosocial behaviour, but that there were differences between countries in the size of the effect. When adjusted to account for the differences between empathy in each group,

however, this cultural effect essentially disappeared. Although this study included a broader cross-section of cultures than previous research, it would be useful to see further replications of these results across more cultures and also comparing individuals with a shared culture with varied levels of empathy. Nonetheless, Prot et al.'s (2014) work, taken in concert with other individual prosocial media exposure studies set in a variety of countries and cultures, offers a hopeful possibility. Although culture, through its influence on empathy, changes the degree to which prosocial games change player behaviour, it may be possible to predict that the nature of the behaviour change will be positive regardless of the individual's cultural background. This is important given the global nature of the population in *Minecraft* multiplayer servers.

While it is important not to generalize and suggest that all players of violent games are aggressive or hostile and all players of prosocial games are prosocial, the research does suggest “that short-term effects of prosocial and violent media accumulate, bringing about lasting changes in behavioral patterns and personality traits” (Prot et al., 2014, p. 365). Increased aggression caused by violent video game use manifests in other situations. However, when comparing statistical measurements of the effect of both types of media, both Vieira (2014) and Greitemeyer and Mügge (2014) noted that the positive relationship between prosocial media and increased prosocial behaviour and traits was usually stronger than the negative relationship seen with violent media. We are, perhaps, more inclined to get along than to fight. I will explore further support for this statement in the next section, but it is important to note that despite the fact that most video games include some violence, experiences of positive and supportive community are common in online game spaces (Ducheneaut & Moore, 2005; Williams et al., 2006; Wang & Wang, 2008; Ratan et al., 2010; Whippey, 2010; Kaye & Bryce, 2012; O'Connor et al., 2015).

Game effects controversy and relevance to this research. Research on the effects of violent and prosocial game play has been criticized methodologically and statistically (Sherry, 2001; Williams & Skoric, 2005; Ferguson, 2007; Ferguson & Kilburn, 2010; Gentile, 2016). However, newer and more robust research continues to show results similar to early findings (Anderson et al., 2010; Gentile, 2016). Perhaps the most frequent criticism has been that the effect on players of violent games is not large enough to be meaningful (Sherry, 2001; Ferguson, 2007; Ferguson, 2013). Violent game effects are similar in size to the effect of poverty and substance abuse on aggression and violence (Bushman, Rothstein, & Anderson, 2010). Unfortunately, violent game research findings are often exaggerated or sensationalized in media reporting, particularly when a gamer commits a serious act of violence, such as a mass shooting (Ferguson, 2013; Gentile, 2016). Game effects research cannot accurately predict serious but rare events (Bushman et al., 2010; Gentile, 2016).

In contrast, the small-to-medium-sized effect seen in the game effects literature (Bushman et al., 2010) is very relevant to the current research. As I will discuss in the next section, it is the small day-to-day interactions that influence an individual's sense of belonging and community (Kaye & Bryce, 2012). The play encouraged by the game could subtly influence whether a player helpfully answers a newbie's request for server information rather than curtly suggests that they "Use Google, dickhead" (O'Connor et al., 2015, p. 467). This difference in response could then impact the sense of community for all online players in the game space (Kaye & Bryce, 2010; O'Connor et al., 2015).

A more recent and more promising line of inquiry relates to the small but growing body of research attempting to tease apart the effects of violence and competitiveness and the ways in which cooperative play can mediate these effects. Studies investigating how direct competition—

even non-violent competition—between players affects them, show that competitive play may cause significantly more post-play aggression and hostility than non-competitive violent play (Adachi & Willoughby, 2011; Adachi & Willoughby, 2013). This research raises new questions about the potentially damaging effects of competition. An important and promising line of research is therefore that focusing on understanding the effects of cooperative play. Cooperating with other players—even when that cooperation is in aid of violent competition—appears to significantly mitigate (Eastin, 2007; Ewoldsen, Eno, Okdie, Velez, Guadagno, & DeCoster, 2012) or possibly even eliminate (Greitemeyer & Cox, 2013; Velez, Greitemeyer, Whitaker, Ewoldsen, & Bushman, 2016) the negative effects seen as a result of exposure to violence in games in earlier research. However, Greitemeyer and Cox (2013) tested cooperative play in neutral (non-violent) games and their results suggest that while cooperative play impedes the negative effects of violent games, violent games likely also impede the positive effects of cooperative play. What is clear is that more of this research is needed, not to establish that playing games affects players in a variety of ways—this has been well established at this point—but to increase understanding of the importance of small differences in game interaction design, in violence, and in player demographics.

It is tempting to suggest that the real controversy of game effects is one of values. In sum, perhaps the argument is not so much over whether violence or competition in games has an effect or what or how large that effect is, but whether the effect itself is something that matters or that should impact the choices that game developers or players make, a subjective and potentially moralistic judgment. In this research I am not trying to make any such judgment call. The question of whether all games should be more prosocial or less violent and competitive is beyond

the scope of this research, which instead is investigating only how to achieve a prosocial community experience when that is what players want.

Minecraft's customizability enables comparison of more closely matched game environments than is usually possible in game research. While leaving significant amounts of the standard gameplay and interaction intact, *Minecraft* multiplayer server admins may uniquely configure each server (Duncan, 2011) using *mods*. Each server can therefore make it easier or harder for players to interact, communicate, or work together and offer a different mix of prosocial, neutral, and violent play, and servers signal this mix to potential players using specific keywords (refer to the glossary in Appendix A for examples). Given both the violent and prosocial game exposure effects demonstrated in the literature, it follows that, on a multiplayer server where *Minecraft's* fighting and player-killing game aspects are given a greater focus, there would also be an increase in social behaviour such as rudeness, lack of consideration for other players' feelings, griefing (deliberate destruction or theft), bullying, or harassment. Similarly, on a server where building and creativity are a greater focus, helping and social support would be more prominent. I have looked for these relationships between design choice and resulting behaviour in both in my own observations and in participants' experiences and perceptions of the multiplayer servers where they have played, and will discuss my findings in a later section.

Community Offline, Online, and Within Multiplayer Games

Feeling oneself to be a part of a community has been acknowledged as a critically important human experience for as long as research into the concept has been published (Hillery, 1955; Sarason, 1974). Three themes in the literature are particularly relevant to the current proposal: the existence of online community, player experiences in online game communities, and the impact of game design on community development.

A model of community. It is possible and even common for individuals to experience a sense of community and belonging in an online context (Ogan, 1993; Blanchard & Markus, 2004; Roberts et al., 2006; Blanchard, 2007; Caplan, Williams, & Yee, 2009; Sum, Mathews, Pourghasem, & Hughes, 2009; Obst & Stafurik, 2010; O'Connor et al., 2015). A strong sense of community in both online and offline contexts is associated with increased happiness and sense of wellbeing (Davidson & Cotter, 1991; Farrell, Aubry, & Couloumbe, 2004; Sum et al., 2009), decreased loneliness (Glynn, 1981; Sum et al., 2009), and better health (Molinari, Ahern, & Hendryx, 1998; Sum et al., 2009). However, community is not an inevitable consequence of gathering people together either offline or online (Blanchard & Markus, 2004). In order to research community I first needed to be able to identify it and its components.

McMillan and Chavis (1986) developed perhaps the most influential community model, intending it to apply to both territorial and relational communities. This model includes four elements: (a) *membership*, (b) *influence*, (c) *integration and fulfillment of needs*, and (d) *shared emotional connection*. Membership involves the feeling of identifying with and having invested oneself in the community and relies on boundaries and barriers—so that there are members and non-members—to create emotional safety. Influence in a community is bidirectional, so that members have the sense that they can influence the group and the group also consensually influences its members towards conformity. Integration and fulfillment of needs are how a community reinforces members' continual identification with and contribution to the group. Shared emotional connection, perhaps the most important of the four elements, relies on positive interactions between members, shared history and experiences, and mutual investment in the community (McMillan & Chavis, 1986). For the current research, this model offers a checkpoint in case of doubt: how does what I am observing fit the model for a community?

As an example of this usage, I will apply McMillan and Chavis' (1986) model to one area of observation that stands out in the research. Players of Massively Multiplayer Online Roleplaying Games ("MMORPGs") report experiencing a sense of community within their guilds, clans, or raiding parties more than in the game as a whole (Ducheneaut & Moore, 2005; Williams et al., 2006; Chen, 2009; Ratan et al., 2010; Hsiao & Chiou, 2012; O'Connor et al., 2015). These formalized in-game social groups fit well within McMillan and Chavis' (1986) model for community, with support for all four elements. That is, (a) membership in such groups is limited and requires an investment from players (Ducheneaut & Moore, 2005; Williams et al., 2006; Ratan et al., 2010; Whippey, 2010); (b) members play a role and can influence how the group functions (Ducheneaut & Moore, 2005; Williams et al., 2006; Whippey, 2010); (c) being a part of the group fulfills player needs, in that it helps them to progress in the game and get the best loot (Ducheneaut & Moore, 2005; Williams et al., 2006); and (d) as members adventure and fight together, they develop relationships and build a history of shared experiences (Williams et al., 2006; Ratan et al., 2010; Whippey, 2010). Some *Minecraft* multiplayer servers would not meet all of these criteria, so I have used this model as a rough tool both during selection and observation to monitor the ways in which the social spaces of those servers serve as communities.

Players as community members. In the literature, it is clear that online game community—and the way that players engage with it—closely mirrors offline community (Chee, Vieta, & Smith, 2006; Hussain & Griffiths, 2009; Kaye & Bryce, 2012; Poor & Skoric, 2014). For instance, players develop important relationships with other players and experience those friendships as close, reliable, and trustworthy (Cole & Griffiths, 2007; Chen, 2009; Whippey, 2010; O'Connor et al., 2015). Players also report increased feelings of social belonging (Kaye & Bryce, 2012; O'Connor et al., 2015) and trust (Ratan et al., 2010; Caplan et al., 2009; O'Connor

et al., 2015). Although most of the research on online game community has focused on MMORPGs, the generalities above are likely to be true in *Minecraft* communities.

Specific differences between *Minecraft* and MMORPGs may change aspects of that community experience however. For example, Lee-Leugner (2013) observed that *Minecraft* players enjoyed the fact that *Minecraft*, unlike MMORPGs, does not require players to create and maintain a “bad ass” (p. 55) competitive avatar in the game. These players saw this as an opportunity to bring their more authentic self into the game environment, with that authentic self perhaps analogous to what Bargh, McKenna, and Fitzsimons (2002) referred to as a “true self” (p. 34). This would suggest that perhaps to a greater extent than MMORPGs, *Minecraft* interaction could share the advantages that Bargh et al. (2002) saw for internet communication in general, including increased self-disclosure and a more generous judgment (idealization) of the other.

One of the most important and central aspects of player engagement in a game community is communication (Ducheneaut & Yee, 2013). There is a lot of conversation in online game spaces, both public and private (Williams et al., 2006; Whippey, 2010; Ducheneaut & Yee, 2013; Lee-Leugner, 2013). Some of that communication is practical and game-focused, such as when players discuss their game play or plan an adventure together. Some is more personal, as players share details about their offline lives, or seek and offer social and emotional support (Williams et al., 2006; Cole & Griffiths, 2007; Whippey, 2010; Lee-Leugner, 2013; O’Connor et al., 2015). During the participant observation phase of my research, I observed a mix of practical and personal conversations in public community channels.

Researchers commonly observe prosocial behaviour in game communities (Chee et al., 2006; Whippey, 2010; Kaye & Bryce, 2012; O’Connor et al., 2015). Whippey (2010) noted that, in *World of Warcraft*, it was common to see small acts of kindness, such as giving items to other

players, healing a player in need, casting protective spells on others, and answering requests for navigation help within the game. One player that Chee et al. (2006) interviewed stated that working together with another player to get them an important weapon that they really wanted (even if the first player got no material benefit from the raid) felt “more productive” (p. 11) than making progress in a single player game. The presence or lack of prosocial behaviour in a game space has a significant effect on player enjoyment (Kaye & Bryce, 2012; O’Connor et al., 2015).

Good leadership is an important factor in the long-term success and continuance of online communities (Williams et al., 2006; Blanchard, 2007; Poor & Skoric, 2014). Leadership in online communities is often voluntary and unpaid, yet requires significant investment of time, energy, and attention (Williams et al., 2006; Blanchard, 2007; Poor & Skoric, 2014). In *World of Warcraft*, Williams et al. (2006) observed that smaller guilds depended on guild leaders and their ability to facilitate social support; within large popular guilds, guild leaders “were able to enforce codes of ethics, police disputes, coordinate scheduling, and even impose lofty guiding philosophies” (p. 350). Without the continuous leadership of skilled leaders, a guild and its community suffers. Poor and Skoric (2014) identified the loss of skilled leaders as one of the factors that led to the eventual dissolution of a once popular guild in *EverQuest II*. In *Minecraft* multiplayer servers, especially ones wishing to maintain a welcoming community, this leadership is also important, and a further discussion of this can be found in my findings below.

Community by design. Just as strangers will come together in a coffee shop for an in-person board game meet-up, players of online multiplayer games play, in part, to meet other players and socialize in the context of the structure that a game imposes (Ducheneaut & Moore, 2005; Cole & Griffiths, 2007; Osmanovic & Pecchioni, 2016). For example, Chee et al. (2006) found that players of *EverQuest*—a popular MMORPG—experienced the game as “a productive

and engaging space” with “everyday tasks, errands, and obligations to be done” (p. 8), and that they perceive the activities they do there as “real engagements with real fellow gamers involved in real forms of community” (p. 15). None of this is by chance; a commercial MMORPG like *EverQuest* or *World of Warcraft* has been carefully designed not only to include engaging obstacles and challenges for players to overcome (McGonigal, 2011) and to be visually and narratively compelling, but also to be conducive to socialization and community-building (Williams et al., 2006; Poor & Skoric, 2014). All of these qualities have been shown to be necessary to keep players engaged in the game (McGonigal, 2011; Hsiao & Chiou, 2012) and in their game communities (Poor & Skoric, 2014). Williams et al. (2006) found that game mechanics and social architectures—both elements of game design—significantly influence many aspects of community formation, such as the size of social groups.

Minecraft's game design differs in several fundamental ways from the more commonly studied MMORPGs. If, as McGonigal (2011) asserts, “games make us happy because they are hard work that we choose for ourselves” (chapter 1, How Games Provoke Positive Emotion section, para. 1), then *Minecraft*'s less directive and structured design offers an incredible range of hard work for players to choose from. McGonigal (2011) suggests that there are six broad categories of work that a game can include. I would suggest that *Minecraft* offers all of them, including the mental work of figuring out the game and its mechanics (Christiansen, 2014); the creative work of building (Cayette, 2014; Christiansen, 2014; Morgan & Mungan, 2014); the busywork of organizing resources; the high-stakes work of exploring increasingly dangerous areas of the game and conquering hard enemies; and last, the physical work of developing skill with the game controls in order to succeed. Any of these types of work are available to a player at any time, and more than in other games, players can freely choose among them.

Minecraft's open-endedness may both help and hinder the formation of community in *Minecraft* by comparison with other online games. O'Connor et al. (2015) observed that "gameplay mechanisms that force or reward cooperation can facilitate the formation of a community; however, when players can 'solo' . . . their sense of community associated with the game appears to be reduced" (p. 467). *Minecraft* presents a challenge in this respect, as it is certainly possible to play independently much of the time. However, Lee-Leugner (2013) observed that playing *Minecraft* at the same time as friends was important for players, whether they were actively collaborating or working on individual projects or just fooling around. In my research, I paid particular attention to the specifics of how community creators modify (mod) the game's default player communications, add or improve player interaction elements, and use rules and project protocols in order to foster and support positive interactions between players.

Social Learning in Online Games

Social learning or social cognitive learning refers specifically to the type of learning that individuals do primarily through informal observation in a social environment (Bandura, 2001). Online multiplayer game settings are places where players learn not only the specific techniques and strategies of game play, but also the intricacies of how to behave and conform to local expected social norms, in addition to learning about topics entirely unrelated to the game context (Ducheneault & Moore, 2005; Chen, 2009; Banks & Potts, 2010; Pellicone & Ahn, 2015).

Navigating the social complexity required to succeed within the game requires significant social skill sustained over time (Ducheneault & Moore, 2005; Whippey, 2010), and the literature suggests that online multiplayer games are good at teaching and reinforcing these skills. Online multiplayer games have significant social complexity (Ducheneault & Moore, 2005; Chen, 2009), especially when users need to work together towards a common goal and negotiate cooperation

within a team. Ducheneaut and Moore's (2005) virtual ethnography of *EverQuest Online Adventures (EQOA)* focuses particularly on the skill of joining and participating in questing groups with others, requiring players to navigate in-game socialization successfully over a period of time. Ducheneaut & Moore (2005) observed that:

To be recognized as a good player, you need to learn the lingo, perform your instrumental role well when grouped with others, and more generally demonstrate that you are an interesting person to play with (e.g., through humor). . . . In short, these games are all about having the right social skills. (p. 92)

MMORPGs are usually designed so that working with others is necessary, and thus provide a framework for social learning.

Although Minecraft does not require players to collaborate in the same way, both Pellicone and Ahn (2015) and Banks and Potts (2010) observed similar social learning in *Minecraft's* distributed meta-game community space. In their 2015 study of Ben, a Minecraft user, and his stitched-together social network, Pellicone and Ahn observed that, while Ben self-identified as being good at the technical skills of "configging servers and building" (p. 9), in fact he also needed significant social and organizational skills to collaborate with other players to build his *Minecraft* server. It is important to note that in both of these examples, social learning is indirect and incidental to game goals. Learning the social skills to successfully join raiding parties with others is not something taught in a tutorial in *EQOA*, for instance. *Minecraft*, notoriously lacking in player documentation of any kind (Duncan, 2011), does not offer players specific advice on how to convince a group of people to share hosting costs for a server. Banks and Potts (2010) suggested that in addition to acquiring game and social skills, social learning in *Minecraft* can also extend to "learning to learn" (p. 6) and "emergent social learning" (p. 7), as

players not only learn skills directly from observing other player's actions and receiving advice, but also from observing how other players solve their own knowledge gaps. During my research, I observed players problem-solving and helping each other to learn necessary game and social skills in the game space, and I looked for opportunities to talk about social learning in interviews.

Summary

The literature demonstrates that games, gameplaying, and the communities and social spaces provided by multiplayer games matter and are worthy of further study. The scholarly consensus regarding prosocial and violent game play and the effects of each on players and on their communities supports this study's presupposition. That is, the consensus confirms that the choices that players make when they play or when they create space for others to play with them can have far-reaching consequences. The research also reveals several gaps. Although there have been several virtual ethnographies or assessments of sense of community in various multiplayer game environments, almost all of these have taken place within MMORPGs. As yet, and despite *Minecraft*'s popularity, the literature does not appear to include a virtual ethnography or assessment of sense of community set within multiplayer *Minecraft*. In addition, O'Connor et al. (2015) specifically identify an investigation into game design choices and how they support or discourage the development of community in games as something that has so far been lacking in the literature. It is my hope that my research project will, by addressing these gaps, meaningfully contribute to the important conversation about community in online games.

Methods

Research Design

In answering my research question, my site of analysis has been *Minecraft* multiplayer culture, and my methods fit within the interpretive paradigm. In interpretive research, researchers

do not seek objective truth. Instead, they look for a socially agreed-upon collective truth set in a place and time, with the understanding that, at another place or time or as interpreted by a different researcher, a different collective truth could emerge (Merrigan, Huston, & Johnston, 2012). This is appropriate because the concept at the heart of this research, community, itself exists primarily as an interpreted phenomenon. I have combined two methodological approaches in both data collection and analysis: virtual ethnography and interpretive phenomenological analysis (IPA). As Maggs-Rapport (2000) observed, ethnography and IPA have similarities in that “they are both exploratory, they both use the researcher as the data collection instrument, and they both emphasize the need to take a self-conscious approach to research” (p. 219). In ethnography, the researcher is an observer and finds cultural meaning in the “descriptions that people give to their cultural world” (Maggs-Rapport, 2000, p. 220). In IPA, the researcher is an interpreter seeking meaning that is often concealed and must be actively surfaced out of the participant’s narrative (Maggs-Rapport, 2000). In virtual ethnography, researchers collect data through “participant observation” and attempt to understand what subjects “experience as meaningful and important” (Ducheneaut & Moore, 2005, pp. 90-91) by becoming immersed in their world (Ducheneaut & Moore, 2005; Chee et al., 2006). In IPA, researchers collect data through in-depth semi-structured interviews with questions that focus on eliciting detailed descriptions and participants’ interpretations of their experiences (Maggs-Rapport, 2000; Pietkiewicz & Smith, 2012).

I conducted this research in two distinct phases. In the first phase I applied the ethnographic practice of participant observation to playing *Minecraft* in multiplayer servers. I then analyzed my observations and experiences using as frameworks both Schein’s organizational culture theory (2010) and Bartle’s player type theory (1996, 2004). In the second

phase, I conducted five approximately hour-long phenomenological interviews with players I had encountered in the first phase. I then analyzed those interviews using IPA. My purpose in combining methodologies was to benefit from the strengths of both approaches and to use triangulation of multiple methods to increase confidence in my findings (Maggs-Rapport, 2000). The cultural knowledge I gained during the first phase provided a rich contextual backdrop for understanding and interpreting interviewed participants' specific phenomenological experiences.

Phase 1: Virtual Ethnography

Data and data collection. My data collection consisted of participant observation in two *Minecraft* communities selected for their apparent prosocial focus. Because of the way community is formed in multiplayer *Minecraft* communities, my participant observation involved both playing *Minecraft* in the chosen *Minecraft* multiplayer servers and otherwise participating in community activities in the larger distributed community spaces.

For this phase of my research, I chose two communities to observe in hopes of experiencing a more diverse array of community activities and interactions and to avoid having my research derailed should a server shut down suddenly or experience other problems. In selecting *Minecraft* multiplayer servers to observe I considered five critical criteria:

- Research activity was not prohibited (Markham & Buchanan, 2012).
- English was the primary language used to communicate.
- In order to ensure that players would not reasonably think of the game spaces as private (Eysenbach & Till, 2001), the server was publically accessible, broadly advertised, and free to play on.
- Player base was in the range of several hundred to several thousand players, with a regular online player count of five to thirty-five throughout the day.

- Clearly defined and documented prosocial community standards and values were present.

The two servers I chose both satisfied all of these criteria. In order to distinguish between them, I will refer to them as YouTube Server and Education Server. YouTube Server had been online for four years, had been founded by popular YouTube creators, and existed as part of their distributed fan community. Education Server had been online for three years, hosted an online university environment where players could kill mobs in the game in order to receive special equipment and tools with custom embedded educational content, and encouraged players to both play in this area and contribute new content to it. Having selected servers, I began participant observation on December 24, 2016. Maggs-Rapport (2000) suggests that both “prolonged engagement” and “persistent observation” (p. 220) are critical factors in participant observation, as the length of time spent in building trust and relationships can also help the researcher to understand what is and isn’t important in what they observe. I played *Minecraft* on my computer, read and replied to other players’ posts in forums or posted my own, and read through the server wiki pages. My play and participation sessions occurred every one to two days for anywhere from 20 minutes to several hours between December 24, 2016 and March 10, 2017. I spent a total of 87 hours playing on one server and 28 hours playing on the other. In addition, I spent approximately 18 hours participating in the distributed community spaces, for a total of 140 hours. This amount of time spent in participant observation is similar to other ethnographic work in video game environments, such as that done by Ducheneaut and Moore (2005), whose ethnography of *EverQuest Online Adventures* was based on around 100 hours of gameplay by two participant observers.

There is a large disparity in cumulative play time between the two primary servers. This is largely a result of differences in the patterns of activity on both servers. The server with less

play time appeared to draw the majority of its players from the central and eastern United States. As I live on the west coast, this server's periods of heavier activity were often incompatible with the times that I was able to play, usually weekday evenings after 9:30. As a result, most of my participant observation on that server took place during the day on weekends and did not accumulate as quickly.

During my participant observation, I recorded data in several ways. I recorded video of my play sessions with Quicktime Player so that I could review important moments and interactions. I also saved the standard *Minecraft* game output transcript as a text file for each game session, unless this was lost as a result of a computer failure. This transcript includes almost all of the text that occurs in the game, including error messages, in-game help, the text associated with objectives and events in quests or minigames, all public chat and any private messages to which I am a party, but not text contained in in-game signs or labels. For my participation in the distributed community spaces, I used NCapture to capture significant public forum posts as PDFs for analysis. Finally, after a play session when I was copying the game output transcript into Nvivo, I briefly annotated important moments in the transcripts with fieldnotes of my thoughts and impressions. The game output transcripts and my annotations on them combined with significant forum posts form the bulk of the data I chose to analyze directly.

Data analysis. During the period of participant observation, I was continuously reviewing and reflecting on my participation experiences and spent time each week deductively and inductively coding my data using two theoretical models as a framework. These are Edgar Schein's (2010) organizational culture model and Richard Bartle's (1996, 2004) player type model. These models provided a useful structure in which I could code and categorize my observations and experiences.

Edgar Schein's (2010) organizational culture model describes three levels of culture that can be observed within organizations: *artifacts*, *espoused beliefs and values*, and *basic underlying assumptions*. In this model, artifacts in an organization are "all the phenomena that you would see, hear, and feel" (p. 23). In my observations I found that within the online game communities I was observing, artifacts fell into three broad categories, which I chose to call documentary artifacts, social interaction artifacts, and game-related artifacts. In the category of documentary artifacts I included any of the many ways that important information was being deliberately or officially documented or communicated, such as posted codes of conduct, the contents of the server wiki, in-game communication tools such as quests or signage, etc. In the category of social interaction artifacts I included any of the ways that individual members interacted with each other, including in words through chat or forum posts, through virtual interactions between player avatars, and through the collaborative constructions that occurred in the game. Finally, in the category of game-related artifacts I included both aspects of the game itself, such as the virtual landscape of the game, player avatar skins, weapons and tools, player constructions, as well as details of technical administration. Espoused beliefs and values are those beliefs and values that are expressed and believed to be true by members of the organization (p. 23). In the observed online game communities, these beliefs and values may be listed in the code of conduct or expressed in the forum or wiki, within in-game signage or quests, or by players themselves in chat. They are the stories that circulate that members believe to be true about their community. Underlying assumptions are the nearly invisible underbelly of the entire beast. They are the unspoken, unquestioned, and deeply invisible group knowledge about what is fundamentally true in an organization or a culture (p. 23). In a game space, this kind of underlying assumption includes the deeply held assumptions about how the game works or about

how people should interact or indeed, what it means when they interact the way that they do (Schein, 2010). I inductively coded these in themes that emerged from the data. Schein's (2010) model provided me with a useful framework for interpreting my community observations, as there is nothing directly observable or inferable that cannot fit into one or another of the three levels. Sorting my observations into those levels provided me with new insights into how they might interrelate with other observations.

Richard Bartle's (1996, 2004) player type model, first posited in his 1996 paper about MUD (multi-user dungeon) players, was one of the earliest attempts to model player behavior differences (Hamari & Tuunanen, 2014). The model suggests motivations underlying player behaviour and was developed primarily through observing player behaviour in MUDs (Bartle, 1996; Hamari & Tuunanen, 2014). In this research, I have used player typology as a qualitative and interpretive tool primarily to aid me in interrogating my observations rather than as a quantitative one to strictly classify and catalogue the players I encountered. Bartle's (1996, 2004) player type theory, while not as well supported empirically as some later models such as Yee's (2006) Five Factor Model, served this purpose well.

Bartle (1996, 2004) posited four types of players: *achievers*, *explorers*, *socializers*, and *killers*. These types can be graphed on two intersecting axes: whether the player prefers taking action in the game vs. interacting (acting/interacting), and whether they prefer to either act or interact with other players or with the virtual world of the game (players/world). In this simple combinatory matrix, achievers are act/world: they like the challenge of playing the game and play to achieve, level up, and win. Explorers are interact/world: they like to minutely examine the game world, the game mechanics, and figure out every obscure detail. Socializers are interact/players: they play to interact with other players socially. Finally, killers are act/players:

the pleasure they get from gaming comes from acting upon other players, usually by player-killing or griefing (Bartle, 2004). I had proposed that the usefulness of this model would come from Bartle's (1996) suggestions for how the player types interact in a gaming environment, how game designers can change elements of the game to attract players of various types, and how a stable equilibrium of those player types can be maintained in the game environment. In addition to gaining some insight in those categories, I also found that attempting to apply this model prompted me to continually reconsider my initial assumptions about what motivated both myself and other players, and what our actions meant both to ourselves and to other players.

My research question necessitates complementary understanding of both the *Minecraft* multiplayer server community as an organization, and the unique aspects of that community that arise from its game context. Schein's (2010) model gave me a useful sorting method for my observations about the organization and its culture, how both are constructed, and how internally consistent or inconsistent they may be. Bartle's (1996, 2004) model provided a similar, though not identical, sorting method for observations about players and their motivations within a game space, in addition to guiding insights about how observed characteristics of the community may be attracting certain types of players and repelling others. Both models have been used and tested in other research. They are both flexible and simple to apply and they are also both interpretive, which makes them a good fit for this interpretive research. By combining both models and using their structure for guidance, I gained a deeper, nuanced, and more focused understanding of my observations and their meaning.

Ethics. During data collection it was important to consider ethical implications relating to consent, to protecting personal information, to ensuring the safe storage and appropriate destruction of research materials, and to the important issue of the possible presence of

vulnerable persons in the observed spaces. It would have been very impractical, if not impossible, to seek consent prior to engaging in observation in the environment. This is due to the constantly shifting population of online players both over the course of a day and over the intended timeline of the observation. Like a public park or town square, a *Minecraft* multiplayer community is an unstructured shared space in which individuals come and go on their own timelines and for their own purposes; this unstructured quality and the number of players involved would prevent a structured and well-executed consent process for the participant observation. It was therefore crucial to do participant observation in multiplayer *Minecraft* servers where players would have no reasonable expectation of privacy (Canadian Institutes, 2014; Eysenbach & Till, 2001). In order to protect the personal information of members of the observed communities I used care in how I stored and treated my data. Game output transcripts and video recordings of play sessions usually include personally identifying details (*Minecraft* usernames and skins, identifying details that other players disclose about themselves within the game environment), so in order to safeguard this information, I stored my data on an encrypted external harddrive attached to my personal computer, which was backed up to an external local drive using Time Machine and excluded from cloud backup processes. I will store my encrypted raw data until two years after the date of my final defense and will then destroy it.

It is also important to address the presence of vulnerable persons, such as children and youth, neurodivergent persons, and other members of marginalized groups, in the observed play space. As I predicted based on my experience playing on *Minecraft* multiplayer servers, many of the players I met during play were younger than 18 years of age, though rarely younger than 11 or 12. As *Minecraft* does not appear to meaningfully track player age, it is impossible for servers to programmatically prevent younger players from joining. Certainly there is no way to prevent

other vulnerable persons from playing, nor should there be. Put simply, avoiding the presence of vulnerable persons was both impossible and inadvisable and would have harmed the research. *Minecraft* multiplayer communities have those persons as members, and any server that has sought to avoid or eliminate vulnerable persons from its player base by doing so necessarily damages its commitment to prosocial community values, this research's focus.

Given this combined constraint and opportunity, it was important to consider the issue of potential harm. To reduce the potential for causing harm to vulnerable persons who were a part of the selected communities, I was continually thoughtful about the possibility that my actions in the game or in the community's distributed social spaces could cause harm and actively sought to avoid that possibility. When playing *Minecraft*, I enjoy kindly cooperation, collaboration, and mutual helping. Throughout I consciously maintained appropriate social boundaries with all players I encountered, and treated online social interactions with the same generosity and respect that I would accord to face-to-face social interactions.

Phase 2: Interpretive Phenomenological Analysis

Data and data collection. During the second phase of the research, I collected data by interviewing players from the observed *Minecraft* communities and then analyzed it using interpretive phenomenological analysis (IPA). IPA aims for depth of knowledge gained through research, rather than breadth; therefore the number of interview participants is usually relatively small, perhaps as few as one or as many as fifteen, while the time and attention paid to each interview participant and their narrative are substantial (Pietkiewicz & Smith, 2012).

For this research, I purposively selected and approached nine players for interviews and eventually interviewed five of the nine. I chose these players from within the group of active, socially involved players 18 years of age and older who played regularly on one of two servers I

had observed, and one player who played on one of the servers occasionally but was particularly engaged and purposeful when they did so. I tried to select players with a range of community roles and apparent player types and who were diverse as to characteristics such as gender, age, and *Minecraft* experience, among others. The five interview participants included:

- A female player, 18 years old, with five years of *Minecraft* experience (“Player 1”);
- A male player/server owner, 23 years old, with six years of *Minecraft* experience (“Player/Server Owner 2”);
- A female player/server administrator, 27 years old, with four years of *Minecraft* experience (“Player/Server Admin 3”);
- A female player/server owner, 39 years old, with four years of *Minecraft* experience (“Player/Server Owner 4”); and
- A female player, 70 years old, with two and a half years of *Minecraft* experience (“Player 5”).

Interpretive phenomenological interviewing approaches participants as self-interpreting and situated in and indivisible from their social world (Benner, 2008). Therefore, the IPA interview strategy is primarily concerned with eliciting the meaning that participants bring to and create in an experience. As Sorrell and Redmond (1995) observed,

The purpose of a phenomenological interview is not to explain, predict, or generate theory, but to understand shared meanings by drawing from the respondent a vivid picture of the lived experience, complete with the richness of detail and context that shape the experience. (p. 1120)

The vivid picture being sought in this research is of the lived experience of playing *Minecraft* online with others and of being a part of a *Minecraft* community. Seidman (2013) offers an

interview structure for qualitative phenomenological interviewing with a structure that moves first from a focused life history, then digs deeper into the details of experiences raised in the history, then finally moves to reflecting on the meaning of those experiences. Although Seidman (2013) suggests that these three sections are best explored over three semi-structured interviews during two to three weeks. This is so that participants have a chance to reflect on each interview and to deepen their own understanding of their experience between interviews. I condensed this structure into a single 60- to 75-minute interview with each participant. The significant investment of time for participants would have made Seidman's three-interview structure impractical to implement. Appendix C in this proposal contains sample interview questions that I used to structure each interview.

I conducted interviews using either Google Hangouts or Discord, and audio-recorded them with Quicktime Player. One interview was conducted via video chat, three via audio chat only, and one interview was conducted in text chat at the participant's request. Before their interviews, participants reviewed and signed the consent letter and emailed me a scanned or photographed copy of it. After each interview I typed up a transcript from the audio recording and shared it with the participant via email for their review. I also emailed four of the five participants once with one to three follow-up questions that arose during analysis. My phase 2 data therefore includes the interview recordings and transcripts and the short emailed answers to follow-up questions.

Data analysis. As the name would suggest, IPA is very focused on interpretation. Indeed, IPA is usually described as a double hermeneutic process of sense-making (Pietkiewicz & Smith, 2012; Sorrell & Redmond, 1995) and Chappell, Eatough, Davies, and Griffiths (2006) suggest that in IPA, "the participants are trying to make sense of their world, and the . . . researcher is

trying to make sense of the participants trying to make sense of their world” (p. 207). The analysis used in IPA is therefore typically more actively interpretive and more concerned with seeking out what Sorrell and Redmond (1995) referred to as “concealed meaning in the phenomenon” (p. 1120) than those used in ethnography.

Once each interview set had been completed and transcribed, I used a modified form of Pietkiewicz and Smith’s (2012) suggested three-stage strategy for doing IPA analysis. In the first stage, I re-listened to interview recordings and did close readings of the transcripts, making notes that focused “on content (what is actually being discussed), language use (features such as metaphors, symbols, repetitions, pauses), context, and initial interpretative comments” (p. 12). I slightly combined Pietkiewicz & Smith’s (2012) second and third stages, as I reviewed and worked with the notes made in the first stage and looked for emergent themes which I labeled and grouped, noting connections and relationships between the themes. I then used these specific participant stories and interpretations to illustrate themes in my written analysis.

I also returned to the deductively-coded data from the ethnographic first phase of my research to cross-reference the observations of specific phenomena within the communities with participant experiences and perceptions of those phenomena. This process of cross-referencing reinforced the conclusions I drew from the interviews.

Ethics. Interviewing demands recognition of ethical considerations relating to the following factors: recruiting participants; ensuring informed consent for participation before, during, and after the interviews; protection of personally identifying information; and the storage, protection, and destruction of interview data.

Recruiting interview participants is a critical stage in the research process. In recruiting interview participants, I did not offer any incentives, nor did participants request one. Before

commencing interviews with participants, I asked for and received written confirmation of free and informed consent, and reconfirmed that consent at the start and conclusion of each interview and in each email correspondence (Canadian Institutes, 2014). I gave participants the opportunity to review interview transcripts and explicitly reiterated at the start and conclusion of each interview that they could opt out of participation at any point in the process. One potential participant I approached declined to be interviewed due to language difficulties, and three that I approached never replied to my initial message, either as a result of not seeing it or because they were not interested. None of the participants who agreed to an interview chose to withdraw later.

During two interviews, participants brought up, unprompted, issues relating to their current or past experiences with mental illness as it intersected with their *Minecraft* experiences. I responded matter-of-factly and empathetically to these disclosures, did not focus more attention on these issues than I focused on any other context provided by the participant, and checked in with them—as with all participants—at the close of the interview about how they were doing. In neither case was this disclosure accompanied by obvious signs of distress and both participants seemed excited and pleased to participate in the research throughout the interview.

In order to protect the privacy of interview participants—as with the gameplay recordings in Phase 1—recordings and transcript files were stored on my encrypted research hard drive, backed up to an external local drive and excluded from cloud backup processes. Interviews contain many personally identifying details such as details about participants' circumstances or history, positions they hold in named servers, or the names of friends and acquaintances. I have been careful to obscure those details in any quotes used for illustration of themes in the final analysis. I will destroy my encrypted raw data two years after the date of my final defense.

Findings and Discussion

From my review of the literature and from my own previous experiences as a player, I went into my observation and interviews with the hopeful assumption that while the qualities of individual players would play a part and were likely important, the choices that community founders and server staff made relating to server design and configuration would have a significant and legible influence on the prosociality of the communities I observed. Although these factors did have an impact, as did moderation strategies, it was dwarfed by the impact of the prosocial orientation of a server community's players and leadership, including server staff. As I observed this impact in play and interviews, it became clear that how players choose where to play was important and that this question had a somewhat unique application to *Minecraft*. This is because of the widely distributed infrastructure and incredibly broad choice of multiplayer *Minecraft* servers compared to other games.

This section will be broken up into five sub-sections. In the first sub-section and in order to provide context, I offer a brief comparison of the two servers I observed and the ways in which each was modified to facilitate community interactions. In the next three sub-sections, I explore the answers to the questions I posed in my introduction, regarding the following variables: first, the impact of gameplay design, server setup, and player interaction; second, the influence of moderation and communication practices or strategies; and third, the importance of individual players and staff to the social environment and social learning in the game. In these three sub-sections, I will also use a series of ethnographic vignettes to illustrate my findings; each vignette is a truthful account of something I observed, though I have generalized it to remove any personally identifying details. In the final sub-section, I will address the important

fourth question suggested by the answers to my initial three of how and why prosocially-oriented players choose the servers where they play.

Two Communities, Both Alike in Dignity, in Fair *Minecraft* Where We Lay Our Scene...

Minecraft can support many different kinds of gameplay and social environment. Both Education Server and YouTube Server had an intentionally prosocial focus on mutual helping and collaboration as evidenced both by their published rules and by the general conduct and communications of server staff and players. Both servers also offer players a sense of community and belongingness, as could be discerned in interviews. Yet, my play experiences on the two were quite different and the similarities and differences between them serve to illustrate both the flexibility of *Minecraft* as a gaming platform and the way small changes to a server setup can influence player experience.

In interviews, several participants identified what they saw as a significant advantages of playing on a well-run multiplayer server; it has been modified to provide the player with more play options and with improvements to standard gameplay. In this section, I lay out and summarize the ways that each server was modified to change or improve on the vanilla *Minecraft* experience. In particular, I briefly summarize the following aspects of game modification: changes and improvements to communication and interaction, including the introduction of an in-game economy; the inclusion of a variety of different play modes; the use of mods that permit users to protect what they create and to travel freely; and, finally, the imposition of a code of conduct and codified project planning process. I examine in more detail in subsequent sections how some of these specific choices can make a server better or worse at supporting community, prosociality, and social learning.

The most obvious change to the *Minecraft* play experience introduced by playing on a multiplayer server is other players and, therefore, the possibility of interacting with them. In addition to the default-built-in text chat, both servers were modified to provide multiple additional ways for players to communicate with each other, including voice chat, mail or messaging systems, and separate website forums. A full list of communication methods offered by the servers and their associated distributed community spaces can be found in Table D1 (in Appendix D). There were several differences in the way that the two servers both configured their communication systems and moderated them, and I will explore the effects of these differences in a subsequent section.

The modded addition of an economy and currency within the server environment allowed players to interact with each other through buying and selling resources, paying for labour, and through donations. On both servers, this economy was thoughtfully controlled and designed by staff, who set certain default prices for goods and for claims or plots, and there were mechanisms for selling resources to the server or to other players. The many ways that players on each server earned and spent in-game currency are detailed in Table D2 (in Appendix D).

As is true of most public *Minecraft* multiplayer servers, both servers contained several different worlds tethered together programmatically so that players could log in once and then move between worlds without ever logging out, and could communicate with other players across the entire server. This setup permitted the server to accommodate different play modes in each world. A full list of the worlds and play modes available on each server can be found in Table D3 (in Appendix D). In addition to a hub or spawn world where players start out and worlds for each of the two built-in play modes, Creative and Survival, both servers had a variety

of other worlds hosting modded play modes, such as Skyblock, Factions, and Minigames (for further explanation of these play modes, refer to the glossary in Appendix A).

Both servers also included mods on at least some of their worlds that made either the dangers of the game or of other players easier to deal with, particularly through the addition of land claim/grief protection and rapid transportation options. Grief protection mods permit players to protect what they have built and their possessions from other players. The two servers used different grief protection mods, but both permit players to claim or own a limited area of the map. Within that area, claim owners have full access to affect the environment but other players have only limited access. Both servers enable the claim owner to permit access to other players individually in order to share resources or work together.

Transportation mods permit players to rapidly move between points on the map. One example of this is that on both servers, when a player died, they could instantly return to their death point and retrieve their scattered possessions, rather than having to walk back to them across the map, naked and weaponless. These mods also made exploration easier, with many public warp points (named map locations that any player can visit by typing a command), random teleportation to anywhere on the map, and the ability for each player to set personal warp points. Players could also instantly teleport to another player or teleport them to the first player's location, with their consent.

While both servers were modified to programmatically prevent player-on-player violence in most or all areas and worlds, they had a different approach to other types of in-game violence or aggression. YouTube Server extended its anti-violence ethic to in-game mobs, fining players if they killed non-hostile mobs that were more useful alive than dead, such as sheep. Education Server had no such limitations and had additionally been modified to support an extensive

educational system that relied on violence as a primary mechanic. In this system players could fight and kill themed custom NPCs to receive specialized loot with an amazing variety of educational content embedded in it, from GRE study materials to materials relating to emotional literacy and cognitive biases.

Both servers had a short list of brief and explicit rules—a modification to the social code rather than the game code—that players needed to agree to follow before they could gain full access to the server. On both servers, the rules started with an exhortation to treat other players with respect. In addition to this primary rule, both servers prohibited griefing, player-killing (though Education Server permitted it on certain worlds only with consent), the use of hacks, exploits, and cheats that provide an unfair advantage, and the use of “anti-afk” machines, which are devices a player could build in the game to prevent the automatic log-off that occurs after a certain period of inactivity. In addition to these shared prohibitions, Education Server also prohibited pestering staff for special favours and gifts and exhorted players to use grief prevention. YouTube Server’s list was slightly longer and also included prohibitions against advertising other servers and creating certain types of machines that might be likely to cause lag for others within the game.

Both servers also had documented processes for managing large-scale construction projects, though with significant differences. On YouTube Server, constructing a new town was a significant and important project, and players wishing to do so were required to get approval and work closely with a team over a period of months. In contrast, on Education Server any player could start building a new town or other large-scale construction any time they wanted without seeking permission first and the optional project process was a way for players to access extra resources and assistance.

Finally, both servers were modified to provide programmatic support for hierarchies of players. This supported a system in which the newest players had only limited access. Players who had earned the trust of the community over time had more access, and server staff (in which category I am including owners, administrators, moderators, and any other players with power, privilege, and responsibilities in the game) could have the most of all, with access to monitoring tools and the ability to bypass restrictions—like grief protection—if necessary to support the community.

Understanding how the observed servers were modified provides useful context for the analysis in the following sections.

Gameplay Design, Server Setup, and Player Interaction

Observation Day 19. I log on to Education Server mid-afternoon. It is a Saturday, and a busy day on the server, with 12 players on. There are several new players, who seem quite young and one is in the middle of complaining about how they lost everything they got in their welcome kit when they died. Server staff are sympathetic but don't offer to give them anything more and gently but firmly make it clear that further complaining will be poorly received. The young player stops complaining and with a friend goes to the Skyblock world to explore some of the specialized Skyblock features and work on challenges together. In the PVP-allowed Survival world two newer players decide to build a house together. In the no-PvP Survival world, two players are deciding which stall in the communal mall area to rent for their shop and getting advice from other players on shop design and content. ServerOwner asks me to test a new quest, and we problem-solve some minor problems. In the Creative world, a staff player is prototyping their design for a complicated build project. Several times a new player logs in, is welcomed, and ServerOwner asks them to read the rules and say whether they agree to follow them, which they sometimes agree to do or sometimes just log off again. One of these new players asks about what Minigames are available and is delighted to discover that there are a variety of Parkour courses available. For the 90 minutes that I am logged on chat is busy and congenial with several conversations going on at once, punctuated by occasional server-wide broadcasts or notices about players beating special NPCs, dying, or beating Minigames.

In my introduction, I asked how the design of gameplay, server setup, and player interaction make an impact on the prosocial community experience. Additionally, I wondered to

what extent those design elements encourage altruism, empathy, and helping behaviours in players. In this section, I first examine the impact of incorporating multiple play modes into a server. I also briefly touch on the topic of violence. Then, I explore the impact of the technical configuration of certain communication tools, using a direct comparison of the two observed servers to better understand how differences in this technical configuration can affect the social environment. Through this comparison, my purpose was to discern what effect, if any, these aspects of a server have on prosocial behaviour, which I discuss at the end of this section.

Variety, play modes, and server mods. As I mentioned in the previous section, both servers have several game worlds, often with different game play modes on each, bundled together. Some players undoubtedly prefer one play mode over another, but my observations suggest that providing this variety is not merely a matter of trying to satisfy the many individual wants of different players, but also of trying to satisfy a more universal desire simply for variety.

Participants emphatically loved *Minecraft*'s open-endedness and the freedom and possibility it permits. In *Minecraft* far more than in MMORPGs, players primarily set their own goals and achievements rather than rely on those designed into the game. Just as previous researchers have observed that MMORPGs players enjoy a variety of satisfying day-to-day work, such as doing quests and leveling up characters (Chee et al., 2009; McGonigal, 2011), *Minecraft* players enjoy the satisfying work necessary to achieve a variety of both self-directed and game-encoded goals. In interviews, when asked what they liked to do in the game, participants had a list rather than a single item, often ranked in terms of the level of focus required:

It depends on my mood, to be honest. If I'm feeling more creative, I do like just building stuff. ... If I'm not in a very creative mood I will just either do something in Survival or ... [a] Skyblock challenge. ... Skyblock is easy because it's just trying to meet certain

challenges and ... you can play it for anywhere from 20 minutes to several hours, but it's incremental challenges which ... can be low stress. (Player/Server Admin 3)

Another participant listed a total of ten tasks on their current to-do list, which included construction, exploration, resource gathering, and questing and finished by saying, "and in between when my brain is fried, I'll kill a few mobs or I'll do some mining" (Player 5). Although players clearly appreciate this variety, I suggest that its impact on the social environment is felt most through its effect on the amount of time that players spend on the server.

Because all of the play modes were contained within one server environment, players could switch from one type of play to another without leaving the shared social environment. As a player, having a variety of play modes and options available helped the game hold my interest over a longer period and be playable both when I was energetic and focused and when I was tired and feeling lazy, and participants echoed this in interviews. Increasing the length of time players spend in a shared social environment increases the number of experiences they share with other players and can therefore potentially deepen what McMillan and Chavis (1986) termed their shared emotional connection. This can, in turn, enhance feelings of trust and connection, as has been observed in previous research on MMORPGs (Williams et al., 2006; Ducheneaut et al., 2007; Chen, 2009; Ratan et al., 2010). Likewise, because cyberbullying is more common between strangers than acquaintances (Ballard & Welch, 2015), increasing familiarity with other players by increasing the time spent with them may be somewhat protective. More research would be needed to directly measure this. As most play modes can be prosocial, antisocial, or neutral, depending on the player and the server, the existence of any specific play mode does not, itself, appear in this research to be a reliable indicator of social environment.

There is one mod category that I should particularly highlight in this section: *grief protection*. Grief protection is a powerful tool for maintaining a prosocial focus on a server and may actually be one way for any server to move its culture in a more prosocial direction. During one interview, a participant related an experience on a competitive *Minecraft* Factions server that was not prosocially oriented. This participant noticed that individual factions on the server tended to be small, with only two or three members, which limited both the type and frequency of possible activities. They perceived a possible explanation for this situation:

I realized the problem was, they didn't know that many people in real life. They didn't trust that many people, and when you invited the fourth guy he had access to everything in the faction, and he'd steal everything from them and then leave. ... I saw a lot of that.
(Player/Server Owner 2)

This participant discovered unadvertised functionality that let them give each faction member their own personal chunk of the base and limit their access to the rest. This participant reasoned, correctly, that this might solve the problem of small factions:

That'll prevent this stealing problem. That'll prevent this mistrust issue. Because sometimes it's not a matter of trust, it's just a matter of policy. ... Everybody will feel safer and more like they'd want to join and if we do get that one guy who wants to steal from everybody else? He'll join, realize he can't, and then leave. It'll be a natural filter. And so I designed my faction with that in mind, and it grew massively. We had about 35 people at max and it was by far the largest faction on the server. (Player/Server Owner 2)

This anecdote reinforces the importance of grief protection and the effect of griefing on players and the relationships they are able to build with each other, even to players who may not otherwise choose a prosocial play style. One analog for grief protection in the existing literature

is guild membership in MMORPGs, as they provide a similar function of providing some amount of protection from potentially hostile strangers (Kaye & Bryce, 2012). Research has consistently shown a strong relationship between guild membership—especially in smaller guilds—and increased intimacy and trust (Williams et al., 2006; Whippey, 2010; O’Connor et al., 2015). Similarly, grief protection permits players who are strangers to each other to play *Minecraft* together without fear and is therefore a critical tool in enhancing prosociality in a multiplayer community.

A quizzical look at the non-effects of violence. Because of the literature I had reviewed on the effects of game violence, and because Education Server was host to so much more incidental instrumental violence in aid of its educational purposes, I was looking closely for the kinds of differences in the social environment that I had predicted could be a possible result. Unfortunately, I cannot draw any conclusions on this point based on my observations. Because of the differences in the visibility of rules enforcement on the two servers (described in a subsequent section), I have no way to know if there was a difference in the incidence in grieving or harassment. Players appeared, on the whole, to be slightly more helpful and responsive to each other on Education Server compared to YouTube Server, but this is almost certainly a result of the way the communication systems were configured and moderated, as will be discussed in subsequent sections.

Based on the interviews, I predict that Factions is likely to be the least inherently prosocial play mode, relying as it does on players attacking and killing each other. Additionally, it introduces the concept of rank to *Minecraft*, which does not otherwise have it, and rank and status are linked with increased cyberbullying (Ballard & Welch, 2015). However, as Whippey (2010) observed in *World of Warcraft*, a predominantly violent play mode does not necessarily

preclude players acting prosocially and as team-based cooperative play can potentially mitigate the negative effects of violent play (Eastin, 2007; Ewoldsen et al., 2012; Velez et al., 2016) I was curious to see how Factions would be played on Education Server and how socializing around that play might differ from socializing at other times. Interestingly, I never saw a single player in the Factions world, despite seeing players on every other world and using every other available play mode. It is possible that there were simply rarely enough interested players on the server to make Factions fun or even possible, but it is also possible that this is a result of prosocially-oriented players having little interest in Factions play. In interviews, only one participant described significant Factions play experience, and as described in the previous section, this play occurred in an environment where griefing was apparently quite common, which could suggest a link. Future research comparing the social environments on Factions PvP servers with that on Survival PvE servers would be very useful, given that it would provide a far better-matched set of game environments for looking at the effects of competition, cooperation, and violence in games than is usually possible.

Communication tool configuration. As a participant identified during their interview, community in a game environment requires that players be able to communicate and interact with each other, at least gesturally, but preferably using a form of speech. *Minecraft* player avatars were not designed for player interaction and have limited movement options. As is true on most servers I have visited, players on Education and YouTube Servers greeted another player's avatar either by using the sneak key to make their own avatar bend over at the waist in a bow (see Figure E1 and E2 in Appendix E), or by using the jump key to make their avatar jump around in an apparently excited fashion. Beyond this limited interaction, however, players communicate with each other primarily through either text or voice. While both servers offered a

variety of tools for players to use for communication, as in Table D1 (in Appendix D), several differences in server and communication tool configuration created very different communication experiences for players in the game and had a significant impact on the social environment as a result.

It is possible to make plain these differences through their effect on a common player social ritual: greetings and farewells. It is common on most servers I have visited as a player to see players greeting and saying goodbye to each other in text chat. In interviews, most participants mentioned how much they enjoyed this simple ritual, and felt strongly that it was expected friendly behaviour on a server. One participant counted that greeting ritual as a part of what made a server a community for them, saying, “We all say hello to each other whenever we log on, and chat about how things are going” (Player 1). There was an immediately obvious difference in how greetings and farewells occurred on the two servers I observed. On Education Server, players used the in-game chat to consistently greet and bid farewell to each other regardless of their relationship and showed particular enthusiasm for the task of welcoming new players. In contrast, on YouTube Server, greetings and farewells were infrequent, inconsistent, and primarily happened only between friends.

There are two main ways that the servers’ configurations may have effected this difference: automated log on and log off messages and automated server announcements. On Education Server, the automated message that a player had logged on or off was accurate: that player’s login status had changed. On YouTube Server, however, the server was configured so that players only saw a login message for another player if they were in the same world. When players moved between worlds on the server, the server reported this as a logout and a login, but the logout message would be visible only to players on the world they had just left and the login

message to players on the world they joined. As players might move between worlds frequently, generating multiple automated messages in a single play session, most players ignored these messages as meaningless clutter, except when the player was a friend. Additionally, because all players logged in through the Hub world and usually immediately departed it to go to another world on the server, almost nobody ever saw the first and most accurate login message for a player because they were not in the Hub world to see it.

Automatic server broadcasts were also a site of difference. On both servers, intermittent automated server broadcasts appeared in the in-game chat, referring users to resources on the website, reminding them of helpful commands or rules, or advertising exciting new builds or upcoming events. On Education Server these messages were infrequent and short while on YouTube Server they were much more frequent, often several lines long, and brightly coloured. I went through a chat transcript for a play session on both servers and counted all automated messages. Because Education Server's automated messages were so much less frequent and also because they showed much more variability in timing, I used the longest play period for which I had a transcript. In the five-hour period represented by that transcript, I counted 27 such automated messages in the chat transcript, averaging perhaps five per hour. For contrast, in a one-hour period on YouTube Server, which was comparable in terms of time of day and number of players logged on, I counted 87 automated messages, more than one per minute. Although this specific count is not quantitatively rigorous, it supported my impression as a player that the in-game chat was "busier" but less communicatively dense on YouTube Server than on Education Server. This made it more difficult for players to interact with others or even see their initial greetings through the noise of these server broadcasts. These automated server broadcasts have a parallel in the research. Ducheneaut et al. (2007) noted that in the MMORPG *Star Wars Galaxies*,

the ability of players to set up macros that caused their avatar to perform repeating patterns of behaviour in the social spaces while the player was away from the game meant that the chat filled with this meaningless content and this made it more difficult for authentic social interaction to occur there.

While social interaction between strangers on its own is not community, it can be the start of it. Simple social rituals such as bowing to another player, greeting and bidding farewell to each other, or typing a sympathetically teasing “RIP” in response to another player’s death are part of how players engage with each other and how they start to build a more personal relationship. If, as Ducheneaut et al. (2007) asserted, online multiplayer games are “informal public gathering places” (p. 130) where people who may be strangers to each other go to find sociable interaction, then it follows that the configuration of those spaces must both make people visible to each other (Kaye & Bryce, 2012) and leave space for that sociable interaction to occur (Ducheneaut et al., 2007).

Overall, although this research suggests that the way that a server is technically configured can have an impact on the social environment, these impersonal factors do not have the same impact as the strategies that server staff employ when moderating the social environment, which I will discuss in the next section.

Rules, Fools, and Chat Moderation

Observation Day 27. I log on to Education Server in late afternoon, planning to do some grass and tree planting at the vacation resort that I’ve been building. There are eight players logged on, five of whom I know to be between the ages of 11 and 18 and I arrive in the middle of a conversation that ServerOwner is having with two newer players about the proportion of players identifying as male and female. The conversation then turns to the new Valentine’s Day quest that has players go on an amusingly bad date with an NPC of unknown gender. ServerOwner tries to encourage one of the newer players to try creating their own quest and since I’ve just finished making a quest for the resort, I add my own encouragement. A player invites everyone to come and see the town they’re

rebuilding and we all teleport to them for the tour. I find the underground minecart town transit system and we start chatting about public transit we have known and loved just as another young player logs on. They immediately launch into a set of complaints about how their city no longer has public transit of any kind and is mostly known for heroin, graffiti, and homelessness. Although at first the conversation seems to be heading towards a pretty simplistic and essentializing narrative about “bad” people and “bad” parts of town, some gentle nudging by ServerOwner, myself, and another older player shifts it into a more nuanced discussion of false narratives about poverty, class, and race. After a few minutes of this, one of the young players asks, “How do you think we could each work to better our communities and open dialogue?” For close to an hour, most of the currently logged-on players engage in a wide-reaching discussion of possible solutions and strategies, break down issues relating to ideology and discrimination. The conversation gradually shifts in a lighter direction until finally it is just a discussion of the X-Men. A new player joins the server, and responds to everyone’s greeting, by using the N word. ServerOwner immediately bans them with the message, “no good can come from that kind of intro.” Other players cheer this decision and then the conversation just as quickly drifts back to other topics. I find that I’m out of time to play and haven’t planted a single tree.

In my introduction, I asked what community moderation practices or strategies make prosocial community more likely or more sustainable. In this section, I first examine the status of rules or a code of conduct in a server’s social space and assess the two different chat moderation strategies I observed in terms of their effect on the communities.

Rules. Server rules communicate a shared understanding of what behaviour will be experienced as hurtful and dangerous in that specific social environment. While previous research on MMORPG guilds suggests that they tend to develop rules only as they grow larger or more popular (Williams et al., 2006), this research suggests that in Minecraft, players who wish to play on a prosocially-oriented server expect to find a code of conduct or set of rules that signals the server’s prosociality. Rules and their enforcement are a part of a server’s organizational structure. Just as greater structure in MMORPG guilds has been shown to positively affect players’ social relationships (Williams et al., 2006), it is likely that they both help to fulfill community members’ need for security and help to define the boundaries of

community membership (McMillan & Chavis, 1986). Although the existence of written rules does not, in itself, prevent bad behaviour (Whippey, 2010), rules do provide a reference against which to measure that bad behaviour and, as in the vignette at the start of this section, permit server staff to react decisively when they need to. Enforceability of rules is important, and enforcement needs to be fair and equitable.

Moderation: Not suffering fools gladly. For server staff, moderation is an activity that encompasses both monitoring the game and social environments to ensure that players follow the rules and then enforcing those rules if they do not. As mentioned previously, both servers were configured so that players in any world on the server could, by default, chat with all other players in any connected world using the default in-game text chat system. Moderation strategies on the two servers were quite different, however, and this had an effect on the shared social experience. In particular, it had an effect on the amount of casual and spontaneous social interaction between player since this shared sociality is so important for players and their “emotional experience of gaming” (Kaye & Bryce, 2010, p. 23) and for building the trust (Ratan et al., 2010) necessary for players to have an experience of community (Whippey, 2010; O’Connor et al., 2015).

On Education Server, in-game text chat was the primary method of in-game communication and was the site for most or all synchronous discussion, from casual socializing to troubleshooting technical server issues. While the amount of conversation varied over time, short intense bursts of conversation were common whenever three or more people were logged on at the same time, and long thoughtful conversations like the one in the vignette at the start of the next section occurred on several occasions. In short, the social environment was a pleasant and intermittently lively one and some players, including the server owner, would log on to the server and just hang out socially rather than play, a phenomenon that has also been observed in

other multiplayer games (Bartle, 1996; Williams et al., 2006; Ducheneaut et al., 2007; Whippey, 2010; Kaye & Bryce, 2012; Poor & Skoric, 2014).

On Education Server, poor player behaviour occurred but was rare, and if server staff were present, they dealt with it quickly, usually with an escalating system that started with a warning followed rapidly by muting the offending player to prevent them from subjecting other players to abuse. As in the vignette, some types of rule violations were considered sufficient for an immediate ban, especially if committed by new players with no history or relationships on the server. Because moderation was visible to players, it helped to develop trust on the server (Blanchard & Markus), and because it was efficient it minimized the unpleasantness and trauma caused by poor behaviour.

On YouTube Server, in-game text chat was treated as a more operational space, with only limited socializing permitted, although this varied somewhat depending on which moderators were online. Unlike on Education Server, I several times witnessed server staff actively discouraging in-game text chat use—sometimes rather tersely or abruptly—or suggesting that players should communicate either privately or through other methods and this had a dampening effect on public socializing between players. Discord was the intended default social environment, but I rarely witnessed conversation in any Discord public channels and had little success at starting conversations in them myself. My suspicion, though I could not properly investigate this due to ethical concerns about privacy and observing private spaces, is that like MMORPG players who prefer to socialize privately with guild mates rather than publically with strangers (Williams et al., 2006; Whippey, 2010; O'Connor et al., 2015), most longstanding community members on YouTube Server socialized with friends in private channels rather than in public ones. In sum, although it was clear that players and staff on YouTube Server

experienced themselves as being a part of a community—and I will discuss the connection between YouTube Server and a pre-existing non-game community in the next section—and were friendly and committed to a prosocial Minecraft play experience, I experienced the community as less immediately accessible to new players and less congenial overall.

While I did not personally observe poor player behaviour on YouTube Server, it undoubtedly did occur as evidenced by forum posts. Any poor player behaviour would likely have been less visible to me on YouTube Server because most active moderation occurred in private communication channels. Interestingly, one outcome of this lack of visible moderation was that regular players were more likely to attempt to enforce the rules themselves, to a degree that prompted the inclusion in the expanded rule set of a request to leave rules enforcement to staff. I posit that because enforcement was not as visible, players did not instinctually trust that it was occurring and tried to fill in the perceived gap, with varied skillfulness.

Although four of the five interview participants expressed a strong preference for having server staff present and moderating whenever possible, this is not the only approach to moderation. It is worth noting that the fifth participant, a server owner whose server was not primarily prosocial and permitted both griefing and player-killing, took a more narrow approach to moderation than was preferred by the other participants. This participant concentrated on having what they called “reasonable restrictions in place to prevent people from causing real world offense” (Player/Server Owner 2) and on implementing programmatic solutions to problems where possible. Although this participant was pleased to discover that in the absence of a strong staff presence, other members of the community took it upon themselves to informally protect the innocent and punish the guilty, this vigilante justice would not be visible at first glance to potential players, and could potentially turn into bullying behaviour without oversight.

Leaders, Players, Prosociality, and Social Learning

Observation day 42. I log on to Education Server around 11pm and head straight for the party room I'm building in my vacation resort. Only ServerOwner and I are on due to the lateness of the hour, and after a short catch-up chat with ServerOwner, I get to work following instructions for making a flashing disco floor powered by redstone that I found in a YouTube video, which necessitates much pausing and rewinding to make sure I get it right. After about 20 minutes a new player logs on, is greeted, and agrees to follow the rules. They ask a few questions about the server and where to find things and either ServerOwner or I answer and then they go quiet for around 10 minutes. Just as I'm testing what I've built to see if it works, the new player announces that they're trying out an online tool they found that lets them see a Minecraft player's server history, and asks me whether I used to play on a specific server with a very obvious LGBT*QI focus in the name. I reply very matter-of-factly that I did. All is quiet for a few minutes. The new player starts chatting again, saying that they're looking for an old friend that they used to play with and that they're using the tool to try to find where they're playing now. There's no way to tell for certain, but the new player feels young to me, perhaps early teens. I do the chat equivalent of murmuring polite encouragement as I can feel that they're working up to something. After a minute or so they say that they're excited that the tool works because now they can use it to "freak people out", pretending to know all these things about them, like a stalker. I reply simply that what they're suggesting sounds like it would be scary for someone who had ever actually been a stalking victim. ServerOwner, who has kept quiet so far, indicates to them that she doesn't like to hear about that kind of behaviour. This prompts a short pause. The new player then somewhat defiantly says that lots of people do that kind of thing, it's normal, and other players have done similarly mean things to them. I express sympathy for them having had those experiences and say that if lots of people are doing mean things, perhaps there's already enough meanness, no need to add more. They talk a little more about the bullying they've received and I ask them how they felt when that happened. They felt bad, they say. It is quiet again for a while, and I go back to working on disco floor, most of which is now working. After a few minutes they say they won't do the thing. I say, "Okay" and the conversation shifts to some of the interesting builds on the server which they are exploring. After another ten minutes or so I have my disco floor working and invite ServerOwner and the new player to come and take a look before I log off for the night.

In my introduction, I asked how important individual players, their motivations, and their play styles are to the prosociality of a community, and this turned out to be an important question.

A community does not exist without its members, and it is the actions and choices of those members that set the tone and create the shared community experience. In this section, I first enunciate the qualities that make server staff best able to support a prosocial community. Then, I offer observations on the impact of a server's connection with an external or pre-existing

community. I also explore the way that prosociality mediates the player motivations identified in Bartle's (1996, 2004) player type theory. Finally, I examine the impact I observed prosocially-oriented players having on each other and on their community through social learning.

Compassionate and ethical leadership. Server staff are a critical element in determining the prosociality of a multiplayer server community. Just as successful MMORPG guilds depend on guild leaders to facilitate social support and enforce rules (Williams et al., 2006; Whippey, 2010; Poor & Skoric, 2014), so too do players depend on *Minecraft* server staff. Players expect that staff will demonstrate significant social skill and good sense in their roles. One participant described good server staff as “basically like teachers in a school yard at recess. You can tell them your problem, and they’ll get on it right away, but they’re also just there to be friendly” (Player 1). This was echoed by a different participant, who highlighted the qualities that they were told had earned them a promotion to staff:

I was told at the time that I was hard-working in the community, I was mature and I knew how to handle myself and not get flustered by, you know, jerks online; ... you kinda have to be able to hold your own a little bit to do moderating. (Player, Server Admin 3)

For both of these participants, there is a notable emphasis on server staff being capable of a certain amount of emotional detachment when dealing with problems and enforcing the rules.

As has also been observed in MMORPGs (Williams et al., 2006), participants wanted server staff to be fair and even-handed in the way that they dealt with players, to not unfairly privilege their friends over other players, and to be fundamentally trustworthy individuals. For two participants, both server owners, negative assessments of server staff played a role in their choice to both leave one or more servers and to start their own. One talked about their experience of discovering duplicitous behaviour on the part of their previous home server's owner and core

friend group. This group appeared congenial at first, but the participant was unhappy to discovered that there was more going on:

I didn't really appreciate the fact that unbeknownst to me the server owner and a few of the other people on the server would actually go off every Friday night—it was sort of their dirty little secret—and troll and grief other servers? They used to have, like, codes for it and they used to make fun of it, but ... I caught on to what they were doing pretty fast. ... It was like, by day they were nice respectable server owners ... and by night, you know, they were going off and trashing other servers. And I thought, this really sucks.

(Player/Server Owner 4)

For this participant, these actions and the pleasure that the group took in them negated the positive interactions they had witnessed and the trust that they had developed for them. Another participant grew increasingly frustrated with servers where the owner's friends had a distinct advantage over the rest of the players:

I also saw a lot of admin corruption? Where, like, the owner would know people in real life and be like, "Oh yeah, I'll give you like some pretty high privileges, and even if you abuse them, that's okay, you're my friend. Like, you know, I'll just overlook it." And I've seen stuff like that go down, and I really really didn't like that. (Player/Server Owner 2)

Both participants' decision to leave a server where they lost respect for what they perceived as unethical staff is consistent with findings in MMORPGs, where inconsistent or unethical guild leaders often lost followers or even saw their guild disappear (Williams et al., 2006). A leader's acquiescence to community norms increases their influence in the community (McMillan and Chavis, 1986), and in a community with a prosocial focus, unethical behaviour is likely to be

seen as particularly egregious because it violates the norms the community aspires to. The expectation that server staff should be socially adept, present, and highly ethical seems particularly weighty when juxtaposed with the fact that for all three server owners or admins in the sample, the often extensive work they did to administer their home server—described as being “a job,” “neverending,” and “constant” (Player/Server Admin 3)—was voluntary and unpaid, a situation that parallels guild leadership (Williams et al., 2006). Both servers were therefore appropriately cautious about accepting applications for new staff and required a long period of active responsible participation by applicants and the agreement of other staff prior to promotion.

Connections to other communities. Although many players of multiplayer games play with strangers they meet in the game, there is a long tradition of playing with friends and family in online spaces and research shows that doing so fosters connection and intimacy (Steinkuehler & Williams, 2006; Williams et al., Cole & Griffiths, 2007; 2006; Osmanovic & Pecchioni, 2016).

Three of the five participants talked about how connections to two communities—one location-based and one virtual—were a part of their play experiences. All three played primarily on these community-connected servers and felt they received a significant benefit from this connection. Echoing previous research, two of the three described relationships with other players that were emotionally intimate and had an in-person component. All three participants also used the word “community” to describe their home servers and the people there, unlike the two participants without these connections.

One benefit that a participant identified was that the server community did not have to start from scratch but that it could instead rely upon the values and cultural artifacts of the

broader community. This is particularly helpful if those values are prosocial. Referring to their home server—YouTube Server—this participant stated:

I think it makes a huge difference because ... there's a whole built-in community that we can kind of foster without having to explain everything, or people having to read this whole backstory. As long as you know who [the community founders] are, you kind of understand the rules of the server. ... So anyone who is even somewhat aware of the community that they've built will understand the type of server without us having to do the work, which is fantastic. It's a huge benefit to us. (Player/Server Admin 3)

Having knowledge of the community's origins and history gives new community members a headstart on building what McMillan and Chavis (1986) called a shared emotional connection with other members of the community. This can have the effect of accelerating both their comfort in the server and their commitment to it and to the friends they make there.

It also seems possible that having in-person connections as a basis for starting a community may lend more importance or a deeper level of assumed intimacy to other possible in-person connections, similar to what has been observed in guilds in MMORPGs (Williams et al., 2006; Cole & Griffiths, 2007; Kaye & Bryce, 2012). The participant who started a server to play on with friends and family described in-person connections that resulted from other players meeting on the server. Examples include a couple who started dating after meeting on the server and a player who got a job in another player's business as a result of their *Minecraft* server connection. This participant appeared both eager and proud to talk about these connections between players, perceiving them as important and special. Notably, this kind of in-person connection was never highlighted by players whose home servers were unconnected to a broader community.

Playing according to type, prosocially. Of Bartle's (1996, 2004) four player types, *Minecraft* seems at first to be a game made for explorers. It checks many of the boxes that Bartle (1996) suggests would appeal to explorers: documentation is poor or non-existent, there is little in the way of point-scoring or meaningful leveling up, players are not railroaded through a storyline, and each unique procedurally-generated map endlessly rewards an explorer's curiosity. Likewise, *Minecraft* seems poorly designed for achievers, for many of the same reasons. Before I started my observation, I suspected that those achievers who did play *Minecraft* might be more likely to self-select into servers that emphasized either Factions-style competitive play or minigames; I also expected to see fewer achievers on prosocial no-PvP servers. However, I observed that it was not player type that determined what players I saw in the servers where I played—as described below, I saw all types. Rather, it was each individual's prosocial orientation that drew them there, and it was this, rather than their player type, that kept them there over the longer term.

During observation I—likely an explorer at heart—at first had a hard time spotting achievers, until I realized that within prosocial multiplayer *Minecraft*, achievement took a slightly different and very self-directed form. For example, I several times observed that certain players were proud and happy to give significant wealth or resources away when other players asked for donations for a project. One such player posted to the forums that they enjoyed collecting resources to donate because they liked to donate a lot all at once. This made it obvious that the accumulation of a vast store of resources or money was an achievement they had set for themselves. The mechanism of a public call for donations permitted these achievers to show off their achievement to other players. What this example reveals is that it is not necessarily the

activities themselves that determine a player's type in the *Minecraft* environment. Rather it is what motivates them to undertake those activities.

With this lens, it became easier to understand how player type was affecting player interactions. Any player might mine and gather resources, including in large quantities. But whereas an explorer might do so as an incidental byproduct of their exploration and a socializer might do so to occupy time while they converse with other players, an achiever who does so is motivated by the satisfaction of achieving a numeric or monetary goal and then showing it off. Likewise, while any player might build a structure, an explorer could be motivated to do so by the fact that it offers them an opportunity to understand a game mechanic, a socializer because it gives them an activity to do with a friend, and an achiever because if they make it big and beautiful they can get the accolades they desire. In addition to this interaction of motivation with *Minecraft's* mechanics, there is also the influence of a player's prosocial orientation.

A player's orientation towards prosociality adds a further refinement to this behaviour. In the example I gave of an achiever making a public large donation to show off their achievement, it is worth pointing out that doing so simultaneously changed that achievement from a singular one to one that benefited the community as a whole. Another achiever example I observed was of a player who proudly showed off their incredibly complex automatic farm complex. While any achiever could be proud to make an efficient and productive device, this achiever was proud also that it was constructed so as not to create problematic lag for other players; with a prosocial orientation, being considerate became a necessary measure of the worth of the achievement. Likewise, while explorers, as Bartle (1996) suggested, "are proud of their knowledge ... especially if new players treat them as founts of all knowledge" (p. 8), a prosocial explorer might

share their knowledge more deliberately so as to benefit others. They may explore in order to find amazing spots to build, and then rather than keep them to themselves, give them away.

There is one player type that I have yet to mention here, that of killer. Although it seems antithetical to have a player motivated by acting, often violently, on other players in a prosocial environment, I would suggest that there is a possible place for them, or at least their prosocial variant. In fact, I observed particular qualities in certain server owners that suggested that this might be a part of their player type makeup. A server staff person who values their community, one who cares about its members and who wants them to have a safe place, could satisfy their killer motivations by ruthlessly protecting that safe space from interlopers, banning new players if they show signs of being a potential threat to the peace of the server. They could create the organizational structures for other players to play within and be strict but fair in enforcing the rules. A prosocial orientation can transform even a killer into a community member who benefits and supports the community.

Social learning. Part of what makes the prosocial orientation of players so critically important is the way that it influences the social learning that occur within the community social spaces. In this, this research I observed two broad activity categories for social learning, both of which have parallels in previous research (Ducheneaut & Moore, 2005; Yee, 2007; Chen, 2009; Hussain & Griffiths, 2009; Duncan, 2011; Pellicone & Ahn, 2015). These are informal and formal information sharing and modeling and observing prosocial community participation.

Information sharing has been observed to be an integral part of the experience of playing Minecraft, perhaps more so than in other games (Duncan, 2011; Riordan & Scarf, 2013; Pellicone & Ahn, 2015; Potts, 2015). In this research, a player's apparent prosocial orientation players sharing game and server information with others where that is possible. While examples

of players informally learning and teaching each other in the social context of the game were ubiquitous in my observation period—especially on Education Server, where I coded almost 300 separate instances of overt informational helping between players in chat transcripts—it is worth noting that a side effect of YouTube Server’s previously mentioned communication difficulties was to decrease the incidence of informational helping between players; several times when reviewing transcripts I noticed an unanswered request for information from another player that everyone, including I, had missed. There were also a few players I encountered during observation who answered requests for information with snarky suggestions that the questioner use Google or YouTube rather than with the needed information. In some cases other players would follow these non-answers with actual answers, but other times this was the end of the conversation, leaving the questioner un-helped. I interpreted this behaviour as being indicative that those players were likely less prosocial in their orientation than others.

Within the category of modeling and observing prosocial community participation, an important element to consider is that of player age. Because many players were young, I was curious to see the kind of behavioural modeling that they performed for each other and whether adults, especially those who were also server staff, took care to model appropriate behaviour and boundaries to young people, in addition to each other. For the most part this was the case, though there were a few exceptions, especially among young adults. In addition, perhaps in part because age is so much less apparent in Minecraft than in face-to-face interactions, there were moments where I observed some adults either holding expectations of responsibility for young players that were—to my eye—somewhat unreasonable, or failing to demonstrate generosity in interpreting the younger players’ actions or communications. Nonetheless, as demonstrated in each of the three vignettes, players frequently modeled generous, helpful, empathic interaction styles to each

other. It was also apparent that social learning was occurring from the way that behaviour of new players could sometimes be observed to shift over time to better fit community norms, including to a less adversarial style of working out conflict.

While information sharing is important for prosocial community, it is this second category—behavioural modeling—where the prosocial orientation of the players on the server had the greatest impact. Just as players can be observed to learn hostile or aggressive behaviour from each other in games (Anderson et al., 2010; Yang, 2012; Ballard & Welch, 2015), increasingly depressing prosocial impulses in all of the players in the space, this research suggests that so too can players who have a base level prosocial orientation actively learn prosocial behaviours from each other, gradually improving their shared social environment over time. Therefore, although it is clear that other factors can influence how likely it is that players are able to experience a multiplayer server environment as a community, it is still the players themselves whose actions and relationships with each other have the greatest impact on how prosocial an environment that community is. Given this insight, it becomes clear that attracting the right players to a server is one of the keys to its success.

Servers: So Many To Choose From

For a *Minecraft* player who wants to play on a multiplayer server that they do not have to host themselves, there are many options. An online *Minecraft* multiplayer server list site, MinecraftServers.com, lists 42,662 separate public multiplayer *Minecraft* servers as of April 22, 2017. This presents both that player and the owners and administrators of those servers with a significant challenge. While it is beyond the scope of this study to suggest an overall proportion of servers with prosocial features, sheer numbers and my own experiences suggest it would not be 100%. If, as this research suggests, creating a prosocial community depends upon attracting

the right players, it is then useful to understand both what is at stake in an individual player's choice of server and also what players see as important criteria.

Selection stakes. How important is the choice that a player makes when they choose a server? In understanding what is at stake in a player's choice of server, three factors emerge from the interview data: the exclusivity of commitment that players have to the server where they play, the length of their involvement with the server, and the intensity of that involvement.

All five of the interview participants had a strongly exclusive relationship with one primary server at a time, which I will refer to as their home server. Participants played on their home server during most or all of their *Minecraft* play time. Three participants reported occasional visits to other servers, though this was a very small proportion of their play time. Their motivations fell into three categories: playing minigames on the Hive, a popular server which hosts structured games and doesn't permit regular survival play; investigating server administration practices on other servers (participants who also operate servers); and visiting a friend on their home server.

Participants' exclusive commitment to a single home server was often lengthy. Participants had been playing on their most recent home servers for periods from six months to four years. The four participants who could remember reported having between one and four home servers overall during their two to six years playing *Minecraft*, with significant diversity in daily or weekly activity patterns and intensity of commitment. While all participants reported playing or participating in the activities or social interaction on their home server for a minimum of three to five hours each week, most participants averaged more than this. At the bottom of the scale was a young student who played an average of an hour per day and at the top was a retired player who liked to stay casually logged on through the day and play between doing other tasks

and whose daily average was 12-15 hours. Three participants identified their involvement with their home server as their primary hobby.

Further research into players' commitment patterns would be useful but it seems clear that for at least some players, the decision to start playing on a server is one that may continue to affect their lives for months or years and occupy hundreds or even thousands of hours of their leisure time each year. It is therefore important to understand how players choose a home server.

Making the choice. Despite the impact of choosing a home server implied by the commitment pattern described in the previous section, most participants chose their first home server quite casually. One participant, in reference to their first home server where they played for over a year, laughingly pointed out the first letter of the server name—an “A”—and said, “It was an alphabetical choice.” However participants that had moved on from their first server reported increasing the specificity of their criteria with each switch. The next several sections will address those aspects of servers and their communities that emerged as being important to participants in choosing a server to try out and in choosing to stay there after a short trial.

Prerequisite criteria: Play modes and community connections. There are two attributes of a server that affect where players choose to play before they even start their search. Although every participant had preferences for specific game play modes within *Minecraft*, this preference preceded their application of other criteria. A player wanting to play on a Skyblock server would likely not choose to play on a pure Survival or Factions server just because it checked the boxes for the criteria that follow in the next sections and might never even encounter those servers in their search. Likewise, players who choose to join a server because of their connection to an existing community—friends and family, a fan community, etc.—are not necessarily using the criteria below to find that community in the first place. In both cases, however, participants

might differentiate between servers offering the specific play mode or community connection they desired using the following criteria.

Grief protection. Understandably, all participants emphasized the importance of grief protection. Participants did not discuss or express a preference for any specific grief protection system, but were unanimous about its necessity. One participant said, “No griefing is an absolute must for me” (Player 5). Another stated, “I want to know that my builds are safe” (Player 1). Players value and are proud of the work that they do in *Minecraft*. Providing grief prevention is a way to both acknowledge the importance of players’ work and of their emotional well-being, and therefore functions as a way for a prosocial community to fulfill that member’s needs, a necessary element for it to be a community (McMillan & Chavis, 1986).

Map reset frequency. Players want to be able to prevent others from destroying the things they create, but they usually cannot prevent the more complete destruction that results when servers completely reset the map. Concern about whether and how often a server resets the map was mentioned by three participants; during participant observation I found that I shared that concern. For players who like to build elaborate projects and accumulate large quantities of resources over time, a potential map reset can be a significant source of anxiety. Players will leave servers as a result of map resets, especially when they seem capricious or unpredictable. When a map reset destroys players’ individual creations, it also erases the shared physical manifestation of the shared history that community, in part, relies on.

Occasionally, a map reset is unavoidable. One participant, a server administrator, went through a significant map reset on their prosocial home server after several years of stability. This reset was necessary and unavoidable, as accumulated map file problems were likely to eventually cause the map to be unplayable. The server team made significant efforts to

communicate with players about the reset and its necessity well ahead of time, worked to involve players in the creation of the new map, and figured out a way for players to move important sentimental objects to the new map. They also made the old map downloadable so that players could still explore it in singleplayer mode. The map reset was a topic of significant conflict for a few members of the community and some players left to find a new home server, though likely fewer than would have left without these efforts.

Server staff: Socially adept, present, and highly ethical. All participants spoke at least briefly about the relationship between server staff and players, an important factor that helped to determine whether participants stayed at a home server. This evaluation depended on how well staff did the technical and social work of managing the server, how present they were, and whether they were fundamentally ethical people, as discussed in a previous section. In choosing a server, presence was of particular importance. One participant, who specifically highlighted “good staff to keep things running smoothly” (Player 1) as one of their primary criteria when choosing a new home server, offered a description of what that looked like for them: “they have a great presence, so that there's nearly always someone on (and definitely in peak hours)” (Player 1). This research, combined with Williams et al.’s (2006) and Blanchard’s (2007) findings that players strongly preferred good community leadership, make it probable that new players seeking a collaborative and non-violent play experience would be more likely to choose a server with visible staff and visibly equitable enforcement of rules.

Other players (by the numbers). All interview participants expressed that, when looking for a server, they placed value in both the number of other players who could regularly be found on the server and the social environment they shared. Though there was some variety in the qualities that participants valued and the weighting that they gave those qualities, most

participants expressed a preference to play on a server populated by friendly, companionable people who played regularly.

The number of regular players on a server can affect not only whether there will be other players on to play and interact with and how busy the chat is—which also impacts how easy it is to keep up with moderating the community and making sure that rules are enforced—but practical matters such as the financial sustainability of a server if it relies on donations, and technical factors such as the effect of more players on server performance. One participant’s primary concern when selecting their first home server was whether there were regularly other players logged on and whether those players had been around for a while. Given the increasing complexity and anonymization of relationships that occurs in larger groups (Eastin, 2007), there is likely a maximum number of regularly online players beyond which a community becomes unattractive to prosocially-oriented players—perhaps similar to the threshold of 35 which Williams et al. (2006) identified as the point at which guild management became much more complicated and formalized—most participants did not identify a specific minimum quantity. One participant saw a small community size as an advantage and stated, “I like small servers, because you don’t get lost in the crowd” (Player 5). In a smaller community, each member has a greater capacity to influence the community as a whole (McMillan and Chavis, 1986) through their visible presence and the activities they pursue. This participant continued playing during periods of time when few or no other players were on, and made a point of reliably donating a specific amount of money to the server each month to help cover the owner’s costs. It is likely that a small community’s sustainability over time depends less on the specific number of regular players and more on the character of those players, especially given Ratan et al.’s (2010) observation that smaller social circles increased trust between players.

Indeed, rather than focusing on a specific number of players, most participants focused on what those players did and the server's culture as more important metrics. One participant, a server owner, said of the small player base on their home server:

Even though... there's not that many people on, if I see that there are a few people on but they're active and they're doing towns and quests– Like, I never actually had a number in mind. My goal was to have a server that had some quality people that have fun, and then eventually maybe become friends, and that enjoy their time together. And whether that's five, or fifteen, or twenty, that's fine with me. (Player/Server Owner 4)

Another participant repeatedly expressed their desire to “play with grown-ups”: “I was looking for something where it was an older player base– well, not older, it's not an age thing, a more mature player base, where the chat wasn't spammy with people begging for stuff or complaining and whining” (Player 5). This participant had, regretfully, left a previous home server because of the frequent use of profanity and gender- and sexuality-targeting slurs. This fits with what Kaye and Bryce (2010) observed about the significant impact that other players' poor behaviour had on a player's experience. In addition to the near universal expectation that players greet each other, one participant focused on the details of the interactions that came afterwards:

If I try to get in on a conversation, or I say something in public chat and people flat out ignore me then normally I'm like, “Oh, the community isn't really that open or responsive to new players.” And sometimes it's just felt like it was really really hard to get in the conversation or to get anybody to even respond to you. (Player/Server Owner 2)

Other players on a server are fundamental to finding a desired prosocial multiplayer experience.

Less influential criteria. Distributed community spaces, project processes, rules, and ease of starting emerged as less important criteria than those listed above. In the case of distributed community spaces and rules, participants expected them to exist and sought evidence for their other criteria there, but did not agonize over the specifics. As one participant said, “I looked at the web page and things seemed to be a good fit” (Player 5). Once committed to a home server, participants seemed flexible and willing to engage with whatever distributed spaces or communication options were available, and to follow any reasonable rules set or processes.

Summary

During the first phase of my research, I identified that the variety of play modes available, the specific details of how communication and interaction tools and options are implemented, and the specific designed collaborative processes and protocols on a server all had the potential to be significant contributors to the experience of playing on a prosocial Minecraft server. I identified and described players whose various play motivations roughly fit into Bartle’s (1996, 2004) four player types and offer examples of how a prosocial orientation altered how those players enact their player type and pursue those motivations. I also examined the function and importance of social learning in the server communities I observed. Taken together, it becomes clear that because social learning could enable a community to build upon either its prosociality or antisociality depending on the behavior modelled, it is important for intended prosocial communities to have a population dominated by individuals who are themselves either prosocially oriented or who can be influenced in a prosocial direction and who are not specifically antisocially oriented. While game design and configuration can do a better or worse job of supporting prosocial behavior and community—and this support is important, especially

for attracting and retaining prosocial players—players' prosociality is the necessary precondition for prosocial community.

I then explored the details of server choice. To establish the importance of this choice, I first identified that participants shared a common pattern of commitment to one home server at a time and that this commitment was often lengthy. Then, I described the most important criteria that participants identified as strongly influencing their choice of server. I suggested that players base this decision on specific identifiable criteria. Players look for a server that has the play modes they prefer, some form of grief protection, a server map that gets reset rarely or not at all, compatibility with the other players there, trustworthy, reliable, and present staff to keep the peace, and sometimes, a connection to another community of which they are already a part. Grief protection and the security of knowing a server and a particular map will be in existence for a long time permit players to increase their individual investment on the server through the important and satisfying self-assigned work of building and participating in large projects (McGonigal, 2011; Cayette, 2014; Christiansen, 2014; Morgan & Mungan, 2014).

These findings led me to conclude that there are specific things that a server owner or administrator could do in designing and developing a server to attract and retain prosocially oriented players. These recommendations can be found in Appendix A.

Limitations

There are several limitations in this research. My research questions suggested a qualitative approach, and while this is not a limitation, without a quantitative expansion I am not able to determine whether my conclusions are broadly generalizable. I would very much like to quantitatively confirm my conclusions in the future. Additionally, I should note that for this research I have played only in the PC version of *Minecraft*, ignoring the very popular mobile and

console versions of the game where it is likely that the community experience is somewhat different, especially as regards mods and configurations. By combining the shorter ethnographic participant observation of two communities in the first phase with richly detailed interpretive phenomenological interviews in the second phase, I believe I still had sufficient data for meaningful analysis to reach these conclusions.

Conclusions

Although players' prosocial orientation emerged as the most important single factor determining the prosociality of a multiplayer server community, other factors had an impact. In order to convey this complex picture, I will first return to the three pragmatic questions from my introduction. Then, using the answers to those questions, I will summarize the answer to my primary research question. Finally, I will suggest a possible explanation for Minecraft's capacity to host prosocial multiplayer community spaces.

How does the design of gameplay, server setup, and player interaction impact the prosocial community experience? While this research suggests that game design and server configuration cannot create an orientation towards prosociality in players, they can nonetheless provide support for prosocial community by helping prosocially-oriented players to have better game experiences and stay on the server to play together. By using game mods and configuring servers to increase the available play variety and to improve player interaction and communication, it may be possible to encourage players to spend their leisure time on one server rather than dividing it between multiple servers or simply finding another server that they like more. While instrumental player vs. environment violence appears to have no significant effect on the social space, supporting or enabling competitive or aggressive player vs. player violence

should likely be avoided on servers hoping to host prosocial communities, though more research is needed to confirm this.

What community moderation practices or strategies make prosocial community more likely or more sustainable? In general, both design/configuration choices and server rules/moderation should support prioritizing and encouraging players' interactions with each other rather than limiting them. Server staff should model congenial social rituals like greeting and bidding farewell to players as they come and go and facilitate public social interaction. Additionally, it seems likely that employing a moderation strategy that makes respectful moderation visible and obvious to players functions to reassure them about the safety of the shared social environment, increasing their comfort there.

Finally, how important are individual players, their motivations, and their play styles to the prosociality of a community? Server staff, as a special class of player, are of particular importance to determining the prosociality of a community, and should ideally be present and visible on the server, fair and ethical in their dealings with players, and ideally supporting each other and holding each other to a high standard of care and behaviour. *Minecraft* can support any type of player, so it is the prosocial orientation of players that matters more than whether they are motivated to explore, achieve, or socialize. Prosocial players are generous with each other, both in sharing necessary game information, and in their interpretations of each other's behaviours, and modeling and copying this generosity is a part of the social learning that occurs in prosocial environments and helps communities to grow in a more prosocial direction over time.

To return to my primary question, in a prosocial online multiplayer *Minecraft* server community, how and why is that prosocial community constituted? My conclusion is that it is the players themselves who most influence the intrinsic prosociality of a *Minecraft* server and its

likelihood of being experienced as a community. Not all *Minecraft* communities are prosocial, but those that are prosocial have that quality in great part because of the agreement, conscious or unconscious, of all of their players. Players create their prosocial communities continuously through their actions and interactions. Given that this research suggests that players commit for a long time to a single server, it becomes obvious that capturing the attention of those players is critically important. Players look for specific qualities, such as grief protection and long-term stability, in a potential home server and communicating that a server has these qualities can gain a server a new member. Consistently demonstrating a commitment to continuing those qualities can earn that player's trust and loyalty and they can contribute to the prosocial community over the long term. I have compiled a list of recommendations (in Appendix A) which are intended to assist those who would form or host such communities to do so in the multiplayer *Minecraft* server environment.

I love *Minecraft*. This is perhaps not the most important or surprising of my conclusions, but it is both where I started and ended with this research and could well be a direct quote from any of my interview participants. Although I was not intending to examine the question of whether *Minecraft* was itself a more prosocial game—I would never suggest that prosociality or community are universal experiences on *Minecraft* multiplayer servers or impossible elsewhere—I do think this research suggests an avenue for further research on this point: what is the effect on players of playing in an environment relatively free of coercion? “Freedom” and “openness” and “choice” were frequent positive descriptors of *Minecraft* used by participants and are defining features of it.

Coercion may appear to be a strong word to use here, but I suggest that in many games players must either consent to a game's narrative and values or continuously actively subvert

them internally, and this requirement is coercive. In *Minecraft*, unlike other games, players need not be party to concepts of enforced dichotomous gender binary or deterministic racial or ethnic difference; nor must they accede to the primacy of violence as a mechanism for solving problems. *Minecraft* does introduce some constraints through the design of the game environment, but even these constraints—game physics, mechanics, visual design, player interaction, etc.—are themselves malleable through built-in game settings and external mods, and configuring a personal or community *Minecraft* experience using settings and mods is a widespread practice and an important and expected element of creating a multiplayer server.

Additionally, although it could be argued that *Minecraft* constrains certain types of self-expression—character creation and avatar design, for example—it does so in an even-handed way; all players have the same canvas on which to paint, but may use any colours they wish. While players in other open world environments superficially appear to have greater freedom in self-expression through avatar design, this is only to the extent that the environment permits it and the boundaries of this freedom can closely follow the normative boundaries of the culture in which the game is situated. For example, it has been my own experience that in open world environments, players such as myself with non-normative bodies can be excluded from creating accurate representations of their physical form. In addition, I would suggest that self-expression is a much broader category than just the appearance of a player's avatar. The server owner who founded Education Server, for example, did so in part because they wanted to create a learning and educational environment for others to interact with. In so doing this player was expressing their identity as a learner and educator, and *Minecraft* placed few if any limits on this self-expression.

The body of literature on game violence is extensive, but I suggest that it is possible that too great a focus on the effects of certain types of violence is a distraction from the effect of the amount of freedom one has to define the game for oneself. In *Minecraft*, players can do whatever they wish to do at any given moment. They are not required to grind for experience, to kill or be killed, or to compete. They are not forced to align themselves with one faction or another, to play act, to collaborate, or to work alone. In short, *Minecraft* does not require its players to enact any agenda but their own. This leads to a game experience that inspires poetry in its players. In the words of one participant, playing *Minecraft* is “like being in a lucid dream, but awake” (Player 1). Less weightily, it is also, in the words of another participant, “just kind of whimsical and fun and weird and interesting” (Player/Server Owner 4). I agree, and feel that it is also worthy of further inquiry.

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Appendix A: Glossary of Common *Minecraft* Terminology

For those readers unfamiliar with the *Minecraft* gaming terms, here are short definitions for common terms used in this research:

- *Creative* is one of the two standard play modes in *Minecraft*. In Creative, players are invulnerable, can fly, and have unlimited building resources.
- *Discord* is an external-to-Minecraft communication tool that incorporates both voice and text chat and permits communication for a server to happen in multiple channels both public and private.
- *Factions* is a modded play mode that allows players to team up with each other and compete in war games, often in an otherwise standard Survival world.
- *Griefing* is a word used in many gaming contexts to refer to any number of transgressive acts performed for the pleasure of causing another players distress. In *Minecraft*, griefing usually means destroying another player's build, stealing objects from their storage chests, killing animals they have penned for their own use, or similar acts.
- *Minigames* is a broad category that covers many different programmatically-supported games-within-a-game such as capture the flag, parkour, dropper, puzzles, spleef, and many others.
- *Mobs* are software-controlled mobiles in the world of the video game. In *Minecraft*, mobs can be neutral, like sheep or cows, or hostile, like zombies and creepers.
- *Mods* and *modding* are terms referring to deliberately changing portions of the game's programming, either to change aspects of the game's world such as objects or mobs, or to change game behaviours (Christiansen, 2014).

- *NPCs* (non-player characters) are more sentient-seeming mobs with whom players can interact in limited ways.
- *Player-killing* is when a player kills another player's avatar within the game, either directly with their own avatar, or indirectly by using the game's mechanics or geography.
- *Skyblock* is a modded play mode that turns *Minecraft* into a game in which each player starts out on a tiny island floating in the sky with limited resources and must work to expand their island and satisfy specific challenges.
- *Survival* is one of two standard play modes in *Minecraft*. In vanilla Survival, players start with nothing and must gather, mine, and craft everything they need in order to progress within the game.
- *Vanilla* is a word used to indicate that something is part of the unmodded *Minecraft* gameplay experience.

Appendix B: Recommendations for Server Owners and Administrators

Focus on Players and Relationships

Prosocial community relies on players and their interactions with each other. Therefore, when making decisions about the design and construction of a server, remember that players and their meaningful interactions with other players should be a first priority. When choosing mods to install or when designing social structures and processes, give preference to mods, structures, and processes that make it easier for players to interact with each other over those that impede or prevent it.

- **Grief Protection:** Make it available to all players, encourage its use, and be generous. Players building together and exploring each other's builds is a central activity in a prosocial *Minecraft* server community, and grief protection encourages this.
- **Transportation:** Make instant transport readily available. Should they consent to it, players should be able to visit each other easily.
- **Communication:** Prioritize communication between players. Players should be able to easily communicate across all connected worlds. Make sure that any automated server messages are meaningful and relevant to players and keep automated messages from dominating chat. When adding external communication tools, choose those that integrate with and enhance the existing in-game chat so that players can use either, and online and offline players can still communicate.
- **Stability:** Plan to not reset the map in the server's primary build world, whichever that is, and make it clear that players can rely on that world to be there for as long as the server exists. Have a sustainable financial plan for the server so that players are assured that the server will be around for a while and is worth their time and effort.

Keep It Simple

In addition to having a sustainable financial plan, it is important to have a sustainable strategy for the ongoing work of maintaining a multiplayer server. This requires balancing the needs and wants of the players with what server staff can reasonably moderate and maintain.

- **Rules:** Write a short list of rules for the server and keep those rules as general, clear, and simple as possible. The simpler and clearer the rule set, the easier it is to enforce.
- **Play modes:** Provide multiple play modes and worlds but do not attempt to provide every possible play mode. Make choices that support the type of interaction a prosocial community relies on: collaborative, supportive, and based in mutual helping.
- **Mods:** Be judicious in choosing mods. Players appreciate slightly modded server experiences, but the more mods in use, the more complicated the upgrade process becomes. Avoid mods that make the server experience unstable, that require constant tweaking, or that increase the likelihood of map file corruption.
- **Distributed community spaces:** Have a primary forum or website space for important server information and asynchronous player communications and maintain and moderate it thoughtfully. If incorporating a social media presence, use this presence to point players and community members back to the primary forum/website so as not to fracture the conversation. As much as possible, automate and syndicate content distribution.

Lead by Example

Server owners and administrators are in a position of leadership. Take that role seriously and consider how staff behaviour could be perceived by other players and what it would mean if other players were to emulate it.

- Presence: Coordinate with other staff to ensure that there is a staff person present or available during at least the busy periods of the day. This is also where integrating a communication tool that permits offline monitoring of the in-game chat can be useful.
- Greetings: Develop a greeting/farewell ritual and set an example of greeting every player.
- Ethics: Prosocially-oriented players want server staff to be strongly ethical people. Be thoughtful about staff behavior and try to maintain a high personal standard. Do not overlook bad behavior from players. Do not engage in trouble-making behavior.
- Moderation: Moderate and apply the rules fairly and consistently. Demonstrate generosity to young or educatable players, but be strict and firm with troublemakers. Do not permit players to pay real money to reverse a ban decision. Do not get drawn into petty arguments and practice positive social self-care, like taking breaks.

Appendix C: Sample Interview Questions

IPA interviews are usually only loosely scripted, so the following questions were used primarily as a starting point. In addition to the below questions I also asked follow-up questions relating to experiences or subjects that were raised by participants.

In the first part of the interview, my focus was on context and experience in *Minecraft*, including the participant's history with computer and multiplayer game playing in general, as well as more general life history. Sample questions:

- Tell me a bit about yourself.
- How did you come to enjoy playing computer games?
- How did you come to play *Minecraft*?
- How does playing *Minecraft* and other computer games fit into the rest of your life?
Probe: How often do you play and for how long?
- How did you come to play games in multiplayer?
- Where do you play *Minecraft* online?
- How did you come to choose those places?
- Can you tell me about any places where you used to play but don't any longer?
- How did you come to play that (specific role) in that server?

In the second part of the interview, my focus was on eliciting more specific details about each participant's experience of *Minecraft* communities, including what activities they do in those spaces and what relationships they have there. Sample questions:

- How do you ordinarily play *Minecraft*?
- How do you ordinarily play multiplayer *Minecraft*?
- In what other ways do you play *Minecraft*?

- Please reconstruct for me what a usual play session would look like for you.
- You mentioned that you often like to play with (person). Please tell me a story about a time you played together.
- You told me you like to do (an activity) in *Minecraft*. Please tell me a story about a specific time when you did that.
- You told me you like to play in (a specific *Minecraft* multiplayer server). Please tell me a story about a specific time when you did that.

In the final portion of the interview, my focus is on having the participant speak to the meaning of those experiences in their life. Sample questions:

- What did playing *Minecraft* mean to you when you first started? How has that changed?
- Given what you have said about your life leading up to starting to play *Minecraft*, and given what you've said about your play now, how do you understand your *Minecraft* playing now? What sense does it make to you?
- Given what you have said about your experience playing multiplayer *Minecraft*, how do you see that continuing in the future?
- Given what you have said about your experience playing (a role) in (a multiplayer server), how do you see that fitting into your future?
- What have been your favourite play experiences in *Minecraft*? What makes them your favourite?

Appendix D: Server Comparison Tables

Table D1		
Available Methods of Communication on Observed Servers		
<u>Communication Method</u>	<u>Education Server</u>	<u>YouTube Server</u>
Synchronous text - public	<ul style="list-style-type: none"> • In-game text chat across all worlds • Forum text chat tool • TeamSpeak text chat room* 	<ul style="list-style-type: none"> • In-game text chat across all worlds • Discord public text chat rooms
Synchronous text – private	<ul style="list-style-type: none"> • In-game private messages • TeamSpeak private text chat rooms* 	<ul style="list-style-type: none"> • In-game private messages • Discord private text chat rooms
Asynchronous text – public	<ul style="list-style-type: none"> • Forum posts • Official server subreddit* • Official server Facebook page* • Twitter • Pastebin (tool for sharing code) 	<ul style="list-style-type: none"> • Forum posts • Tumblr • Twitter
Asynchronous text – private	<ul style="list-style-type: none"> • In-game mail system • In-game book-in-hopper mail • Website private messages 	<ul style="list-style-type: none"> • In-game mail system (after setup) • In-game book-in-hopper mail • Website private messages • Private forum posts • Ticketing system for users to report problems to staff
Asynchronous Voice	<ul style="list-style-type: none"> • TeamSpeak public and private voice chat rooms 	<ul style="list-style-type: none"> • Discord public and private voice chat rooms
Official server broadcasts	<ul style="list-style-type: none"> • Automated messages in in-game chat • Forum posts • Twitter • Instagram • Wiki articles* • YouTube channel • Twitch.tv channel** 	<ul style="list-style-type: none"> • Automated messages in in-game chat • Announcements in Discord • Forum posts • Twitter* • Wiki articles • YouTube channel* • Twitch.tv channel*

* Online, but no observable activity during observation period
 ** Listed on website but no longer active

Table D1

Table D2		
Possible Economic Interactions on Observed Servers		
	<u>Education Server</u>	<u>YouTube Server</u>
Players can gain in-game money by:	<ul style="list-style-type: none"> • Selling resources to the server • Selling resources to other players casually or with shops or auctions • Doing jobs for other players or for server projects • Selling claimblocks • Receiving donations • Completing quests 	<ul style="list-style-type: none"> • Selling resources to the server • Selling resources to other players casually or with shops • Doing jobs for other players or for server projects • Selling building plots • Receiving donations
Players can spend money by:	<ul style="list-style-type: none"> • Buying resources from other players casually or through shops or auctions • Buying resources from the server • Buying claimblocks • Donating to projects, other players, etc. • Buying public /warps • Buying creative plots • Buying replacement Skyblock islands • Paying other players for work 	<ul style="list-style-type: none"> • Buying resources from other players either casually or via shops • Buying goods from the server • Buying plots in the limited impact build world • Donating to projects or other players • Buying /warps • Paying other players for work for their personal projects • Buying additional Creative world plots

Table D2

Table D3

Available Play Modes and Worlds on Observed Servers

<u>Play Mode/World</u>	<u>Education Server</u>	<u>YouTube Server</u>
Hub/spawn world	Entry point for new players. Has portals to other worlds.	Entry point for all players at every login. Has portals to other worlds. Has a special entry point for new players.
Creative worlds	Players may use in-game money to purchase 200x200 plots.	Two worlds available: <ul style="list-style-type: none"> • Public, players get one 256x256 plot, may buy more for in-game money. • Semi-private, specific donators get access to build, any player may visit.
Survival worlds	Two modded survival worlds, one with no PvP, one with limited consensual PvP. Players may build anywhere, claim and protect their builds, do server-specific quests, and use a variety of instant transport methods.	Three survival worlds available, all no with no PvP: <ul style="list-style-type: none"> • Public modded frequent-map-reset Resource world, players may use instant transport methods, build, collect resources, but may not claim area for their own use. • Private modded survival world, only available to specific donators. • Public vanilla server.
Build world	None.	Shares an inventory with the Resource world (the first of the Survival worlds above). Players may use a variety of instant transport methods. Players may use in-game money to purchase small build plots within planned official cities.
Skyblock world	Players may start one island for free, or pay in-game money to start up to four others over time.	Players may start one island. World refreshes every four months (old islands are removed).
Factions world	Players may form teams to compete with each other. PvP allowed.	None.
Minigames world	Survival world heavily modded to permit a variety of minigames, including several unique to the server.	Advertised but not functional during observation period.

Table D3

Appendix E: Bowing in *Minecraft*

Figure E1. A screenshot of a standing *Minecraft* player avatar.



Figure E2. A screenshot of a sneaking *Minecraft* player avatar. Players often use the sneak action to make their avatar bow.