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IRVINE**

Playful Places in Online Playgrounds: An Ethnography of a Minecraft Virtual World
for Children with Autism

DISSERTATION

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DOCTOR OF PHILOSOPHY

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by

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DEDICATION

*For all the strong women in my life—for those who have blazed the trail before me,
those in the trenches with me, and those following in my footsteps.*

*With much love to my mother
and
my daughter.*

~

And to my son, who gave me my favorite title, “Mama”

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ABSTRACT OF THE DISSERTATION

Playful Places in Online Playgrounds: An Ethnography of a Minecraft Virtual World for Children with Autism

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Professor Gillian R. Hayes, Chair

The playground is a space where play is encouraged and happens most freely. Online communities can be imagined as playgrounds. In addition to face-to-face playgrounds, these “online playgrounds” mediate the embodied experience, but in a different way. In the field of Human-Computer Interaction (HCI), to better understand play, I shift the focus from using technology to assist children with disabilities engage in normative play, to using technology that supports children’s play—whether normative or not. Work in other fields upholds normative, face-to-face interactions as the goal in any social interaction. Current research often holds offline and online as two distinct experiences with many caregivers, teachers, parents, and researchers privileging the experiences that happen in the physical, face-to-face realm—the physical-world playground. In HCI, studying technology for play is often acknowledged only to accomplish specific goals (such as education, skill mastery, or improving health). When stakeholders use technology for play simply for the sake of play, normative interactions are the focal point, such as with able-bodied children. In technology research, children with disabilities are not ignored

altogether, but rather when technology for play is studied for disabled children the technology becomes an aid—a support to allow the children more normative interactions. Being disabled inherently means not fitting into and not adhering to the normative embodied interactions. When we assume a normative way of engaging as the best or only way to interact, there will be people who are excluded. In a digital ethnography conducted in Autcraft, an online community centered around a Minecraft world for children with autism, we can see how online communities can become “online playgrounds” and used as an alternative place to play. This dissertation aims to re-center technology design to support topos-mediated ludic sociality—the various ways sociality as an embodied experience is mediated by playful place—rather than focusing on how technology can be used to normalize social interactions.

1

Introduction

Sandy walks across to the throne and declares, “I am queen now!”

Another child, Meg, says, “And I will be your daughter. We have a pony named Sparkle.”

A third child, Stuart, says, “I am a dark assassin. I sneak into the castle.”

Sandy sits on her throne regally, while Meg runs around seemingly on her pony. Stuart slowly sneaks around the perimeter of the scene.

“Remember, no killing,” Sandy insists to Stuart. “Or I’ll go get Ms. Hall.”

Stuart replies, “Don’t worry, I’m a good assassin.”

This scene could be from any child’s playground. Play is a critical aspect of childhood, where children not only learn skills and gain cultural knowledge, but process their lived experiences, have fun, and unwind. However, this particular scene is from my fieldnotes in a Minecraft virtual world for children with autism¹.

The playground is a space where play happens most freely—and is encouraged, even in the space’s label: *playground*. We can think of online communities which are centered around

¹ Throughout this manuscript I will use “person-first” (a child with autism) and “identity-first” (autistic child) language interchangeably. Person-first language is the standard for researchers, clinicians, and some family members of individuals with autism. People within various disability communities sometimes prefer identity-first language (Brown 2011). I discuss the rationale for this at more length in Chapter 4.

games and virtual worlds as playgrounds—labeling certain platforms as games encourages play. In addition to face-to-face playgrounds, these “online playgrounds” mediate the embodied experience, but in a different way. In the field of Human-Computer Interaction (HCI), I identify a key gap in our scholarly understanding of play: the focus has been on using technology to assist children with disabilities play in normative ways, rather than creating technology that supports children’s play as they would wish to express it—whether normative or not. This research gap stems from work in other fields, including in Games Studies where disability is often ignored, and in Child Development where normative, face-to-face interactions are held up as the goal in any social interaction. Current research often holds offline and online as two distinct experiences and many caregivers, teachers, parents, and researchers privilege the experiences that happen in the physical, face-to-face realm—the physical-world playground. Even in HCI, studying technology for play is often acknowledged only to accomplish specific goals (such as education, skill mastery, or improving health). When technology for play is explored simply for the sake of play, normative interactions are the focal point, such as with able-bodied children. In technology research, children with disabilities are not ignored altogether, but rather when technology for play is studied for disabled children the technology becomes an aid—a support to allow the children more normative interactions. Being disabled inherently means not fitting into and not adhering to the normative embodied interactions. When we assume a normative way of engaging as the best or only way to interact, there will be people who are excluded. In a digital ethnography conducted in Autcraft, an online community centered around a Minecraft world for children with autism, we can see how online communities can become “online playgrounds” and used as an alternative place to play. This dissertation aims to re-center the question of play to no longer focus on the normative, but rather to explore how

disability shows us how in the dichotomy between online and offline play the latter is considered the norm.

In this chapter, I discuss: the embodied experience of play and the playground—both online and offline; how the disabled embodied experience impacts access to play; technology research and play; my dissertation research questions; the contributions of my dissertation; and an outline of the rest of the dissertation document.

1.1 *Child's Play as an Embodied Experience*

Play is a ubiquitous part of childhood. Marsh and Richards state, ‘play,’ by that name, is also, in common-sense discourse, located almost exclusively within early childhood” (2013, 14). Although difficult to define, play can be interpreted as enjoyable and pleasurable; unproductive, with all goals and motivations being intrinsic to the play space; voluntary; and requires active engagement of the player (Caillois 2001; Garvey 1990; Huizinga 1949; Salen and Zimmerman 2004; G. Bateson 1955). Sicart defines play as an activity that is “contextual, appropriative, creative, disruptive, and deeply personal” (Sicart 2014). Play occurs within a contextual space, with activity occurring within the bounds of place and space (*e.g.*, a playground with the rules of tag or a play house with the rules of a household) (Salen and Zimmerman 2004; Sicart 2014).

Understanding play is of interest to many different stakeholders in childcare (*e.g.*, researchers, teachers, caregivers, parents) because it is “a major source of development” (Vygotsky 1978, 102). As Pellegrini states, “from a scientific perspective, recess represents a unique opportunity to study children’s social interactions” (1995, 1). Play is how children learn social skills and are acculturated into greater society (Sutton-Smith 1997). While play may be unproductive and have no extrinsic goals, collaborative play does offer children the ability to

practice and enhance many areas of their lives, including social, cognitive, and cultural skills (Arthur, Bochner, and Butterfield 1999). Children play out a range of playful practice roles and test the boundaries of social rules during these collaborative play sessions (Garvey 1990). All of these skills are vital for children to grow into competent, functioning adults and discover who they might want to be as adults (Garvey 1990; Markus and Nurius 1986). Play is also how language is learned and transferred—the symbols and signals people use to communicate with one another (Willett et al. 2013). Garvey states that certain skills are required in order for social play to occur: ability to distinguish between play and reality, ability to abstract rules, and the ability to maintain a joint theme (1974). Also, cognitive performance in the classroom is enhanced by children’s free time to play (Pellegrini 2005).

Play is not something that is limited to childhood, although outside of Games Studies, play in adulthood is understudied (Pellegrini 2005; Huizinga 1949). “[P]lay is central to adult cultural practices, both in terms of play with rules (sports, games) and fantasy play (role-playing computer games, virtual worlds, etc.)” (C. Richards and Marsh 2013, 14). In many ways, play looks similar in adulthood as it does in childhood. Adults and children can play together, especially in family groups or children playing with caregivers. However, there are some differences in adult play that make the distinction between adult’s play and child’s play important in this dissertation. When adults play with children there is a power differential between the two parties—adults have much more power than children. Also, adults have already learned many of the symbols and ways of interacting that children are still learning—so the purpose of the play is different. Children use play to make sense of their world and to process events, where adults can do other activities to achieve these goals (Paley 2004).

Due to the differences between adult and child's play, in modern society the physical play spaces of children and adults are typically not mixed. Children have designated playgrounds—often fenced off from the rest of the world—to keep children in and other adults out. This creates a separate play world that feels safe and secure for the players (Armitage 2001). Since the 1990s, there has been an increased institutionalization and policing of children's play (Willett et al. 2013). Trained caregivers (*e.g.*, teachers, parents, aids) watch and guide the children as they play in these designated playgrounds (Hakkarainen et al. 2013). Children learn skills from their parents (or other caregivers) and assimilate their parents' values and socialization. In Western culture, parents often feel pressured to construct and maintain a rich, stimulating environment for their children (Hays 1998). While constructing this rich play space, parents must watch their children more closely than parents of previous generations (Carrington 1991; Pellegrini 2005). However, ethnographers working in playgrounds have found that adults are not always privy to the content of children's play. In fact, because these spaces are policed, children feel safe enough to experiment with more adult content when they are away from direct supervision of the attending adults (Armitage 2001). I return to caregiving and play in Chapter 5 to investigate the tensions around decisions regarding who polices children's play in these spaces and when policing occurs.

One concern that adults have for children playing is seepage of the “real” world into their play. For example, researchers have explored how mainstream media is embedded in play—which has been documented by researchers as early as the turn of the Twentieth Century (but certainly occurred before then) and continues to today, but there is greater concern over it now (Willett et al. 2013; Itō et al. 2010). This concern extends to consumer influences on children's play (Willett et al. 2013; A. Burke and Marsh 2013), but also to “unsafe” topics (*e.g.*, sex,

violence) (boyd et al. 2009). Therefore, only “trained” or vetted adults are permitted in the playground or inside the playground boundaries (*e.g.*, parents, teachers, approved caregivers). However, others have noted that play is how children process “real” world events (*e.g.*, natural disasters) (Paley 2004). Trained adults can help children process their lived experiences through play by supporting play and prompting through asking questions.

Play is an embodied experience during which bodies (and avatars) are people’s means of engaging with and playing in the world. The world and the body create a system, in which the body is the heart of the system; one does not exist without the other (Merleau-Ponty 2012). The body is the way human beings interpret and make meaning of the world they inhabit. “The form, function, comportment, and sensory modes of human bodies inform the ways we interact with human, built, and natural environments” (Garland-Thomson 2011, 601). The body is “a system of possible actions, a virtual body whose phenomenal ‘place’ is defined by its task and its situation. My body is wherever it has something to do” (Merleau-Ponty 2012, 260). The embodied experience is the act of being in a world, or “the way that a variety of interactive phenomena arise from a direct and engaged participation in the world” (Dourish 2001, 125). This is not simply the body sensing the surroundings in a space, but the actions of the body in that space that allows for social play. Play is a form of embodied experience or a way of being-in-the-world. With this as our understanding of play, we can now explore the playground as a place of play.

1.2 *The Playground*

Place allows for an embodied experience to occur. A place has symbols and culture that shapes the interactions that take place there. Some places are playful and they are built to

encourage play. The playground, in this case, is the physical space, which holds equipment, delineates where certain play can take place with signs, markings, and fences. But the playground is also a social space, where children and adults interact, along with specific cultural cues and understandings. How adults design the playground changes how the players interact. For example, by a few markings on the ground, children may have a communal understanding of the play-space (*e.g.*, the corner with the square around it is for kickball). Adults do not necessarily cue in on these subtle understandings of the space, imposing their own ideas onto how the children should be playing (Armitage 2001). The playground is made up by the process of social interactions between the individuals occupying that space. “We interact daily with other people, and we live in a world that is socially constructed. Elements of our daily experience... gain their meaning from the network of social interactions in which they figure” (Dourish 2001, 100).

Those who conform to the rules and expectations of the social world in question often go unnoticed. A person who goes against social norms, even playfully, becomes noticed (*e.g.*, a child shouting playfully in a quiet library or girls skipping rope in the kickball corner because an adult told them to). Rules and cues make up these play worlds and guide people how to behave within them. Those who behave in unexpected ways, intentionally or not, are often labeled deviants (Kafer 2013). As I discuss in Section 1.3 and again in Chapter 5.1.2, being labeled as deviant can have long-reaching consequences, such as being bullied and being denied access to social play.

Human activity takes place in a variety of realms including the physical and digital. People build the physical realm, melding together the natural with a socially constructed environment by augmenting the physical spaces with architecture and technology. When humans

inhabit the physical world, they make alterations through building, inventing, and terraforming. Every built object “bears as an imprint the mark of human action it serves. Each one emits an atmosphere of humanity” (Merleau-Ponty 2012, 363).

How people interact with each of these human-made objects will change depending on the context. When the world of play is part of the physical realm, the play can be disruptive, challenging the norms of a space and reshaping how people think of physical spaces (Sicart 2014). In *Boundary Play*, for instance, objects act as a boundary that is drawn and redrawn, bringing amusement to the players (*e.g.*, children playing in a dog’s crate) (Nippert-Eng 2005). For example, the recent phenomenon of Pokémon Go, where players use their phones to find virtual Pokémon in the physical world, has led to some disruptions for those who are not also playing the game². For example, people have trespassed or been hit by cars (Velloso and Carter 2016; Fingas 2016; Associated Press 2016). On the other extreme, the game has been lauded for motivating people to go outside and socialize (Lani 2016). This augmented reality is overlaying a digital realm on top of the physical world (Szalavári, Eckstein, and Gervautz 1998; Piekarski and Thomas 2002), which I discuss further in Chapter 6.

The digital realm is the spaces found online and is another place, much like the physical realm, where the world of play can occur. Virtual worlds are a part of this digital realm. In this dissertation, virtual worlds are persistent digital or computer-generated environments that allow individuals to interact with each other, objects, and the environment (Boellstorff 2010; Nardi 2010; Pearce and Artemesia 2009)³. Virtual worlds contain objects, people, buildings, and

² Pokémon Go. 2016. Mobile. Niantic.

³ The term ‘virtual’ is commonly used to distinguish “virtual worlds” from other digital spaces. I discuss in Chapter 6 the problems with this terminology and how it is not the most accurate (Boellstorff 2016). However, in this

boundaries just as in the physical realm. Virtual worlds allow for users to interact through avatars (*i.e.*, a user's body in the virtual world). This is complicated by how virtual worlds are also situated in a physical world as well. A physical body is interacting with a physical controller in the physical world while simultaneously embodying an avatar in the virtual world. In essence, a person can embody two bodies in (at least) two different worlds at the same time (Boellstorff 2011). And while virtual worlds are worlds in their own right, but a person cannot access one without some physical-world interaction. Both physical and virtual worlds are turned into playgrounds, worlds of play, where people come together, agree upon rules, and play (Sicart 2014).

The embodied experience of play is the way in which a body interacts in the world within the context of play. People can experience play in a variety of spaces and across physical and virtual worlds. As I explore further in the next section, one's embodied experience may affect access to play.

1.3 How Identity Affects Access to Play: The Disabling Embodied Experience

For any number of reasons, a body may not be accommodated by the world. A body can fall outside the norm, in particular for those bodies that are considered "disabled." To understand this disabling experience, I define access and, through the lens of Garland-Thomson's "misfits," when access does or does not occur (Garland-Thomson 2011). Another way of asking this is: *who fits into what worlds?*

dissertation, I follow the norms of my community members and will use 'virtual,' 'digital,' and 'online' interchangeably to refer to these digital spaces.

Two of the most well-known models of disability from disability studies literature are the medical model and social model. Straus describes the medical (or individualized) model of disability as a “culture that treats disability as pathology, either a deficit or an excess with respect to some normative standard,” “the pathology resides inside the individual body in a determinate, concrete location,” and finally “the goals of the enterprise are diagnosis and cure” (Straus 2010). The medical model potentially oppresses disabled people by placing the disability within the individual’s body—stating that the disability is caused by a deficit (or an excess)—and pushes for the elimination of the category of disabled. Disabled people are often seen as “burdens” on their caregivers and, in modern society, the members of the family are often placed with the “responsibility” of this care (Silverman 2012). This push for elimination of disability leads to many negative trends (currently and historically) including sterilization stemming from the eugenics movement, institutionalization, and death (L. J. Davis 2013). This leads many disability scholars to find the medicalization or individualization of disability to be a source of trouble for disabled people (Straus 2010; Shakespeare 2010).

The social model of disability emerged as an answer to the medicalization and individualization of disability (Shakespeare 2010). Shakespeare asserts that the key elements of the social model include “the distinction between disability (social exclusion) and impairment (physical limitation) and the claim that disabled people are an oppressed group” (Shakespeare 2010). Disability studies scholars, particularly those who ascribe to the social model of disability, often use the idea of the socially constructed world as being responsible for creating the category of disability (Shakespeare 2010; Kafer 2013). The built environment is considered troublesome for those who do not conform to “normal.” And even when inclusion of these “not normal” bodies becomes a directive, the built environment can be large and difficult to change without

great effort (*e.g.*, a university building built 40 years ago, before standards for wheelchair access were in place). In newer technology, the burden is often placed on the user to customize their own access to systems (*e.g.*, installing browser extensions to make websites accessible) (Ginsburg and Rapp 2013). While the natural world creates limitations on the human body, the human-engineered objects are what some disability advocates hold responsible for abling or disabling bodies (Shakespeare 2010; Beckett and Campbell 2015).

Neither the medical or social model completely explains all disability or the societal problems that disabled people face. For example, the medical model may not account for the oppression of the disabled (Straus 2010), but the social model does not fully account for impairment (*e.g.*, those who suffer chronic pain, which is by definition inside one's body) and does not account for individuals who may want to cure their impairment (Kafer 2013). Many of these models also do not account for situational disabilities, where a person may be considered (and identify as) able bodied most of the time, until the context of their environment changes and consequently their ability as well. Perhaps disability occurs not solely within bodies (medical model) or within worlds (social model), but somewhere in between.

Access, in general, is not a given experience for any one person. Access occurs at the moments where a body and the world interact. "Access...is an interpretive relation between bodies" or between bodies and the world (Titchkosky 2011, 3). When access is faulty or denied, disability is created in that moment (Ellcessor 2016). Disability "is not simply lodged in the body but created by the social and material conditions that 'dis-able' the full participation of a variety of minds and bodies" (Ginsburg and Rapp 2013). Indeed, "questions of access can arise for anyone, at any time, and anywhere for innumerable reasons, access is a way people have of relating to the ways they are embodied as beings in the particular places where they find

themselves” (Titchkosky 2011, 3). Therefore, access goes beyond ability and disability in a medical or physical sense. Garland-Thomas refers to these failed moments of access as a “misfit,” where a “misfit occurs when the environment does not sustain the shape and function of the body that enters it” (Garland-Thomson 2011). This misfit does not occur all the time, during every interaction in the world, but rather during encounters in an environment that was not built for that body (*e.g.*, a shelf that is too high, a wheelchair encountering stairs). “The built and arranged space through which we navigate our lives tends to offer fits to majority bodies and functioning and create misfits with minority forms of embodiment, such as people with disabilities” (Garland-Thomson 2011).

For bodies to interact with the world there must be access between the two. As “our bodies move, meet, negotiate, and come into direct contact with the built and natural worlds. The degree to which that shared material world sustains particularities of our embodied life at any given moment or place determines our fit or misfit” (Garland-Thomson 2011). Access is, then, whether or not the world is able to sustain a body, determining whether the body fits or not. In summary, access can be defined as the point of interaction when the world is able to sustain a body and that body is able to *fully experience* the interaction.

Access is usually reserved for the “majority” or normative body (*i.e.*, those bodies that are privileged by society), but there has also been an effort to change the norms and create a more inclusive environment. This can be seen through official legislation, such as the Americans with Disabilities Act (ADA)⁴, and through individual efforts to create inclusive, safe spaces, such as moderating forums. Handicap parking, as mandated by the ADA, is a prime example of

⁴ <https://www.ada.gov/>

giving access to a certain set of individuals who did not have access previously. Considering the physical aspects of the handicap space—creating wide spaces and adding a ramp to the sidewalk— allows for those with mobility impairments to move freely from a vehicle to a sidewalk. Likewise, in considering the social aspects of handicap parking—the licensing required to have access to the spaces, demarcation of the wheelchair symbol, and the inference of priority for disabled individuals—all show how society deems those with disability may have access to public spaces. However, these priorities and considerations only extend to a certain subgroup of disabled individuals—those deemed by the state to have the “right” kind of disability. As discussed in other disability studies literature, society reflects these priorities by shaming those who use the space but whose appearance does not fit the societal expectations of someone who is disabled, even though they are legitimately using the space with the required licenses and tags (N. A. Davis 2005). If both body and world are constantly in flux, then we can say that a disabled person is not disabled all of the time, but rather, they are disabled by the context (*i.e.*, the world with its objects and the body itself) with which they are trying to engage. “While we all have bodies—bodies that we act, sense, feel, or move in and through—only some bodies, only some of the time and only in some places, are understood as disabled ones” (Titchkosky 2011, 4).

Access, and, therefore, whether a body fits or misfits, is dynamic and ever shifting. Garland-Thomson writes, “...embodiment—our particular ‘shape’ in the broadest sense—is always dynamic as it interacts with the world” (2011). The experience of a body in a world, or their access to that experience, is dependent on both the discursive (*i.e.*, communication) and material (*i.e.*, physical world interactions). “The concepts of misfitting and fitting guarantee that we recognize that bodies are always situated in and dependent upon environments through which

they materialize as fitting or misfitting” (Garland-Thomson 2011). This fitting or misfitting happens in all the various worlds bodies inhabit including physical, virtual, social, and, even, the world of play.

When the embodied experience “fits” it often goes unnoticed and unremarked. The disabled embodied experience highlights when a body does not fit into the world creating a remarkable experience for the disabled body. “The experience of disability highlights the disparity between the physical realities of our lives, between the ways our bodies function and are formed and the ways the world is built for certain kinds of bodies” (Garland-Thomson 2011). To be “normal” is the expectation that is assumed all other human beings strive for, with every able-body striving to reach perfection and asserting their own normality by comparing their able-bodiedness to those who are disabled (McRuer 2010).

“Everyone is virtually disabled, both in the sense that able-bodied norms are ‘intrinsically impossible to embody fully, and in the sense that able-bodied status is always temporary, disability being the one identity category that all people will embody if they live long enough” (McRuer 2010).

The disabled body becomes the oppressed body, as do many other kinds of misfit bodies when they are denied access, not only in a social sense, but also in a literal, physical sense.

People with disabilities become misfits not just in terms of social attitudes—as in unfit for service or parenthood—but also in material ways. Their outcast status is literal when the shape and function of their bodies comes in conflict with the shape and stuff of the built world (Garland-Thomson 2011).

Those who do not conform to the normative embodied experience of play, then, are not invited to the game. This is done both literally and through the crafting of play objects that a misfit cannot use.

Access is not always determined by ability or disability. Access is often granted or denied based on a whole host of varying identities (*e.g.*, age, race, gender). Therefore, being a misfit not only describes the disabled experience, but also any embodied experience that does not fit in the world.

The body is dynamic, constantly interacting with history and environment; sometimes it fits and at other points or moments, it does not. We evolve into what we call disability as our lives develop. The misfits that constitute the lived experience of disability in its broadest sense is perhaps, then, the essential characteristic of being human (Garland-Thomson 2011).

Using misfits as a lens goes beyond thinking about disability, but also thinking about other marginalized populations (*e.g.*, children or gamers). The various engagements (or lack of engagement) with the world help us understand more about the construction of these worlds and people's experiences within them. Through exploring how various misfits enact play, we can explore one way in which they experience their world and how they experience (and deal with) norms. To do this I look at the point of access—where does access occur, who is granting access, and how is the experience of access different for different people—in the results (Chapter 3, 4, and 5) of this dissertation.

1.4 ***Technology and Play***

For HCI researchers, technology is the means to understanding how people gain access to a variety of interactions, including play. In some cases, the researchers study existing technology and, in other cases, researchers design and develop innovative technology. If, in the last section we asked, “*who fits into what worlds,*” in this section, we ask, “*how does technology help or hinder a person's fit into those worlds?*”

In this section, I review literature that serves three focal points for research in technology and play: understanding technology for play; edutainment in particular; and technology as an aid to normative play. Finally, I discuss how some interactions are privileged as the norm, leading HCI researchers to develop technology that also sanctions and enables those norms.

1.4.1 Technology for Play

Child-computer interaction is rooted in the constructivist philosophy of Piaget and the constructionist ideas of Papert, who both have a long history with child development and education (Hourcade 2007). As such, much of the research in technology for play cites motivations for the work such as education, skill building, or health. These motivations often become the rationale for having research published. Only recently has there been a call for research on play for the sake of play. McClure states the aesthetic possibilities of digital playscapes should not be discounted in the areas of art and creativity (McClure 2018). Work also exists that explores how play (with digital technology) facilitates family bonding, but even projects such as Virtual Box have a dual focus on both virtual and physical play (H. Davis et al. 2007).

“Edutainment” is a popular genre of game that mixes entertainment and an education agenda. The history of edutainment began when the first personal computers were being sold in the 1980s (Ito 2009). Since then, technology for play has become a fully-fledged industry. An educational agenda often motivates the research in play and child-computer interaction in HCI, especially in the Interaction Design for Children (IDC) subcommunity.

Motivated to create more engaging platforms, researchers collaborate with children and youth to co-design systems. These systems often have similar motivations (*i.e.*, health,

education), but re-center children as participants in the design of the technology they will be using (Druin 1999). More recently, this research includes designing with children with autism (Frauenberger, Makhaeva, and Spiel 2017; Anthony et al. 2012; Benton et al. 2012).

1.4.2 Technology as an Aid to Normative Play

For children with disabilities—as with adults with disabilities—the focus of HCI researchers is on assistive technology. Assistive technology performs a service or support role that, most often, aims to create a more normative experience or to give individuals access to interactions they would otherwise not have access to. This also includes creating assistive technology that helps children play, but instead of emphasizing play, there are other reasons (*e.g.*, skill development, learning, health). For example, in my own work, I have employed game-like interfaces to evoke playful interactions from autistic children in order to augment their current therapy (Ringland et al. 2014). SIDES, a tabletop display game for children with autism, aims to improve social skills (Piper et al. 2006). This interactive game promoted socializing through collaborative play, but assumed this play would happen in a face-to-face setting at a large tabletop. This is similar to FutureGym, where the children play collaboratively in a school gym—with the system enforcing specific social rules (*e.g.*, how far apart to play from the other players) (Takahashi et al. 2017). These forms of play sometimes leave children feeling disappointed that they had been duped into doing something good for them, rather than playing a fun game (Ringland et al. 2014; Boyd et al. 2017).

Much assistive technology for play promotes health specifically. In fact, Hourcade’s book, *Child-Computer Interaction*, has “Health and Special Needs” as one chapter (Hourcade 2015). As with able-bodied children, technology and play is often used to gamify activities that

are perceived as unpleasant, such as exercise. For example, a bike is used to control a video game and was designed to give children with cerebral palsy exercise (Hernandez et al. 2013). While games for health, and assistive technology more broadly, is a valuable area of research, little attention has been paid to playing for the sake of play. In part, this is because other fields (*e.g.*, psychology, education) continue to perpetuate the idea there is a normative way to play (Wolfberg 2009).

1.4.3 Troubling the Privileged Norms in Technology and Play Research

Physical world face-to-face interactions are habitually privileged over virtual interactions (Micah O. Mazurek and Engelhardt 2013; Laushey and Heflin 2000; Turkle 2005; Kardaras 2016). Often there is a distinction between “real” life interactions and those that are online, with priority being placed on the “real.” Even in play, society often privileges physical world social play over its virtual counterpart. “There is a danger here, it is not the danger of mindless play but of infatuation with the challenge of the simulated worlds. In the right circumstances, some people come to prefer them to the real” (Turtle 2005, 80). Turtle argues that relationships made and maintained in the physical world are more meaningful than those made and maintained online, and that these online interactions are changing how humans interact with one another for the worse (2005). Others echo these concerns, worrying that children (and adults alike) spend too many hours with “screens” and not enough in the “real world” (Alper 2014; M. O. Mazurek and Engelhardt 2013; Rutkin 2016; Kardaras 2016).

This concern over time spent on entertainment is not a new one. With every new trend, there is concern over safety, changes to culture and society, and, in particular, how new media might affect the children (Alper 2014; Kocurek 2015). When discussing sociality in digital

space, scholars have begun to push back on what sociality is “real” or not. Miller *et al.* state, “popular perception of online relationships as things which can be contrasted with a ‘real world’—inhabited by one’s real or more authentic offline relationships—seems therefore simplistic and misleading” (Miller et al. 2016, 100). Miller and Sinanan explore the many different ways individuals can be social, mixing physical and virtual together using a webcam (Miller and Sinanan 2014). Games Studies scholars have also shown how video games (and games more broadly) can be social experiences that span both physical and virtual spaces (Nardi 2010; T. L. Taylor 2006; Tina L. Taylor 2002; Adrienne Shaw 2015b). Much attention has been paid to massively multiplayer online games such as World of Warcraft in their ability to bring people together virtually (Bardzell et al. 2012; Ducheneaut et al. 2007; Nardi 2010). Building on this work, scholars can explore other types of sociality found across virtual and physical spaces (Adrienne Shaw 2015b).

Physical world interactions are not always possible and, for some, may even be oppressive. Sometimes individuals with disabilities cannot or will not engage in normative physical world play and face-to-face interactions, and, therefore, turn to virtual world social play instead. These virtual social interactions in individuals with disabilities are often overlooked or regarded as not as meaningful as physical world interactions.

1.5 *Research Questions*

If being disabled means not fitting into and not adhering to the normative embodied interactions, and we design technology (and playgrounds more generally) only for the normative ways of engagement, then there will be individuals who are excluded. In this dissertation, I defamiliarize (*i.e.*, shift the our focus to see a familiar place in a new light (Dourish and Bell

2011)) the space of technology and play so that we are no longer seeing normative play, but how social play can occur in different ways. I examine one community—Autcraft—and their practices of play in and around a Minecraft virtual world and propose the following main research question and three sub-questions:

- I. How do children and caregivers engage in social play in an online community centered around a virtual game world for children with disabilities?
 - a. How does play take place in the constellation of interwoven platforms that make up this online community?
 - b. How does the intersectionality of multiple identities impact access to social play online and how does social play affect the performance of these various intersecting identities or not?
 - c. How do adults and children interact with each other to create an accessible play space?

1.6 *Contributions of Dissertation*

My dissertation contributes an empirical understanding of how access is granted to some individuals and not to others, creating an uneven distribution of experiences when interacting with technologies. This includes an exploration of how the intersectionality of multiple identities of community members, such as gamer, autistic, and child, impacts social play online and how social play enables the performance of these identities. This insight can help shape our scholarly understanding of how users approach technology, as well as some of the work marginalized users do to fully experience interactions. This includes some of the “Do-It-Yourself” activities individuals engage in to make systems more usable for themselves and their communities.

Results from this work also highlight the value of virtual social interactions for marginalized users. When scholars privilege physical, face-to-face social interactions over virtual ones, they run the risk of making invisible those who prefer, or have better access to, virtual

social interactions (*e.g.*, (Turkle 2005)). My dissertation contributes to the discourse of normalizing social play as it occurs in virtual spaces for children with autism. Often, these children are told they should focus solely on their physical-world engagements, while their online relationships and experiences are discounted. They are just one example of a subset of people who may prefer virtual interactions.

Finally, my work contributes a new way for HCI researchers to define and study social media. This work expands the definition of social media to include games and virtual worlds, beyond the scope of other social media platforms such as Facebook, Twitter, and Tumblr. The ethnographic methods used in this project also exemplify how HCI researchers should look beyond the bounds of a single social platform to understand a user or a community of users. Adding to the body of work in media ecologies (Chang 2009; Jenkins and Deuze 2008), I show how social media platforms work together to create an organic network for social interaction. This holistic lens of research allows for a far more complete understanding of users, which is necessary to create access and inclusion.

1.7 *Outline of Dissertation*

This dissertation is organized around three results chapters. Chapter 2, Methods, is an overview of the qualitative methods, including digital ethnography, used to gather and analyze data in this dissertation. Chapter 3, The Embodied Experience in the Autcraft Community: Inhabiting a Constellation of Social Media Platforms, explores the various platforms the community uses including Minecraft, video, social networking sites, and the Autcraft community website. Community members maintain their community culture across these various platforms, which includes having to enforce rules and norms. Social play happens in and across the

platforms used by the community, with play often conforming to the norms of the platform (*e.g.*, playfully editing together videos in YouTube, leaving playful comments in forum threads). Because of this, what is “social” in this social play may look different depending on the platform (*i.e.*, not always a one-to-one social interaction, sometimes the audience must be imagined such as in YouTube videos).

Chapter 4, *Who’s Playing the Game: The Multifaceted Identities of Autcraft Community Members*, explores the question of the multiple intersecting identities of Autcraft community members and how these identities impact access to social play. Because these identities have the potential to negatively impact access—as they do in other places both in physical and virtual worlds—the Autcraft community works to build an inclusive play space. This chapter ends with a discussion of how using a lens of intersectionality when studying online populations could benefit the research being doing with these populations.

Chapter 5, *Taking Care During Play: Children and Caregiving*, takes a deeper look at the dynamics between the children and caregivers of the Autcraft community. Caregivers are those members of the community either formally or informally responsible for the caretaking of others within the community. Caregivers are found in a range of ages and abilities across the Autcraft community. This caretaking takes many forms including parental roles, protective and policing roles, and through mentorship and friendship. Children are in a unique population in online spaces because, as in the physical world, they are still developing and face more potential risks. Because of this, caregivers are an important part of childhood—they affect what a child experiences and is exposed to. Through the role of caregivers, members of the Autcraft community can shape and create access to social play within the community. Caregiving may

also make access to social play challenging because of the work required to maintain an inclusive, accessible play space for others.

Finally, Chapter 6 is the discussion and conclusion of this dissertation. In this chapter, I weave together themes from the previous three chapters to understand what social play looks like and how social play happens at the intersection of community members' identities and the platforms they are using. I propose researchers consider topos-mediated ludic sociality, rather than platform-mediated sociality. This will allow for technology as a part of the landscape, but not to dominate the focus. Play includes both the real and unreal as elements, which shifts our understanding of the spaces (physical, liminal, and virtual) that play inhabits to allow both real and unreal experiences. Safety during topos-mediated ludic sociality is imperative for full, rich engagements. In turn, these acts of play are activism—changing the norms and resisting negative discourse about autism and even play itself.

2

Methods

To investigate questions of how marginalized individuals interact in an online community centered on a virtual world, I turned to the Autcraft community, which revolves around an instance of a Minecraft virtual world and was created for children with autism. Following an ethnography of approximately three years I analyzed data collected to explore themes of access and social play. This chapter is organized as follows: details of the field site, an introduction to ethnography as it relates to this dissertation, and data collection analysis.

2.1 *Field Site: The Autcraft Community*

The multiplayer virtual world in my study, maintained by the Autcraft community, is a semi-private Minecraft server created for children with autism and their families. Minecraft is an open-ended, free-play style game through which players can interact in a virtual world with no particular goals or play requirements (Duncan 2011). The open-endedness of Minecraft allows for an expression of individuality and creativity during play, which may make the game particularly compelling for players (Duncan 2011). The graphics are intentionally pixelated and blocky (See Figure 2.1).



Figure 2.1. Screen shot of Autcraft landscape in blocks.

Minecraft can be played as either a single or a multiplayer game. In a single player game, the player is alone in his or her own unique virtual world. This virtual world is procedurally generated at the outset of the initial play session creating a randomly unique world each time a new virtual world is started¹. As a multiplayer game, Minecraft allows players to interact with others and be as socially engaged as the individual player desires. Players interact via text chat and avatars (See Figure 2.2). Avatars can interact by bumping into one another, hitting each

¹ Procedurally generated content is create at the outset of a game (or “world creation”) and the placement of terrain and objects in the world are determined by an algorithm, rather than designed by a human (Short and Adams 2017).



Figure 2.2. A screen shot showing text chat in a Minecraft virtual world.

other, or dropping items for others to pick up. These interactions are simplistic compared to other platforms such as Second Life or World of Warcraft. One world could have each individual building on his or her own land plot, while another could have a communal space where everyone builds collaboratively.

As a private server for children with autism, anyone wishing to join must first complete an application to be added to the white list (See Appendix A). This application includes a declaration of having autism or being a friend or family member of someone with autism who plays on the server. Only those who have been added to the white list can access the server. Autcraft currently has more than 7,000 white-listed members with a daily average of approximately 50 players in-world at peak hours of the day and approximately 1,200 unique players logging in each month. Because the Autcraft server requires all chat activities to be in

English, most players are in English-speaking countries. This server has strict rules for behavior that are enforced both by software modifications and a group of volunteer administrators and “helpers.” There are important features that have been added via mods to the Autcraft virtual world, which I discuss in detail in Chapter 3.

Minecraft is different from other virtual worlds (*e.g.*, Call of Duty) in that the content can be geared towards children, with an official rating of PEGI in the United States. Common Sense Media rates the game as for ages 8+ with many of the reviews by adults warning parents not to let their children onto public servers (Chapman 2012). The controls and interface are accessible to a broad audience. Unlike virtual worlds such as Second Life, Minecraft does not require knowledge of scripting or programming to create objects in the world. However, Minecraft is more open than virtual worlds aimed specifically at children. There is an open text-chat and adults play and populate the public servers. Others besides Autcraft have created private Minecraft servers specifically for children, including Connected Camps (Salen 2017; Ames and Burrell 2017).

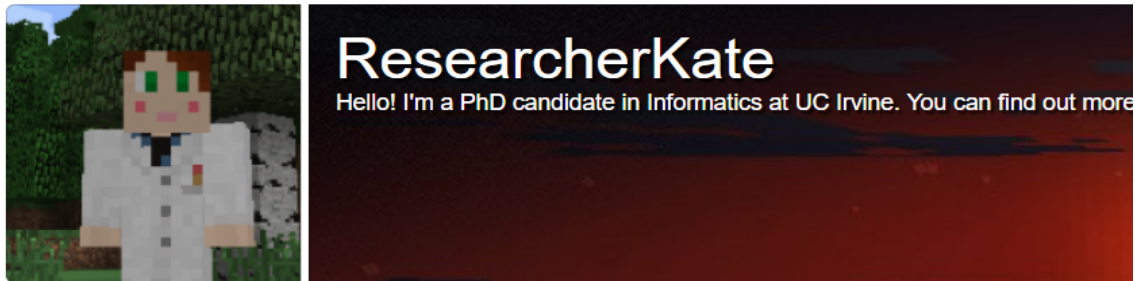
The Autcraft community uses a variety of social media and other technology. In conducting my ethnography, I soon discovered the importance of including the entire ecosystem of technology in my observations. Only by looking at the entire constellation of social media in the Autcraft community did I get a holistic view of how community members are engaging in various social play experiences. These technologies include: Minecraft, video, social networking sites, and the Autcraft community website. I detail these further in Chapter 3.






2.1.1 Motivation for Server Creation

The Autcraft community Facebook page states that Autcraft is “[the] first Minecraft server dedicated to providing a safe, fun and learning environment for children on the autism spectrum and their families.” Autcraft server expresses the goal of allowing players to play without the fear of being bullied. Generally, concerns of parents and caregivers about online safety range from children viewing inappropriate content to sexual solicitation (boyd *et al.* 2009). Cyberbullying (*i.e.*, bullying that occurs online) has raised new worries for many parents and educators. There is no consistent definition of cyberbullying, other than it is very similar to physical world bullying (Bowler, Mattern, and Knobel 2014; Mishna, Saini, and Solomon 2009; Levy *et al.* 2012). Cyberbullying can consist of activities such as spreading rumors, making derogatory comments, and making threats (Mishna, Saini, and Solomon 2009). I discuss and analyze these motivations for creating the Autcraft server further in Chapter 5.


2.1.2 Summary of Community Members

Community members consist of both children and adults—community members may or may not have a formal autism diagnosis, but all members have a connection to autism. Some of these community members are assigned roles. Administrators (*i.e.*, parents who have administrative power in-world), senior helpers (*i.e.*, select parents), and junior helpers (*i.e.*, select children) enforce Autcraft’s rules (See Appendix E). Administrators can be invisible in the game to monitor activity unobtrusively and to maintain the game without being bothered by other players. Helpers are both adults and children that have been selected by the administrators as being “responsible enough” for the position. Junior helpers are children, while senior helpers are adults on the server. In the main area, there is a board with all the current junior helpers, senior



-  Activity
-  About Me
-  Photos
-  Communities
-  Posts

Basic Information

Name:	ResearcherKate	User ID:	9712277
Gender:	Female	Joined on:	7 April 2014
Age:	-	Last seen:	ONLINE
Location:	United States 	Views:	177
Friends:	25	Posts:	70

Hello! I am a PhD Candidate at the University of California, Irvine.

You can find out more information about why I am here at:
<http://kateringland.com/minecraftstudy/>

Figure 2.3. Autcraft website "About Me" user profile page.

helpers, and administrators listed. As I will discuss further in Chapter 5.2, not all children’s parents have a voice or are active in the Autcraft community. The administrators and parents represented in my data are those who have the knowledge, means, and time to engage with and be caregivers of the Autcraft community.

While some community members have a formal diagnosis of autism and other do not (See Chapter 4.1.2 for further discussion), a wide range of the autism is represented in this work. However, those who can use text chat (*i.e.*, those who are literate and can type) are naturally going to be more heavily represented in my data. This may not always be obvious as some children who are “verbal” in the Autcraft community are not in the physical world. Other children in the Autcraft community never engage in the text chat and only use their avatars to engage in the virtual world and to communicate with others. As Thomas and Boellstorff have

theorized, a wide range and matrix of autism is seen here as in with autistic communities (Thomas and Boellstorff 2017). Therefore, this work is going to be more representative of those community members and I certainly do not purport to make sweeping generalizations about everyone with autism.

Demographic information is difficult to obtain. All members have a profile page on the Autcraft website (See Figure 2.3). Some members have populated the “About Me” section of these profiles. This information includes: name, gender, age, location, number of friends, user id, date joined, date last online, number of views, and number of posts. However, this information is not always provided, with profiles being blank or incomplete. Where possible, I have made note of any demographic information. Because this information is only provided in the community website, I did not have direct access to it while I was in the virtual world.

While some players only play on Autcraft, others also play on other servers not specifically dedicated to autism. In addition to playing on these larger servers, many players also have their own private servers for their family or also play in single player games. In fact, while on Autcraft, players will discuss leaving the server to go play on a “normal” server or in their own game for a while, usually to come back later.

2.2 Digital Ethnographic Approach

This work employs ethnographic methods established by other studies of virtual world communities (*e.g.*, (Nardi 2010; Boellstorff 2010; Pearce and Artemesia 2009; T. L. Taylor 2006)) (Boellstorff et al. 2012). I employed participant observation within the Autcraft community across the platforms used by the community (*e.g.*, Minecraft virtual world, social networking sites, website and forums, video streaming platforms) and interviews of community

participants. Conducting ethnographic fieldwork allowed me as a researcher to engage deeply with the Autcraft community. This afforded me the opportunity to not only capture extraordinary events as they happened in the community, but also, and much more importantly, the mundane everyday activity of the community. Having this deep understanding of the mundane is what gave me the ability to answer my research questions regarding the community's engagement in social play.

An ethnographic, participatory approach is relevant because of the nature of the community. Children are a vulnerable population and disempowered by their position in relation to parents, teachers, doctors, and, more generally, adults. Using a participatory approach allowed me to work closely with all the stakeholders (children and adults) to get a more representative version of the data. Likewise, this community is also disempowered because of their disabilities. Being a member of the neurodiverse community myself, I was sensitive to the needs and requests of community members. I have done my best to represent the community as they view themselves rather than as an objective researcher (employing a social model rather than a medical model of research).

Before conducting this study, I ran my own private Minecraft server and spent approximately 15 hours per month in the virtual world. I was familiar with implementing modifications (*i.e.*, “mods”) on my own server as well (See Chapter 3.6). During my ethnography, I also developed² mods for my own server. Therefore, I was familiar with the basics of running a Minecraft virtual world, creating and installing mods, and activities that are conducted within Minecraft.

² These were developed using programs written in Java and Python scripting (Guthals, Foster, and Handley 2015).



Figure 2.4. My Minecraft avatar in a white lab coat standing next to a pond in the Autcraft virtual world.

I gained access to Autcraft via permission of the server's creator³ for the purposes of this study and used an avatar labeled as a researcher in-world (See Figure 2.4). I intentionally styled my avatar complete with a "lab coat" in order to provoke questions about my presence. My goal was to be as transparent as possible, including reasons for the study and the types of data I would be collecting.

I access Minecraft mainly through my laptop computer. During 2015 and 2016, I also had access to a desktop computer, which I would also use because the hardware allowed Minecraft to run faster. When in the Autcraft virtual world, I used my laptop's built-in monitor and keyboard.

³ <http://www.stuartduncan.name/>



Figure 2.5 My home/office within the Autcraft virtual world, with a sign over the door.

I used an externally connected mouse. Occasionally, when I knew I would be online for several hours, I would use an external monitor.

Upon entering the Autcraft virtual world, I built a “home office” that community members could visit if they chose (See Figure 2.5). I introduced myself in the virtual text chat, with automated text also announcing my presence every time I logged into the world. I announced my presence and purpose to the community through both the Autcraft web-based forum as well as in the in-world chat. Community members could ask questions about the study through the forums or by visiting an in-world “home office.” Links to the Study Information

Sheet (See Appendix A) and the Recruitment Flyer (See Appendix B) were included in the forum posts, my signature on all communications within the Autcraft website, and my profile page on the Autcraft website. I informed parents of my presence via a parent message board and the Facebook page of the community. I also maintain a public website with postings of updates from the study, including any publications. I did not receive any negative feedback in response to the announcement of my presence and the study. Responses I received included questions such as, “So we just need to keep being our usual awesome selves?” and “How many years did/have you gone to school, and was it hard?” Throughout this ethnography, I maintained communication with the community regarding my research activity. I updated administrators and parents when relevant data was published. I also actively worked to create accessible media publications (e.g., blogs and social media posts), as well as maintaining a website⁴ as a “photo journal” that would be more accessible for community members than technical research papers. I will also be providing an electronic copy of this dissertation.

Table 2.1. Data Collection Methods

Data Collection Method	Data Type Collected
In-world observation	Chat dialog, in-situ interviews, field observation notes
In-world interviews	Semi-structured interviews, screen shots of interviewees builds
Participant observation in forums, social networking sites	Forum posts, blog posts, social networking site posts,
Directed forum posts	Responses on forums
Interviews via Skype	Semi-structured interview either via voice or text
Observation of video via YouTube and Twitch	Field observation notes

⁴ <https://virtuallyneurodiverse.com>

2.3 *Data Collection*

Overall, I collected a range of data from sources in the Autcraft community (a summary of my methods is in Table 2.1). In total I collected approximately 200 hours of immersive in-world observations, including participating in activities on the server, recording chat-based dialogue, and field-notes on everyday practices of community members and events as they occurred in the virtual world. I participated in community activities outside the virtual world, including observing discussions in the forums and on the social networking sites. In addition, I created informal focus groups on the online forums through prompts, including open-ended questions of the community through directed forum posts. I included digital artifacts from the various platforms used by the community in analysis. I collected these data over a period of 36 months and include approximately 10,000 forum threads, 150 blog posts, and 50 videos created by players, parents, and administrators.

2.4 *Data Analysis*

I used an inductive approach to derive the emergent themes from my data, following techniques similar to those employed in grounded theory (Charmaz 2006). I scrutinized observations and interviews and wrote analytic memos. I organized these memos initially through open coding. Through these preliminary codes, types of practices and meanings emerged, particularly patterns of common behaviors and situations around practices of social play. Additionally, through directed coding around the themes, I identified the dimensions and degrees of variation around these behaviors related to social play.

3

The Embodied Experience in Autcraft: Inhabiting a Constellation of Social Media Platforms

In this chapter¹, I examine the various infrastructures created and used within the Autcraft community. In continuance of Chapter 1, I unpack the concept of the embodied experience, exploring the diverse ways in which a person can experience embodiment in digital contexts. Through the lens of this digital embodied experience, I explore how the Autcraft community actively creates access to social play through the platforms they choose to use and modify. The central question of this chapter is: *where is the body in the Autcraft community?*

Collaborative systems, such as virtual worlds, have long been sites of adoption, adaptation, and appropriation. People with disabilities, in particular, have always found creative ways to pick up everyday objects—including information and communication technologies—to do the work of assistive devices. Indeed, many closed, proprietary, or heavily customized systems are often abandoned (Dawe 2006; B. Phillips and Zhao 1993) in favor of lower cost, less stigmatized, and more prevalent “mainstream” technologies that can be easily adapted to suit specific needs (Shinohara and Wobbrock 2011). The adoption and adaptation of Minecraft, along with other social media platforms, in the Autcraft community is one example of this practice.

¹ Some of the writing from this chapter is from or is inspired by the following previous published works: (Ringland et al. 2015; Ringland, Wolf, Faucett, et al. 2016; Ringland 2017; Ringland, Wolf, Boyd, et al. 2016; Ringland et al. 2017).

Computer games and virtual worlds have their own history of being hacked or modified by users, regardless whether they identify as disabled or not (Kow and Nardi 2010; Christiansen 2014; Consalvo 2007). Hacking might mean taking advantage of bugs in the game or breaking into the software code, while modifying alters the game's code (or adds to the code) to make changes to how the game performs. In some instances, the software companies discourage this behavior—especially when it is seen as cheating—while other companies encourage modifying the original game software in the hopes that the players will have a more satisfying experience (Consalvo 2007). On one end of the spectrum, for example, Blizzard has gone as far as suing to stop hackers from using their software code outside their sanctioned servers (N. Crenshaw and Nardi 2016). On the other end of the spectrum, the creators of Minecraft are known to be more liberal with their code, even in the terms of service, encouraging user to modify and take ownership of the game (Christiansen 2014).

3.1 The Embodied Experience, Social Media, and Individuals with Disability

Individuals with disabilities use the infrastructure of online spaces to socialize, among other activities—empowering themselves to do what they may not be able to in the physical world. Online spaces afford different embodied experiences than do physical spaces. As I discuss below, the various platforms and places that the Autcraft community inhabits allows for a variety of ways to interact and communicate. One type of mediated experience is not better (or less mediated) than another. Rather, these experiences, from face-to-face to text to avatars on a computer screen, are diverse kinds of embodied experiences. Horst and Miller frame these mediated experiences in terms of digital technologies:

"there is no such thing as pure human immediacy; interfacing face-to-face is just as culturally inflected as digitally mediated communication, but ... we fail

to see the framed nature of face-to-face interaction because these frames work so effectively. The impact of digital technologies, such as webcams, are sometimes unsettling largely because they make us aware and newly self-conscious about those taken-for-granted frames around direct face-to-face encounters" (2012).

As stated above, people do not see the mediated nature of face-to-face interactions because they are effective (Goffman 1959). However, as members of the Autcraft community demonstrate, for some people these face-to-face interactions are not as effective as digitally mediated interactions. In this chapter, I expand Horst and Miller's work with webcams to a variety of sociotechnical platforms chosen by the Autcraft community—such as social networking sites, video sharing platforms, and a Minecraft virtual world. Another way of understanding the differences in the variety of mediated experiences is to look again to the disabled embodied experience I explored in Chapter 1. While members of the Autcraft community may find face-to-face interactions disabling, the interactions they experience in certain digital environments—for example, through their avatars in Minecraft—are not disabling. These community members have turned to other types of mediation, that are more comfortable and effective for them. At the end of this chapter, I return to this idea of disabling embodiments in more detail. In the following section, I explore the embodied experiences available in the Autcraft community.

3.2 Appropriation of Assistive Technology

Noting the challenges to adoption and widespread dissemination, assistive technology researchers have called for new ways to augment existing systems, such as using lightweight browser plugins instead of expensive screen readers (Bigham, Prince, and Ladner 2008), alternative and augmentative communication software built into “off the shelf” tablets (Naftali and Findlater 2014) in place of expensive (and typically more robust) assistive devices, or

repurposing commercial products for unintended uses (Fiannaca, Apostolopoulous, and Folmer 2014; Folmer and Morelli 2012; Ringland et al. 2014; Tsai 2012).

Going one step further, others have advocated for and tested the feasibility of those with disabilities developing their own assistive devices (Hurst and Tobias 2011; Kane et al. 2014). As Hurst and Tobias (2011) have suggested, the ability to Do-It-Yourself (DIY) or appropriate “off the shelf” commercial products to create assistive technology may improve the quality of experience with those devices and software. Users adopt, adapt, and augment technology in ways designers do not envision to support needs that have not been fully understood or anticipated (Dix 2007). Often, this kind of appropriation takes mainstream or “off the shelf” technology and changes it to suit the needs of those who have differing abilities (Hurst and Tobias 2011; Wobbrock et al. 2011).

Appropriation covers many activities, during “*which technologies are adopted, adapted and incorporated into working practice,*” including customization, modding, and simply using artifacts for different purposes than originally designed (Dourish 2003). This phenomenon fosters psychological satisfaction from exerting control and expressing ones’ sense of identity (Marathe and Sundar 2011). Appropriation can lead to an empowering experience for youth (Carroll et al. 2001, 2002) and people with disabilities (Hurst and Tobias 2011), who often inherently feel disempowered.

The assistive technology community has long addressed how to make technology accessible and supportive for people with disabilities. These efforts have sometimes been addressed through the concept of “Universal Design,” an approach towards design for the largest community possible (Meiselwitz 2010). However, designing too broadly has been associated with low acceptance and high abandonment of assistive technologies in particular (B. Phillips

and Zhao 1993). On the other hand, designs that are too specific are often costly to produce and can result in a very small market (Hurst and Tobias 2011; Scherer 1996). The DIY space offers an alternative (Hurst and Tobias 2011; Rajapakse et al. 2014). However, these efforts to date have largely focused on physical supports. Translation to less tangible forms of assistive technology (*e.g.*, commercial software) may be challenging (Draxler and Stevens 2011).

Appropriation of “mainstream” technologies can also be helpful in reducing the stigma associated with assistive device use, an additional barrier to long-term adoption (Shinohara and Wobbrock 2011). Stigma can result from aesthetically ugly devices, misunderstandings about an individual’s ability, or social isolation for being marked as disabled (Shinohara and Wobbrock 2011; Faucett et al. 2017). Thus, many people have pushed for appropriation of so-called “mainstream technologies” that look like ordinary devices or even like elite products but act like assistive devices (Dix 2007). For example, by using iPhones rather than custom Alternative and Augmentation Communication (AAC) devices, children with speech delays can move from the stigmatized “other” with a special device to the “cool kid” with their own iPhone (Alper 2017). These efforts can also improve the technological experience for people without disabilities. For example, the effort to standardize and introduce a consistent experience across the web, unintentionally made web browsing more accessible for everyone (J. T. Richards, Montague, and Hanson 2012). However, caution must be taken when using mainstream devices as assistive technology because mainstream devices lose their ability to signal to others that an individual may need assistance (Profita 2016; Faucett et al. 2017). In the case of the Autcraft community, people (especially stakeholders such as parents, therapists, and educators) might view Minecraft as a game or virtual world—something that is stigmatized as being a lazy, anti-social leisure

activity or even potentially addictive—rather than viewing the added dimension of assisting and supporting sociality.

3.3 *Previous Research of Social Media for Individuals with Disability*

For scholars, our understanding and definitions of disability impact the research conducted in the space of social media and games for individuals with disability. Broadly, social media uses online software applications to mediate the communication between people (Walther 1996). This section covers social media that includes social networking sites, messaging (including email and instant messaging), blogs, forums, as well as virtual worlds and digital games (Fuchs 2017).

In the field of HCI, using a medical model framework (See Chapter 1.3), research has mainly focused on the potential benefits and disadvantages of social media, with an implication that these systems are making up for the deficits of the disabled individual user. These works do show the ways in which disabled users may or may not use social media and shed light on some of the reasons why. Burke *et al.* found through interviews that computer-mediated communication was especially beneficial in helping autistic users initiate communication, but problems occurred once initial contact had been made (2010a). Issues of trust, disclosing personal information, and understanding the norms of the social platform made online socialization difficult (M. Burke, Kraut, and Williams 2010a). Mazurek *et al.* studied adults with autism and their social media use, finding a majority used the social networking sites for social connections, as opposed to other activities such as reading the news or playing games (2013). As in the Burke *et al.* study, Mazurek *et al.* found that social media users with autism appreciate the affordances of electronic media (*e.g.*, not having to interpret facial cues). Despite potential

drawbacks and challenges, scholars have also found that those with disabilities—particularly, individuals with autism—often tend to be at the forefront of adoption and use of new technologies and these pioneering users can show the potential uses of new technologies (Pinchevski and Peters 2015).

Use of social media can empower and increase independence for those with disabilities, but this is not a universal experience. In a literature review, Stendal found 38 out of 54 articles about social media and virtual world use by individuals with disabilities were focused on inclusion, exclusion, and empowerment (2012). A scholarly focus tends to be on what technology may do *for* individuals with disabilities, with an emphasis on how the technology acts to support the disabled user. Researchers place much less emphasis on understanding disabled users' relationship *with* technology—how a user feels about or acts to change their technology. Carr states that this leads to the “inadvertent propagation of an ‘impairment as problem/technology as solution’ dynamic” (2011). This is exacerbated when individuals with disabilities are offered children’s version of software because it is simpler to use, but can infantilize the user (Näslund and Gardelli 2013). Social media can empower individual users and create a sense of agency, but as Disability Studies scholars have noted, the tendency to infantilize disabled individuals can have far-reaching negative consequences (Luborsky 1994). Young adults and adults with disability need access to age appropriate, yet still accessible technology to enjoy the same privileges as others who can easily access these social media technologies.

Overall, youth are spending more time socializing online, including youth with disabilities (Söderström 2009). Social media, including blogs and forums, are useful as supports, connection to others in similar situations, and advice for individuals who may not have access to such support in the physical world (Stendal 2012). Söderström interviewed young adults with

varying disabilities about their online and offline social ties and found that patterns of social ties appeared different in youth with disabilities (2009). The offline and online social ties tend to be more blurred together for these users, with less stark contrast between online and offline interactions. This is not surprising given the trend for more youth in general to socialize online (Itō et al. 2010; boyd 2014). Young adults with disabilities may rely on social interactions in virtual spaces more than other young adults; meaning an understanding of how disabled youth interact in these online spaces is becoming increasingly important for scholars, caregivers, and the youth themselves.

3.3.1 Virtual Worlds and Multiplayer Digital Games

While not always included in the category of social media, virtual worlds and multiplayer digital games² do much of the same work as other social media. Social media, including virtual worlds, have the potential to be social spaces, where users have the opportunity to interact with one another. The type of interactions available on the platform can impact how a user engages with that platform, which can be compounded with marginalized users (Haimson 2018). Communication occurs through both visual and auditory channels, with virtual worlds adding the potential to have more three-dimensional embodied interactions with the user's avatar. For those with disabilities, "virtual worlds offer the possibility of communicating through both text and voice, communication can become less of an obstacle while interacting with others" (Stendal, Balandin, and Molka-Danielsen 2011). Text-based virtual worlds, such as MUDs³, may be

² For the rest of this document I will refer to both virtual worlds and multiplayer digital games as virtual worlds. While there may be some technical distinctions between the two genres, for the purposes of understanding for this work, they are fairly equivalent.

³ MUD is a text-based multi-user dungeon (Dibbell 1998b).

simpler than some other social media with graphical user interfaces—Facebook, for example, has the ability to incorporate photos and video—blurring the lines between these different embodied interactions found in virtual worlds and other social media.

Researchers have conducted limited work on virtual world community members with disabilities. However, scholars have explored both how virtual worlds can allow users to set aside specific spaces (places within the virtual world) for themselves and their community, as well as allow for experimentation with various embodied interactions within these spaces. Second Life is one heavily studied example of having the infrastructure needed to create individual areas for communities. Boellstorff mentions disability in his ethnography of Second Life, finding disability was mentioned particularly when it affected the user’s ability to use the interface (*e.g.*, typing slowly) and that otherwise, most avatars of disabled users were indistinguishable from able-bodied users (2010). Stendal *et al.* found people with disabilities can use virtual worlds to meet new people “on their own terms” where they can be “in control of the situation” (Stendal, Balandin, and Molka-Danielsen 2011). For instance, Second Life has an entire island (*i.e.*, a space set aside within the virtual world) dedicated for users with autism, which is similar to the Autcraft community virtual world (Irani, Hayes, and Dourish 2008).

Virtual worlds also offer an opportunity for those with disabilities to experiment with their avatars, living both real and fantastical experiences online (Stendal, Balandin, and Molka-Danielsen 2011). Users have the choice of whether their avatar has the same disability that they do (*e.g.*, avatar using a wheelchair). Carr found with Deaf users in Second Life that disability is recreated in virtual worlds through discourse and activities (2011). This gives users the chance to escape physical world discrimination and constraints or to play with varying identities, whether those identities have anything to do with disability or not. Individuals with disabilities can

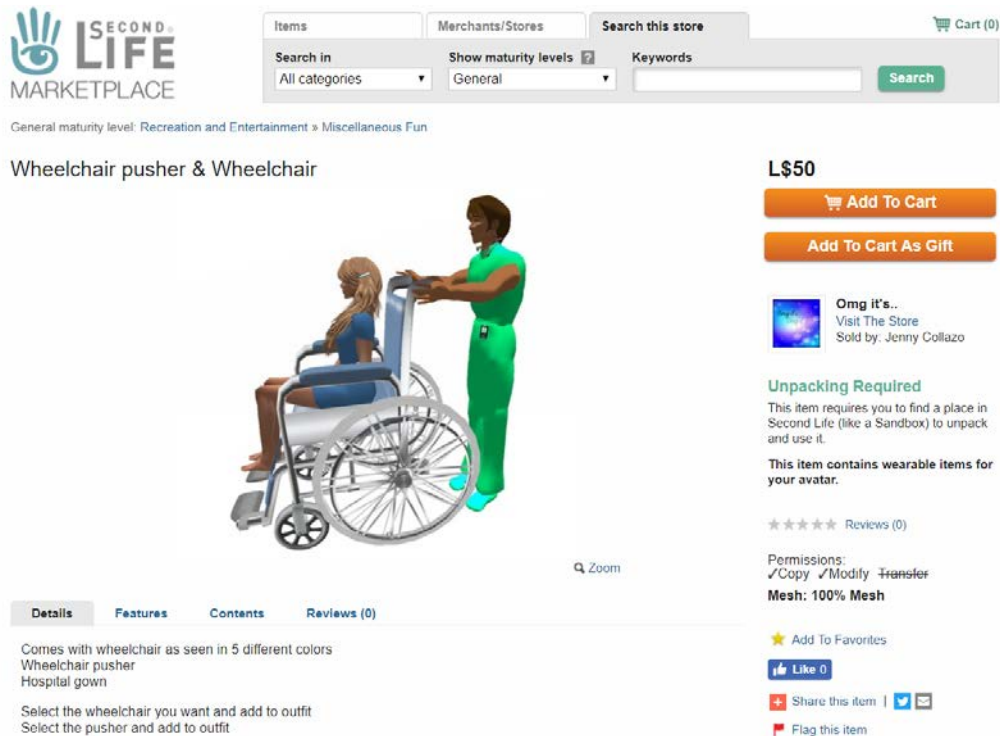


Figure 3.1 Screen shot from Second Life Market Place for a wheelchair and wheelchair pusher.

experience social interactions virtually that might not be available to them in the physical world (Stendal, Balandin, and Molka-Danielsen 2011; Boellstorff 2010). Users may want to express their identity within the virtual world as having a disability, which are available in some virtual worlds (e.g., Second Life, See Figure 3.1). While there is the opportunity to embody an able-bodied avatar, likewise, there is the ability to embody an avatar with a disability. Mainstream game developers have begun including disabled avatars (both playable and those characters a player interacts with) in their game content (Cullen, Ringland, and Wolf 2018).

Despite a focus on the medical model framework, research has shown that social media has the potential to empower individuals with disabilities. Interfaces open up access to interactions and information previously difficult or impossible to obtain. Social media, especially virtual worlds, allow users with disabilities to play with and perform identities in ways

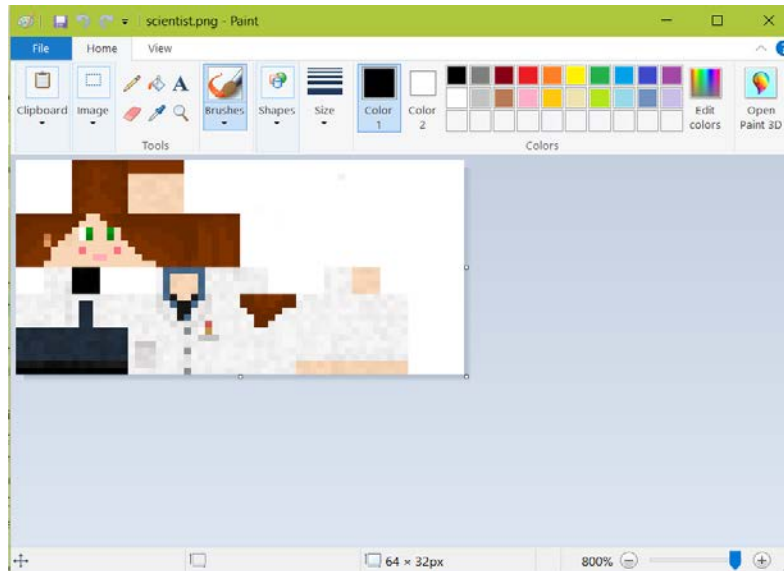


Figure 3.2 Editing my Minecraft avatar in Microsoft's Paint program.

previously unavailable to them. In the next section, I discuss the embodied experiences of these various social media for members of the Autcraft community.

3.4 *Exploring the Embodied Possibilities in Autcraft Community*

There are various kinds of embodiment, as discussed in Chapter 1, throughout the community that allow Autcraft community members to perform aspects of their identities. Predominantly, the avatar is the representation of community members; this is what is seen by other players and interacts in the Autcraft virtual world. The avatar is a blocky humanoid figure that can be edited in appearance through software such as Paint (See Figure 3.2). Pre-made avatars are available online through searchable databases (*e.g.*, Skindex⁴) (See Figure 3.3). While the shape of the avatar is fixed, players can design with a variety of colors, allowing them to be more than human—from a bear or mermaid (See Figure 3.3) to a blue humanoid (See Figure 3.4). Other scholars have pointed to some of the problems with these databases (*e.g.*,

⁴ <http://www.minecraftskins.com/>



Figure 3.3. A screenshot of the Skindex website displaying the daily top skins available for download.

underrepresentation of women and people of color), particularly for players of color who are looking to represent themselves in the virtual world (Ames and Burrell 2017). For individuals with disabilities options for representative avatars is limited. All avatars are bipedal and objects, such as wheelchairs, are currently not available. Individuals can also represent themselves through their profile pages and usernames on the website and social media, through their voice or video recordings of their physical world bodies in video streaming and YouTube, and through their own bodies when meeting face-to-face in the physical world.

These various representations of an individual's identity are given continuity by stability in their username. A user chooses their own username⁵, which is linked via the Minecraft Mojang account that gives access to an individual's copy of the Minecraft game. These

⁵ All usernames in this manuscript are pseudonyms.



Figure 3.4. An avatar with blue skin, black eyes, and a glass helm.

usernames are used across multiple social media platforms. For example, a parent may comment on a Facebook post in the Autcraft community, “*My son (Piratescurse) really enjoyed the event today.*” Referencing the Minecraft username helps to create continuity across the platforms. However, this username can be altered every 30 days; a feature added by Mojang in June 2014. When this feature was originally added, it led to some confusion for Autcraft community members. Some of the members, particularly younger ones, tend to change their names frequently. This is perhaps linked to the more fluid identity of younger individuals (Grotevant and Cooper 1985). Autcraft administrators implemented new rules (*e.g.*, list old usernames on the public profile) to help maintain the continuity of the community members’ names. Through usernames and avatars, Autcraft community members can engage in a variety of embodied experiences across the community’s platforms. In the next section, I describe the infrastructure of the spaces where these engagements take place.

Table 3.1. The different "layers" of environments that affect access to play in the Autcraft community.

Physical	Computer hardware, physical space
Liminal	Software configuration, Authentication and Subscriptions
Virtual	Minecraft, Social Networking Sites (<i>e.g.</i> , Facebook, Twitter), Video (<i>e.g.</i> , YouTube, Twitch), Autcraft community website

3.5 *The Infrastructure of the Autcraft Community: A Constellation of Social Media*

The Autcraft community uses a variety of social media and other technology to actively create access to social play. By looking at the constellation of social media in the Autcraft ecosystem we gain a more holistic view of how community members are engaging in various social play experiences. These technologies include: Minecraft, video via Twitch and YouTube, social networking sites (*e.g.*, Facebook, Twitter), and the Autcraft community website.

Access to the Autcraft community happens through three layers of environments: physical, liminal, and virtual (See Table 3.1). The physical space includes computer hardware and the environment in which the computer is accessed (*e.g.*, bedroom, home office, computer lab in the library). The liminal space includes how the software is installed and configured and user authentication. Finally, the virtual space includes the various social media, which is the main focus of this dissertation. Because of the nature of my ethnography being entirely online, I could only infer some of the ways community members were gaining access, with regard to the physical and liminal spaces, through their own records of these activities within the virtual space.

3.5.1 Physical Space

The physical space is one that includes the physical environment, the computer hardware, and the internet connection needed. How the physical space is configured is one of several points of creating access to social play for Autcraft community members. In fact, for many individuals with disabilities, this is the first point where access can be limited or denied (*e.g.*, mobility impairment prevents someone from interacting with the interface or a visual impairment prevents accessing visual content). Despite the Internet and social media being empowering spaces for disabled individuals, if they cannot gain physical access, they will lose the opportunities afforded to everyone else. Ellcessor states, “digital media cultures take for granted an able-bodied user position” (2016). Assuming one mode of interactivity (*e.g.*, only visual or only auditory) creates disability in other users who are unable to interact in that way (Ellcessor 2016; Baldwin et al. 2017; Carr 2011).

The physical environment and access to Minecraft poses several different challenges for autistic children—both because they are autistic and because they are children. First, as children, they are often not in control of their physical computing setup—particularly younger children who do not yet have the privilege of their own computers or devices. To further complicate this, families that include individuals with disabilities often live in poverty, further constraining their access to technology (Fujiura and Yamaki 2000). For example, one parent posted in the forums,

“Sadly, it will be just one at a time since we only have one computer semi-capable of handling Minecraft. :(My other computer is from like 2004-ish and I can barely play a game on Facebook with it. But, we will have fun and it will be a lesson in sharing for both of us!” (Autcraft forums)

This means that these children must use the family computer, often out in an open space. This also means they might not have permission to use the computer whenever they desire, being

relegated to times when parents tell them it's okay to play or when their siblings are not using the device. This varies from home to home, but is not questioned when discussed online. A child might say they have to get off now because their older sibling needs to do their homework or that their hour is up. This is met with fond farewells, with everyone understanding why the child must leave. How and when a child gets access to a computer must be negotiated within each family. Parents often struggle with how much “screen time” to give a child (Hiniker, Schoenebeck, and Kientz 2016), but with autistic children this is complicated by media and experts concerned over the so-called “addiction” to games as a medium (Kardaras 2016; Micah O. Mazurek and Engelhardt 2013; M. O. Mazurek and Engelhardt 2013; Alper 2014) and by the child's desire to engage in the virtual world, potentially leading to issues such as temper tantrums and meltdowns (Hiniker et al. 2016).

Another important consideration in the physical setup of Minecraft access are the various sensory concerns for those with autism. This includes adjusting the hardware so that it is a more comfortable setup, including dimming or brightening the screen, adjusting the volume of the audio, and even adjusting the brightness of the lights within the physical room. This physical setup is often mirrored by similar adjustments in the Autcraft virtual world. For example, a child digs a hole in the ground with their avatar to make the screen go black (as opposed to simply turning off the screen). This example shows the analog-digital divide in their play is not as stark or as obvious as one might think—a user moves more seamlessly between and through the two. Creating access happens concurrently across the physical and digital environments. Community members fluidly move from one space to another and simultaneously experience embodiment in all of them.

3.5.2 Liminal Space

The liminal space between the physical and virtual environments proves a source of contention and access to the Autcraft play space. Liminal space is a concept meaning the transitional space between two states of being or the threshold between two spaces (Martinez 2011; van Gennep 1960). The liminal space, in this case, is a distinct space between the physical space and the Autcraft virtual space, a place where critical infrastructure is set up and the software for the virtual world is maintained. This liminal space includes the software, user accounts, and the computer system setup. In the liminal space, one does not necessarily occupy a body as they do in the physical world or virtual world, but nevertheless play still occurs (*e.g.*, overclocking, or running the hardware faster than it is certified to go, or “playing” around with software settings).

The software for Minecraft⁶ can be downloaded any number of times to compatible devices with a valid user account login. For some children, this means they have their own account (with their own screen names) and for other children they must share the account with a sibling or parent. Children and parents negotiate and decide where to spend their resources to create access to Minecraft while balancing other priorities in the family—including rules about how much time a child can spend on the computer, how much money a family can afford to spend on access to the game, and the needs of other family members. This becomes more than a simple question of access to game play, but a negotiation over the shared environment and individual values to gain access to the Autcraft community.

⁶ Buying a license for the Minecraft software costs \$26 USD at the time of this writing.

Welcome to AutCraft! This server is an *English language only*, white-listed server. We strive to give each player a comfortable and safe place to play Minecraft no matter what their ability.

Waiting time for assessment of applications is currently 2 weeks, due to recent increased interest in our server. When applying for family members with different usernames, please complete a new application for each, remembering to log out of your enjin account after every submission. Otherwise, you will not be allowed access to a new application.

Computer version ONLY, either Mac or PC. XBox and mobile (smartphone/tablet) will not work.

Please keep in mind that this server is **free to play** but that means that we rely on the support of generous people who are willing to spare a little to keep Autcraft running. By becoming a patron, you ensure that children all around the world will have free access to our server.

Please consider becoming a patron at <https://www.patreon.com/autismfather>

IMPORTANT: Many applications are rejected due to lack of response to comments left during assessment. Please remember to log into your Enjin account frequently and check your notifications for comments added to this application. Assessment waiting time may increase, depending on how promptly our questions are answered!

About the applicant

These questions are meant to help us get to know the player. Please answer these questions from their perspective.

Name

Minecraft Username (*not the email address, must be for the computer version of the game*):

This can be found at minecraft.net if you don't know it. We need separate applications for each family member using different user names.

Age of player

Value: 0

Email address

Who has autism in your family?

Have you ever played on other servers?

If yes, what servers?

Figure 3.5. Screen shot of the top of the Whitelist Application from Autcraft community website.

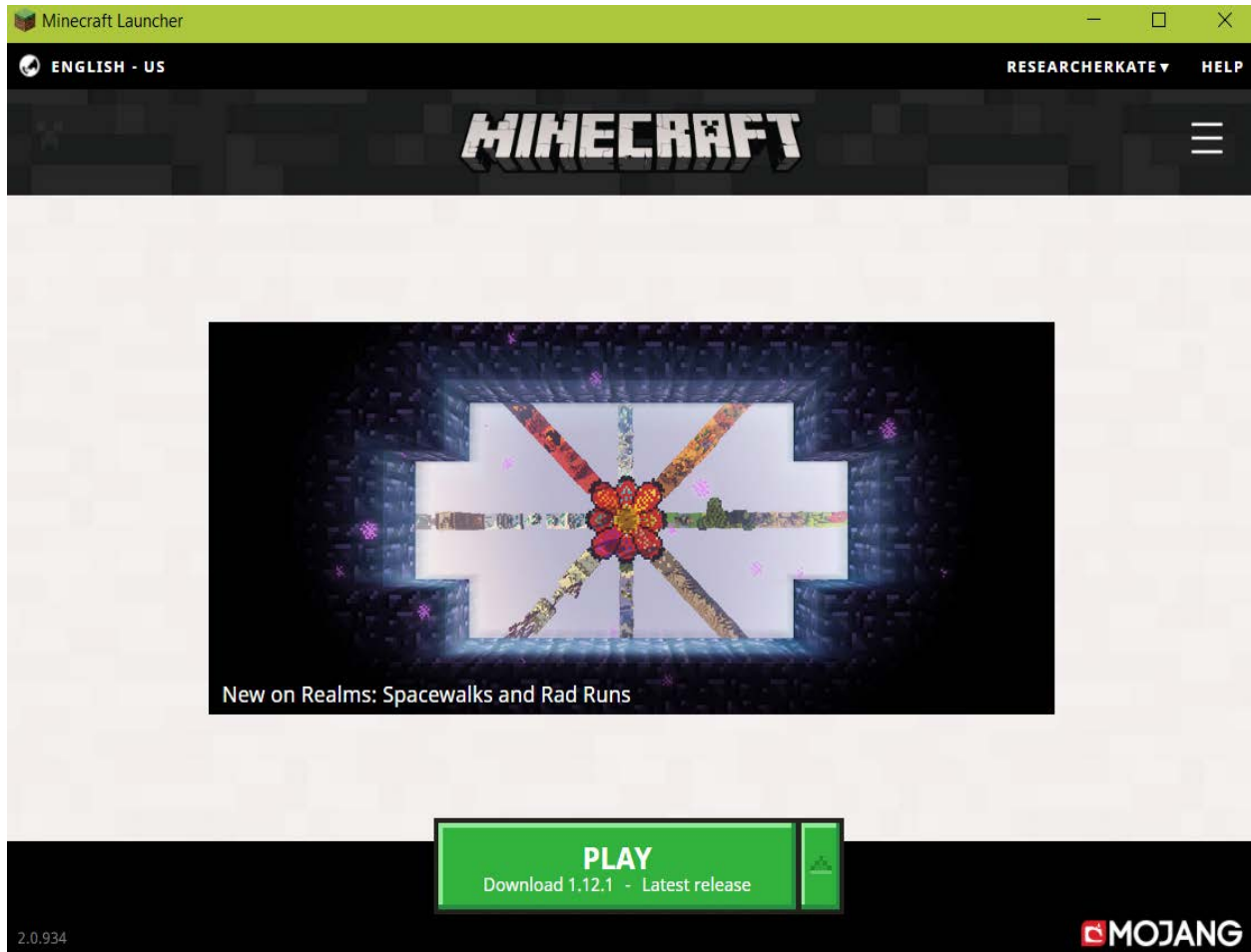


Figure 3.6. Screen shot of the Minecraft Launcher after successful login. From here the user selects the version of Minecraft they wish to play.

After obtaining a license to download and play on the Minecraft software, the next point of access for community members is to join via the application on the website, which requires that an individual have a valid email address linked to a Minecraft account. The application consists of several questions, including “Who has autism in your family?”⁷ (See Figure 3.5). The wait time for application processing, as of this writing, was approximately two weeks. This wait time is because a small set of administrators are in control of the whitelist and, as they are volunteers, it takes them time to go through the applications. Setting up access to the server

⁷ For a full list of the whitelist application questions, see Appendix F.

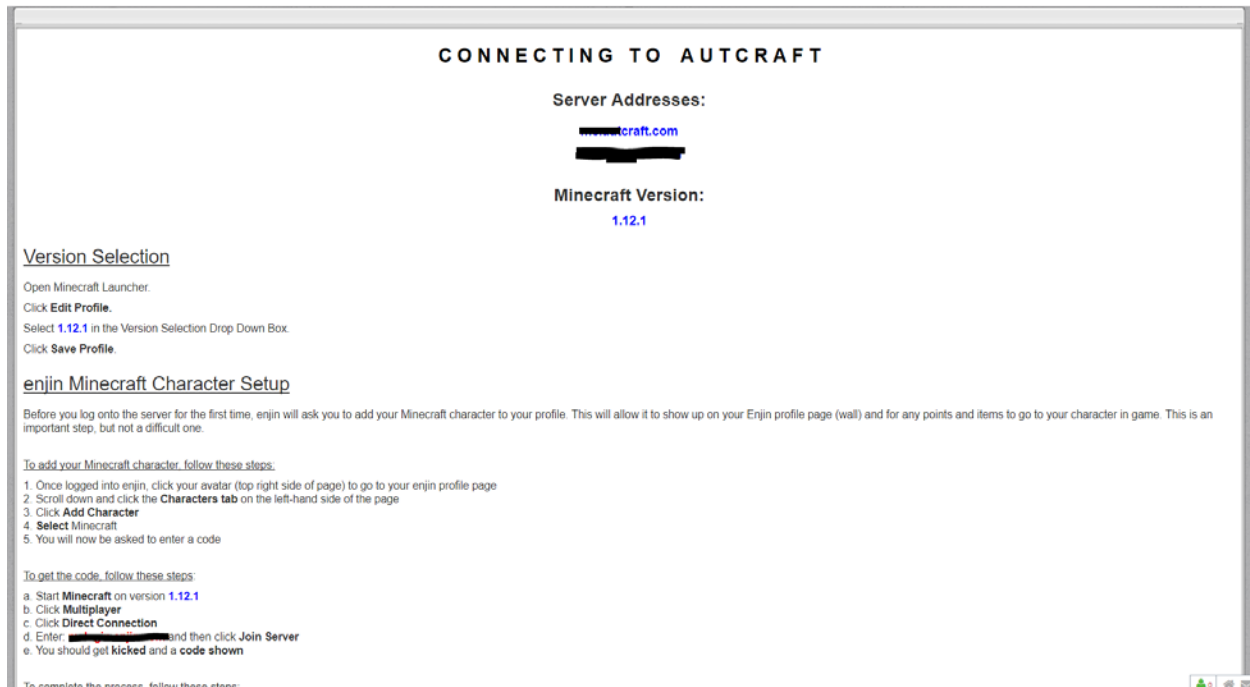


Figure 3.7. Screen shot from Autcraft website with directions on how to connect to the Autcraft virtual world. (Information intentionally redacted for privacy.)

requires multiple steps after the member has been accepted into the community (See Figure 3.6).

Challenges include ensuring the right version of Minecraft has been selected and installed (See Figure 3.7), dealing with virus protection and firewalls that might prevent the software from accessing the internet, and configuring the operating system to run Minecraft smoothly. These challenges are faced by caregivers and children of the community—those responsible for maintaining the software and hardware needed to run Minecraft and access the other platforms of the Autcraft community.

Through a computer with an internet connection, a child can access the full version of the Minecraft software. While there are mobile editions and console editions of Minecraft, the Autcraft virtual world is only supported through the computer version. However, for children with limited access to a computer, they may also access the chat functionality of the virtual world through third-party mobile applications. These applications log a user into their account

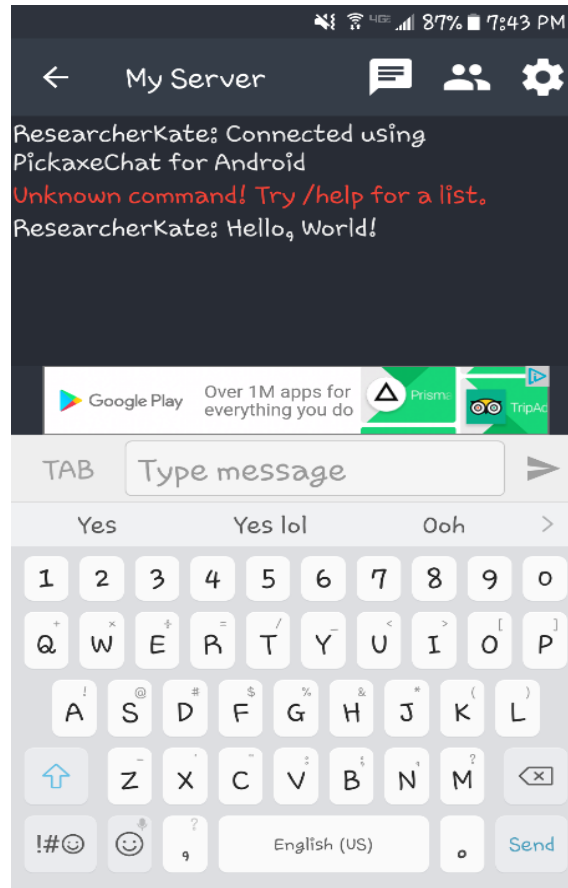


Figure 3.8. A screen shot of the chat app for mobile devices.

and their avatar appears in the virtual world. When using these applications, the user cannot move their avatar or even see the virtual world, except for the text chat (See Figure 3.8). In this way, they and their avatar embodiment are caught in the liminal space. When a user connects to the virtual world with this application, community members will often signal they are using the mobile application and the server announces in the chat channel:

```
<(JrHelper) fuzzybear> Brb, getting on minechat
<ABC2> aww.. sad face
[CHAT] fuzzybear left the game.
[CHAT] fuzzybear joined the game.
<(JrHelper) fuzzybear> connected with an iPhone using MineChat
<(SrHelper)FrostedCakes> hello bear on an iphone.
```

This allows community members to participate in one aspect of the virtual world play, even if they do not have access to the full Minecraft game. Community members learn about these other access options from each other. Following is an excerpt from the chat log in the Autcraft virtual world where community members discuss “minechat”:

<(Donator) dancer> whats minechat?

<RegisteredU> dunno

<RegisteredU> probably a chatroom about minecraft

<(JrHelper) fuzzybear> It's an app which you use to connect to servers on a phone or tablet

<(SrHelper) ParentDigger> it just means he will be in game on his phone

<RegisteredU> oh

<(Donator) dancer> errnm ok

<(JrHelper) fuzzybear> You can chat, but you can't control your avatar

Using these applications to engage in the virtual world show that the child is willing to have some engagement in the virtual world play, or at least the social aspects of this play, rather than none at all. Perhaps given the response from one of the children, “*errnm ok*,” the benefits are not necessarily obvious. A child using the minechat application accepts disabling their avatar to have the ability to engage in some form of social play, rather than have no access at all.

For parents who are able to afford (financially, the energy required to set up, and time) to give their child access, they must also “buy in” to the Autcraft experience—that is, they believe that Autcraft is a valuable place for their children to be spending their time. Much of the parent and child’s time is consumed in work, school, and various therapies to help support the autistic child. What little time is left for free play is especially precious. Some parents admit trepidation about allowing too much “screen time” or not understanding the technology or game enough to make informed decisions about their child’s access. A whole Autcraft forum is dedicated to

helping parents navigate the Autcraft space, while another entire forum is dedicated to solving hardware and software issues. These online forums become almost as important as the virtual world itself. Both children and parents use them to gain the knowledge required to gain entry to the virtual world, which can be intricate and in-depth. This knowledge spans hardware and software set-up (including how to add mods and understanding IP addresses) to the social rules needed to navigate the social play within the community.

3.5.3 Virtual Space

The virtual space is the place of digital embodied interaction. This includes the environment of Minecraft inside the Autcraft virtual world, videos, social networking sites, and the Autcraft community website.

Autcraft Virtual World: An Instance of Minecraft

Within the Autcraft virtual world, there are different “worlds” that can be accessed via a portal system, similar to “islands” in Second Life. Each of these worlds have different purposes and rules. These separate worlds within the larger Autcraft virtual world allow for players to engage in a variety of activities. These spaces serve as meeting places, areas for building, and a means to go on adventures with other players. Some of these places include: Spawn, Mini-Games, and Villages.

Spawn. The area where players arrive when they first access the virtual world is the starting area, commonly referred to as the “spawn” (See Figure 3.9). This is the area where all the current administrators, helpers, and Player of the Week are displayed. Portals to all the other areas players can access in the virtual world are found in the spawn area, the entryway of the



Figure 3.9. Building in the Spawn area including the initials 'AC' for Autcraft and water fountains.

virtual world. The Spawn area acts as the “passageway” from the liminal space into the virtual world.

Mini-Games. Small, enclosed games or mini-games are group activities that players can choose to take part in within the virtual world. These games have their own arenas that players can access by teleporting through a portal found in the starting area (See Figure 3.10). Mini-games include: Paint Ball, Hide & Seek, Wither Battles, Parkour, and Spleef. In each of these areas, when the player teleports to the arena, players are given the equipment they need to participate in the game.

One of the more popular mini-games is Hide & Seek, an extension of the classic “hide and seek” children’s game. In this alternate version, hidere that have been caught by the seeker

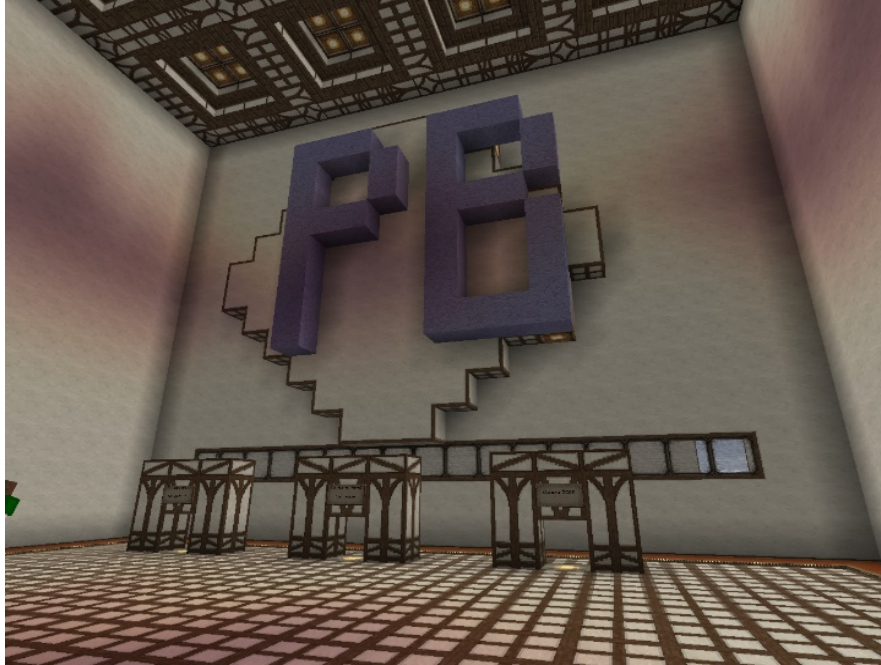


Figure 3.10. Entrance to the Paint Ball mini-game.

also become a seeker. This allows players to continue playing even after they have been found. In addition, players call out taunts (or hints) to the seeker as time begins to run out to give the seeker a fair chance to win. For instance, a player might say, *“I can’t believe I haven’t been found yet. I’m very near the rose bushes!”*

Player Houses. In the Peaceful Survival World (as opposed to other areas where building is not permitted or only temporary), players can build their houses anywhere outside of the administrator created village as long as they are at least 30 blocks away from other players’ claimed space. Administrators can “protect” player created houses when a player claims the location as their own. Once a house is protected, only designated players (*i.e.*, owners) can add or remove blocks in that area. This protection feature is not available in the original Minecraft software, but is a mod that the administration selected when creating the server.



Figure 3.11. Community member shop under construction.

Villages. Villages are large, public community sites (See Figure 3.12). These can be used by everyone, but cannot be altered by players (*i.e.*, players cannot place or destroy structures in these spaces). Villages include many different kinds of buildings including: hotels, banks, schools, churches, libraries, reading spaces (including outdoor reading gardens), general stores, court houses, and jails (See Figure 3.11). These serve as common meeting grounds for players to engage in various activities.

Players can also form groups through the forums and in-world chat to create their own community spaces. Players have made villages of their own where each member has a house and as a group, they have created other buildings, such as cafés or other places to be together. One player made a “*Hang Out Place*” with a dance floor, cooking area, horse swimming center, and



Figure 3.12. Aerial view of a permanent village that can be transported to from the Spawn.

lounge chairs. As noted on a sign left by the space’s creator, “*No killing horses is magior,*” meaning that not killing horses was a “major” rule for that communal area (See Figure 3.13). The rules of these areas are made by the “owners” (*i.e.*, children who have laid claim to a particular portion of real estate). Children who are playing in groups work out the rules and then help each other enforce these rules. As above, rules might be posted on signs in the area, but they are also discussed and reinforced in the chat window. In fact, most of rule creation and enforcement happens within the chat. If children cannot agree on the rules or a player is not adhering to the policies (and the other children’s input) in the space, an administrator (*i.e.*, an adult) is called in to help resolve the matter – much like group play in the schoolyard. The administrators try to coordinate themselves so there is one online at all times, although there are times when no



Figure 3.13. Horse Swimming Center rules posted next to the pool.

administrator is present. These community places also serve as spaces for communal events to take place, such as firework displays, which I revisit in Section 3.7.1.

Video

Autcraft community members use two main outlets for creating and publishing video content: Twitch⁸ and YouTube. Twitch is a live-streaming video platform used for streaming video game content while the user is playing (MacCallum-Stewart 2014). Members use this platform to stream live videos of their activities within the Autcraft virtual world. Other Twitch users can search for the Autcraft keyword or find users by username to watch the desired community related content. Live stream videos are meant to be watched in the moment, but are occasionally recorded. Videos recorded and published on YouTube are generally edited before publishing, including title screens denoting the player's username and video title. YouTube

⁸ <http://twitch.tv>

videos are shared with other Autcraft members through the community's website. This also included the founder's TED talk about Autcraft, which is widely shared throughout the community.

Members follow the example of others they have seen in creating their own videos. For example, one popular Minecraft YouTube channel for children named Stampy⁹ has over 8 million subscribers ("The 12 Best Kid-Friendly Minecraft Channels on YouTube" 2016). Children then emulate these videos, through content such as "Let's Play." "Let's Play" are edited videos of players playing through a video game, giving viewers a first-person experience of playing the game and are popular way to share gaming experiences in many games, including Minecraft (Nguyen 2016). I made note of one such video in my field notes:

One community member, age 12, created a YouTube video of himself building in Autcraft. He opens the video saying, "Hello, today I am going to continue building my house in Minecraft and talk to you about bullying." During the 15-minute video, the creator continues working on his home in Autcraft. He builds a bridge across a river, explaining his actions along the way. "I will make this bridge 6 blocks wide. And put supports in the water like this..." In between demonstrating to the viewer how he is building the bridge, the creator is explaining what it is like to be labeled with autism and go to school. He explains that some children get bullied, both in school and online. He ends with the plea to the viewer to consider passing on the message that everyone should be allowed to play Minecraft and to stop bullying. (from field notes)

The video this boy created shows how he is building within Minecraft, making something new for others to replicate. He is also using the video to express his own identity as a child with autism.

⁹<https://www.youtube.com/channel/UCj5i58mCkAREDqFWlhaQbOw>

Social Networking Sites

Autcraft administrators maintain a Twitter account and a Facebook group page, which are used to disseminate community news, post inspirational blogs by members of the community, and keep in touch with community members. Community discussions happen across these sites and are member-driven. For example, announcements are made in multiple places (*e.g.*, Facebook, Twitter, and the website) so that community members can see them on the site they visit more frequently. When media news about the Autcraft community occurs (*e.g.*, “How Minecraft is Helping Children with Autism Make New Friends” in the *New Scientist* (Rutkin 2016)), an administrator posts the link to the article across all the social networking sites. Parents are more likely to respond to posts on Facebook, while more active community members, such as the children, are more likely to respond on the community website. This assures that news reaches many members—even those only indirectly active, such as parents who do not play Minecraft.

Autcraft Community Website

Autcraft administrators maintain a website that includes a main page with news and blog posts, a status page for the virtual world, forums, member profile pages, and an in-browser web messenger. The website allows members to “friend” each other through profile pages and displays “top forum posters” on the front page for those who have posted the most in the forums (*i.e.*, those who have posted the top number of posts). “Player of the Week” is selected each week by administrators and are players who have stood out to the administration as helpful community members.

In these various places, the ways in which individuals experience virtual embodiment is different. For example, the avatar in the virtual world takes on a much more “physical”

embodied experience—interacting in a three-dimensional environment. However, a Facebook profile may not have the same kind of embodied experience. The liminal space in each of these platforms is also different and, in some ways, much less obvious. Again, Facebook requires hardware and an account to access, but the system is supported by a much wider range of hardware and software than Minecraft.

3.6 Modding in Minecraft & Other Social Media

The Autcraft community actively works to modify Minecraft to suit the needs of community members. The base software of Minecraft can be modified with other programs, called “mods.” According to the Minecraft End User License Agreement (EULA)¹⁰, *“If you’ve bought the Game, you may play around with it and modify it by adding modifications, tools, or plugins, which we will refer to collectively as ‘Mods.’”* The makers of Minecraft leave the system open for any kind of modification users might envision (Wolfberg 2009). Mods are popular across Minecraft instantiations (Christiansen 2014) and have been explored for a variety of purposes in the research literature, including teaching children how to program (Guthals, Foster, and Handley 2015). The Autcraft community has taken advantage of the open and easily adaptable nature of Minecraft and this “modding culture” to tailor their server to multiple user needs, all while maintaining the creative and imaginative atmosphere characteristic of the virtual world. Minecraft has created a unique platform for these two communities—those with disabilities and gamers/hackers—to modify the software as they desire. The Autcraft community also uses a multitude of other platforms within their community. Many of these platforms are not

¹⁰ https://account.mojang.com/documents/minecraft_eula

as flexible in how users may use them. For example, Facebook and Twitter offer little in the way of changing how a user experiences their platform, except through APIs that allow third-party applications to create different views of the data (*e.g.*, TweetDeck). This means that instead of modifying software, the Autcraft community must employ more social modifications (*e.g.*, social rules) to have the platforms meet the needs of their community members. I discuss these social rules more in Chapter 5. However, the Autcraft community has also created and employed a variety of modifications to the Minecraft software.

Autcraft has some unique features that make it different from other Minecraft servers. This includes how the virtual world is administered, unique spaces within the virtual world, and specialized events and activities. Autcraft is set up with specific measures in place with the intention of creating a “fun, safe environment for children with autism.” These safety measures include giving each player the ability to keep their items safe from other players, turning off violent monsters, and monitoring and logging of all activity by administrators, moderators, and add-on tools.

3.7 Modding to Create Access to Social Play

There are many ways people adjust or “mod” their environments to be more comfortable, to improve access to, or quality of, interactions. Members of the Autcraft community are no different. Modifications alter the way community members interact and build within the virtual world and include: specialized zones, teleportation, and enhanced text chat.

3.7.1 Specialized Zones

Mods allows the administrators of Autcraft to set specific areas of the virtual world with special properties. For example, in some areas the community members cannot alter the



Figure 3.14. Mining World with tower structures in the distance.

landscape or break objects (e.g., in the Spawn area). These areas serve to create a communal space to gather and play without fear of trespassing on private land or ruining another community member's build. In other areas, such as in Mining World, the entire landscape is renewed at the end of every month. Mining World allows community members to dig, build, and alter the landscape without these actions being permanent. Fireworks displays are another type of impermanent form of play that happen in the communal spaces.

Mining World

Some zones are designed to renew and change every month. From my field notes:

In Autcraft, there is an entire world dedicated to mining raw materials. Mining World is different from other locations in Autcraft because once per month, the world is reset, wiping out everything and making a new world with all new resources. Signs are ubiquitous, warning community members not to build in Mining World because they will lose their creations at the end of the month. However, as the players mine, they also create. Players build functional objects, such as stairs to help reach minerals, but also aesthetically interesting builds (See Figure 3.14). (from field notes)

In the cases of these builders, the monthly world refresh does not stop them from creating in that space. Perhaps, like in the work with physical-world sandboxes (Lu et al. 2010), the ability to

practice in a space that is not permanent may be motivating. This allows them freedom to try new ideas, practice building specific creations, and play around with making in a space that will be wiped away at the end of the month. In some ways, this is a liminal space—the software coding programmed to wipe out and refresh a section of the virtual world—interacting and layered on top of the virtual space. Community members can collect materials for their permanent buildings in the other parts of the Autcraft virtual world. In Mining World, they can practice building, try new building ideas, and learn the “physics” of the various blocks (*e.g.*, try different block configurations to see how water flows) without destroying more permanent environments.

For some community members, this Mining World allows them to simply dig holes. This can be a form of self-soothing or stimming—a repetitive action that helps alleviate overwhelming sensory experiences (Westeyn et al. 2005). In therapy settings, clinicians try to replace these repetitive behaviors with more adaptive, age appropriate, or typical self-soothing behavior to support sensory integration, but many in the autistic community embrace stimming behavior (Case-Smith, Weaver, and Fristad 2015). Instead of simply going offline to self-soothe without an audience, these players choose a virtual representation of such behavior that requires the player to manipulate game controllers to execute this action.

Administrators encourage children to play and build in whatever way makes them feel comfortable, as long as they abide by the community rules (*e.g.*, not hurting other players or destroying other members’ buildings). These acts, both building in Mining World and less goal-directed activities, such as digging, happen without others being present. The community members are still expressing themselves, but they are doing it for their own enjoyment or stress relief, rather than having the explicit need to share every creation with others. They are doing it



Figure 3.15. Onlookers gathered for the fireworks, looking up at the display.

for self-satisfaction, such as giving themselves a sensory break by digging a hole to turn the screen black. Mining World in Autcraft provides a wide-open space for this activity to take place, indicating the potential value of intentionally creating spaces for children to destroy what they built as a part of their play.

Fireworks Display

While Mining World is a place to explore and create in an open environment, other locations do not allow building or modifying of the landscape of any kind. These areas serve as communal gathering spots for members to congregate and hold events. One of these events is the fireworks display, which is usually hosted by individual community members after they have

Crafting the firework star:	Adding a fade color:	Crafting the firework:	Preview
	No fade color		
	No fade color		

Figure 3.16. Charts displaying materials needed for the fireworks recipes.

built enough fireworks. Fireworks are also set off during large community-wide events, such as Autism Awareness Day or the Fourth of July. I made note of a fireworks event in my field notes:

It is late in the evening in the summertime and only a handful of players are online in Autcraft. One community member posts in the chat window that there will be fireworks displayed in the main hall in 10 minutes, inviting everyone to come join in watching. This member spent all day gathering the supplies needed to create the fireworks and then crafting them all individually. Five minutes later, the member writes in chat that the show will be in five minutes' time. One minute until the show, the member then gives a countdown every 10 seconds and at 10 seconds out, every second. Six players in total arrive leading up the fireworks event. As they wait, they chat and walk around together. When the show starts, everyone stands still, looking up into the black sky as the colors burst forth (See Figure 3.15). (from field notes)

Fireworks take a great deal of effort and time to create. Firework creation is a lengthy process in which the player must find the right materials within the Minecraft world and use them to craft the various kinds of fireworks. To create a variety of colors and displays requires varied materials be crafted together in the correct order using recipes¹¹ (See Figure 3.16). To know how to make these different fireworks requires the player to ask more experienced players or to look up the knowledge online (which is readily available on wikis). Some players will only have access to information found within the Autcraft play space if their parents do not allow them to use the internet more widely. However, published material with Minecraft recipes is now available in libraries and bookstores.

One of the reasons these fireworks shows are important to Autcraft community members is because many players, due to their special sensory needs, cannot attend physical-world fireworks displays. In a video titled, “Autcraft Fireworks for the Fourth of July,” AutismFather records community members setting off fireworks together. In the beginning of the video, words scroll across the screen reading,

“Millions of children with autism love fireworks but miss out due to the level of overwhelming sensory input

*Bright & Flashing Lights
Loud & Repetitive Sounds
Smoke
Crowds*

We found a better way” (Autcraft YouTube video)

Being able to control their own fireworks show in-world gives community members the opportunity to partake in an activity that was before inaccessible to them. Creating fireworks

¹¹ https://minecraft.gamepedia.com/Firework_Rocket

displays shows users are willing to put in tremendous effort when given the opportunity to experience a sensory experience in a comfortable way.

3.7.2 Teleportation

The Autcraft virtual world supports sociality through the teleportation mod. Teleportation enables players to jump from one place to another in the Autcraft virtual world nearly instantly. This mod, which can be found on a variety of Minecraft servers, is enabled by administrators of the server. Teleportation is available through various waypoints within the Autcraft Spawn area as well as through the text chat window.

In the case of Autcraft, the administrators enabled teleportation to create a “safer” virtual world experience. Community members can use teleportation to return to the Autcraft Spawn area or to teleport to their own designated “home” (*i.e.*, the area the member has set to be their personal property). In this way, players have a safety net for their avatar. They are able to return “home” whenever they need to. This is helpful particularly if a player gets stuck somewhere they cannot get out of or if they get lost in the world—something that can happen frequently, because the world is very large¹².

Teleportation allows a person to “call” someone else’s avatar to them from anywhere in the world. The other person must consent to this teleportation. When this happens, the avatar appears next to the caller. Because the virtual world is so vast, this is the fastest and easiest way for community members to get to one another. To consent to being teleported, the member must

¹² Using an avatar with no speed modifications, it would take years to traverse the 30,000 km from one end of the virtual world to the other.

invite the other to teleport to them and the invitee must “accept” the teleportation in the virtual world text chat:

[CHAT] To teleport, type /tpaccept.

[CHAT] To deny this request, type /tpdeny.

When interviewing one community member, they instructed me on how to teleport before inviting me to their build:

ResearcherKate: do you have any builds you would like to show me?

Monkiez: Sure! ill show ya my mansion

ResearcherKate: you'll have to remind me how to tp lol

Monkiez: Oh you have tp timer :P

ResearcherKate: oh I don't know what that means

Monkiez: it just makes it so there is less lag

Monkiez: if everyone is teleporting everywhere at the same time server would lag

Monkiez: Useful yet [annoying] :P

ResearcherKate: haha yes

Monkiez: should be over....

(YouTube) Monkiez has requested that you teleport to them.

In explaining teleporting to me, this community member described the reasoning for enabling a cooldown timer for teleporting—server lag. Lag can create problems not only for individuals with slower machines, but also to the server as a whole, causing objects and people to load slowly on the screen.

Community members use this functionality to teleport to each other in order to play, build together, or participate in other activities together. In the following example, *auttoplay* is inviting others to roleplay in the “hard world” (*i.e.*, where a member can die and there are monsters, unlike Autcraft in which protections are in place to avoid such negative experiences) and to teleport or “*tp*” to him:

<(Autcrafter) auttoplay> [Role play] in hard world tp to me if u want to join there is food!

<(JrHelper) gamegirl> tpa cookiez i found a nice spot¹³

<(Buddy) cookiez> gamegirl i tped magicamom here :P

<(JrHelper) gamegirl> tpa if you want to be blown up!

This teleportation functionality not only enables these quick avatar interactions, but also gives community members an ability that they do not have in the physical world. This helps support empowering these young community members to engage in socialization with their friends, when and where they choose. For children, who often must rely on their parents or older siblings to transport them to a friend’s home, the ability to rapidly and easily have access to their friends can be particularly freeing. The “reduced bandwidth” provided by high structured computer-mediated communication provides relief from deciphering nonverbal cues, while enabling control, clarity, liberation, and empowerment (M. Burke, Kraut, and Williams 2010b). Teleportation allows for a novel way to engage and disengage in social interactions.

Additionally, for children with autism, a play date may end rapidly when one child has reached the limit of socialization they can—or choose to—have in a day. In physical spaces, a parent is then likely called, requiring waiting and often continued uncomfortable interactions. In Autcraft, one player can simply teleport home and away from others. One of the consequences of social play for an individual with characteristics of autism (*i.e.*, “inflexible perception of others’ intentions and difficulty understanding how others perceive their actions” (M. Burke, Kraut, and Williams 2010b)) may be difficulty in maintaining relationships. Thus, learning to accept one’s

¹³ TPA means to “teleport accept” or accept someone’s teleportation invite.

denied offer of teleportation and accepting another's need to teleport away helps take on the perspective of the other and can help players develop empathy.

Teleportation, then, serves multiple purposes: it gives a sense of safety by allowing players to get away from situations that make them uncomfortable, supports socialization by bringing players together and allowing them to be apart, and gives members the ability to be "home."

3.7.3 Enhanced Text Chat

Many players have additional disabilities and health challenges. The particular intersection of health concerns, developmental differences, and a spectrum of life experiences related to race and gender can come into play (Erevelles and Minear 2013). I will address the complexities of these intersecting identities more in Chapter 4. The administrators of the Autcraft server attempt to address these additional challenges as they arise. For example, one young member disclosed to the Autcraft community administrators that he had lost vision in one of his eyes and was slowly losing vision in the other eye. He explained that he was repeating characters (*e.g.*, >>> or ---) in the chat window to help him to break up the text and make it readable. This initially looked like spam (*e.g.*, the repeating of characters or words resulting in making the chat window difficult to read and can be interpreted as bullying), which is against the Autcraft community policies (See Appendix E for full list of rules). The administrators not only implicitly supported this choice by allowing him to behave in this way, but explicitly tackled the issue in a post to the community:

A quick message to the other admins and helpers on the server and now we're all aware of this and going to support him with his needs even if it means explaining to the other players that in his case, it's OK to do what he's doing.

```
(JrHelper)FruitMstr: can it be set to  
other names too?  
-----  
(JrHelper)FruitMster: or just your own?  
-----  
(Admin)AutFather: hey Hurry :)  
-----
```

Figure 3.17. Sample of the splitchat screen modifications with line breaks and highlighting in Autcraft.

This is just one of the many ways that Autcraft is different from all other servers. (Facebook post)

Following on this policy and behavior change, the administrators also modified the software to change the text chat capabilities. This modification is optional for players, meaning they can choose to use all, parts, or none of the new functionality. The modifications include: personal name highlighting, splitting the chat lines with a personalized character (See Figure 3.17), and distinct chat “channels” that thread specific conversations together. This new feature offered more flexibility in the chat:

... it's customizable. We know not everyone wants yellow so there's actually a command to change the color using Minecraft color codes.... (Facebook post)

Designers of the modification used technology to build in flexibility to meet the variety of needs of community members.

The modified text chat has come into regular use among community members. As is the case both in the physical world (e.g., curb cuts) and in other parts of the Internet (e.g., closed

captioning), not only did this end up helping those with visual impairments, but other members as well:

This was the BEST idea ever! Chat is so much easier to see now. I don't have poor vision (Or at least that I know of) but it STILL so much easier to see (Autcraft forum)

Members began asking questions in the forums about other uses this new chat functionality might have, including ways to create separate channels for different activities (Andalibi, Bentley, and Quehl 2017). One member even posted a screen shot of his joke about the split chat “dividing” the chat screen using the mathematical divide symbol (*i.e.*, \div), “*when you said splitchat divides chat i didnt know you actually meant it divides chat...*” (forum, P41, age 12, m).

As discussed previously, normative face-to-face interactions are undesirable for many individuals with autism (Wolfberg 2009; Lainhart and Folstein 1994), and members of this community rely heavily on avatar interactions and the text-based chat functionality (Ochs and Solomon 2010; Ringland, Wolf, Faucett, et al. 2016). By supporting community members in their chosen modes of communication, the Autcraft community enables access to social play.

As the children work within the confines of the virtual world to make their environment more usable by appropriating what is available, administrators then iterate on these appropriated instances to re-appropriate the software itself. Thus, administrators, following the cues of the children within the virtual world, can instantiate these appropriations and make them available to everyone on Autcraft.

3.8 *Where is the body? The Placeness of the Autcraft Community*

Understanding the infrastructure of the Autcraft community, including the spaces—physical, liminal, and virtual—community members must traverse to engage with each other, as well as the modifications made to Minecraft for the community members' use, allows for a deeper understanding of their embodied experiences in these spaces. Acknowledging that real and unreal experiences can occur in the physical world and in the virtual world means we must also acknowledge the validity of experiences in both spaces. Violent, negative engagement can be painful wherever they may occur. Likewise, positive engagements can lead to meaningful relationships and happy memories no matter where they take place. Who we choose to let in to these spaces shapes how these interactions unfold.

3.8.1 The Embodiments of the Experience Matter

The Autcraft community gives their community members many different options for communication and social play through the various platforms discussed above. In doing so, the community accommodates many different user needs across contexts. A parent may not feel comfortable entering and interacting in the Autcraft virtual world, but they are able to leave comments and send messages through Facebook. A young child might not have access to social networking sites, but is able, often with the help of a parent, to navigate their avatar through the Autcraft virtual world and play with others. Being literate is not a requirement for being social in the Autcraft community. While some members choose to access the chat functionality of the virtual world through applications on their phone, other children do not use the chat at all. Instead they rely on their avatars to express themselves and interact with others and the Autcraft virtual world environment.

The embodied experience is different depending on how it is mediated (*e.g.*, face-to-face, text, phone, avatars in the virtual world). However, this does not mean that one is by default better (or less mediated) than the others. Depending on the individual, their “fit” in that mediated experiences may change –not only by type of mediation, but by the context in which that mediation occurs. The “fit” of a mediated experience can directly impact a person’s access to social play. Miller and Sinanan argue that all interactions are mediated—including those that are face-to-face—even when they do not feel mediated (Miller and Sinanan 2014). However, this feeling may be context-dependent and different for each person. In the case of those with autism, some find that physical, bodily sensations are overwhelming or painful and, therefore, seemingly mundane experiences to some, such as eye contact, become unbearable (Müller, Schuler, and Yates 2008; Cesaroni and Garber 1991).

Despite pressure from therapists, parents, educators, and researchers to privilege face-to-face interactions as more “real” than digital interactions, one kind of embodied experience is not necessarily more “real” than another. In fact, what is considered “real” for an individual is highly subjective. Instead of seeing physical and digital in stark contrast to one another, the digital becomes another realm that extends the self and is a place that can contain both the real and the unreal (Boellstorff 2016). The premise that real and unreal can occur in both physical and virtual environments is especially salient for those who have lived experiences in both places. To accept that the interactions and encounters that occur in digital spaces are real, is to then accept that negative or hurtful engagements can cause pain when they occur in these spaces. For example, in Dibble’s *My Tiny Life: Crime and Passion in a Virtual World* (1998a), the virtual world was entirely based in text. However, when one rogue user violated other community members’ avatars with sexually explicit text, the violation still had a profound impact on the users. Similar

violent acts have been recounted across various virtual worlds (*e.g.*, World of Warcraft (Nardi 2010)), as well as other social media platforms (W. Phillips 2011). Because this violence is so ubiquitous across social media, the Autcraft community becomes especially important for those who do put value in their own embodied experiences on virtual platforms, such as autistic children. As in face-to-face, physical world interactions, their virtual counterparts also offer positive experiences. Social media has been studied for its ability to foster connections (*e.g.*, intimacy and friendship in virtual worlds (Pace, Bardzell, and Bardzell 2010; Marsh 2013; Munn 2012; Pearce and Artemesia 2009; T. L. Taylor 2006)). However, feeling safe is integral to these positive embodied experiences. In turn, feelings of safety help create access to social play. I return to this discussion in more detail in Chapter 5.

The embodied experience is what makes social play possible—embodied experience is the vehicle through which play occurs. The embodied experience gives children the place of play—the tools, other bodies, and boundaries. Whether it is children building a fort out of pillows in the living room or pixels in the Autcraft virtual world, play is made possible by experiences and interactions with the environment.

3.8.2 Walls Work Both Ways

The Autcraft community engages in some gatekeeping practices to maintain exclusive membership. Community members must have a connection to autism, if they do not themselves have autism. These gatekeeping practices, for the most part, keep people out who mean to do community members harm (*i.e.*, the bullies and trolls). However, this works both ways. This gatekeeping also works to keep community members *in*. Choosing to be a part of this separate nonnormative identity and space has the effect of “othering” community members. Othering is

when a group of people are classified as “other,” which becomes a way to reify the self (*e.g.*, in-group or the self and the out-group or the other) (Brons 2015). For members of the Autcraft community, their othering began long before joining Autcraft (in fact, for many it is the reason for joining). The consequences of othering in the case of children with autism are alienation and bullying.

Othering Autistic Community Members

Othering is apparent through the continued bullying and harassment of autistic players. YouTube comments reveal some of this bias as commenters refer to Minecraft as a game solely for autistic people, “*i feel like the game itself is dedicated to autistic people.*” The implication is that Minecraft only attracts players that have autism – or at least exhibit behavior that others might construe as autistic. Having the space labeled for autistic members also means that they can potentially be targeted more easily, “*All the autistics in one place. Sounds like a trolling paradise XD.*”

In his TEDx talk, the founder of Autcraft describes how autistic children have been told by strangers on the internet that they should kill themselves. In the comments of that video, one respondent wrote:

Probably the wrong place to say it, but autistic people should not live. What people call love and humanity are just really intricate instincts and neuro-connections, but still, they are sentient and for some reason i am happy that they can get help like this... (YouTube comment)

Comments such as the above are common enough to not be surprising, but, fortunately, are outnumbered by positive comments (in the above post, for example, there were five negative comments out of 80 overall). However, by creating the Autcraft community and having a social

divide between community members and others, there runs the risk of affirming the otherness of community members.

The Autcraft community creates a space that feels safe for the members, but there is a balance that must be struck between keeping members safe and alienating them from larger society. Especially as children grow up and age out of the community, there is currently little support in place for community members who feel they are too old for Autcraft. Some of these members may “age out” of Minecraft altogether, but more are simply looking for a less restrictive server. More work needs to be done to understand how the transition for autistic youth can be supported as they spend more time in other communities, beyond Autcraft.

Venturing Outside the Community

Autistic Minecraft players do not always relegate themselves to behind the walls of the Autcraft community, however. While some players only play on Autcraft, others also play on other Minecraft servers not specifically dedicated to autism. In addition to playing on these larger servers, many players also have their own private servers for their family or play in single player games. In fact, while on Autcraft, players discuss leaving the server to go play on a “normal” server (*i.e.*, open, public servers) or in their own game for a while, usually to come back later. Players will leave for other servers because they outgrow the Autcraft community—the rules and structure of the community are in place for the youngest members and, therefore, older members may find this infantilizing. These players often come back to “visit” or “take a break” from the other servers to enjoy the relative calm and safety of the Autcraft community.

Children post on the Autcraft forums about experiences they have had outside the community, on other servers or on their own servers. Autcraft community rules state that the advertising of other servers is forbidden. The rules state, “*No talking about other servers, no*

telling people to go check your Enjin wall where you've posted your server or anything like that at all either on the Autcraft server or in our forums.” The rationale for this is some Autcraft members may go to these advertised servers expecting the rules to be the same as in Autcraft (e.g., no bullying, no name-calling) and are hurt when they are mistreated in these other places. Some children announced their departure to go to other worlds in the Autcraft forums. These announcements are met with both encouragement and dissuasion— “*Come back soon!*” and “*I will miss you*” being the most common responses. Some children eventually come back, while others may “check in” or give updates as to how they are doing. One young community member, for example, came back after a few months to announce his new YouTube series and that he had obtained a part-time job. The Autcraft community then serves as the place that community members not only gather but also return to.

Autcraft members venture outside the walls of their community to reach out to others through video and fan content sharing. In much the same way, the creation of fan content and videos also allows Autcraft community members to venture outside the walls of the Autcraft community. Here they may intentionally be seeking to interact and communicate with those who are not members of the Autcraft community—perhaps to educate about autism or Minecraft, as in the example about a boy who created a building tutorial and used the video to educate about bullying (See Section 3.5.3). While the Autcraft virtual world is a clearly delineated space, other platforms employed by the community are not. Posting public videos may expose community members to outsiders, either intentionally or not.

The place-ness of the Autcraft community is critical for members—allowing for a variety of embodied experiences as something to both leave and come back to. As a place, the Autcraft community can also create a target and “other” community members. However, this is balanced

by creating a safe haven for those who need respite from bullying and harassment in other online communities. The sense of place in the Autcraft community also helps cement the rules—even when traversing platforms, the rules stay the same and, therefore, the feeling of safety also remains.

3.9 *Conclusion*

In this chapter, I discussed the embodied experience of those with disabilities, especially regarding social media. I then described how these embodied interactions occur throughout the Autcraft community including the physical, liminal, and virtual spaces Autcraft community members live in. Finally, I discussed modding and how the Autcraft community has made special modifications to accommodate their community members. This is important when realizing that the computer-mediated experiences for these community members is preferable to physical-world, face-to-face interactions. How someone interacts with others is meaningful, regardless whether that interaction is online or offline. The Autcraft community has defied the conventions set out by many educators, parents, researchers, and therapists by creating a space that privileges digital engagements over physical-world ones. In doing so, they have made a playground that is more comfortable for many autistic children, but also runs the risk of further othering those children. Ultimately, it is the placeness of Autcraft that gives children the options of embodied experiences they need to access social play.

In the next chapter, I describe the various community members and explore their varying identities such as child, gamer, and autistic.

4

Who's Playing the Game: The Multifaceted Identities of Autcraft Community Members

In this chapter, I explore the performance of identities found within the Autcraft community¹. I focus on the social model (instead of other models, such as the medical model) as a lens for understanding disability and, therefore, autism as a socially constructed identity. The social model best fits the lived experiences of the members of the Autcraft community, but I also acknowledge community members must also manage medicalized frameworks of autism daily. I have taken this into account in my analysis. I also engage with Games Studies literature to understand “gamer” as an identity. I analyze how intersecting identities impact access to social play and affect and are affected by social play as it occurs within the Autcraft community. Both those with autism and those who are gamers find themselves stereotyped as outcasts and loners in mainstream media—and both identities are often conflated with each other. The entanglement of autism and gamer as identities within broader society has led community members to seek spaces, such as Autcraft, to freely express themselves in play. This chapter seeks to answer the question: *How do identities shape the body?*

¹ Some of the writing from this chapter is from or is inspired by the following previous published works: (Ringland et al. 2015; Ringland, Wolf, Faucett, et al. 2016; Ringland 2017).

4.1 *The Identity of Disability & The Social Construction of Autism*

Throughout history, disability has been a part of interactions and relationships in society as a way of creating an other and, therefore, privileging the “normal” (Garland-Thomson 1997; L. J. Davis 2013). For example, the act of labeling a person as disabled reduces them to a flat, shadow of a person with no other characteristics. In a sense, a person’s disability seems all encompassing—leaving little room for any other aspects of their identity. Not only is the person then defined by their inability, but they are then not seen as having ability in anything (Garland-Thomson 1997). In the following section, I explore perceptions and the social construction of disability—in particular, autism—from Disability Studies literature and popular mass media.

My analytical lens primarily uses the social model of disability. The social model of disability focuses on disability as a social construction. Society creates the barriers that make individuals who may be differently abled as “disabled” (Goodley 2011c). Straus (2010) asserts that individuals with disability have been neglected by those advocating for changes under the social model of disability because of differences in how they communicate. He speculates those in the minority are expected to have a voice and be able to fight back against the medical views of their disability (Straus 2010). However, a community of autism has been growing in recent years, especially for those who find support online (Blasiotti, Westbrook, and Kobayashi 2003; Straus 2010). For example, the neurodiversity movement has been taking shape, with much of the conversation occurring online (Kras 2010; Owren 2013). The neurodiversity movement emphasizes those with autism as being in a neurological minority and for them to be accepted for who they are, without trying to “fix” them (Owren 2013). Because of this neurodiversity movement, a social model lens fits best for my analysis, rather than a solely medical model of disability.

The medical model of disability is the clinical perspective of disability, wherein diagnosis (labeling), treatment, and cure of the individual is the directed course of action (Garland-Thomson 1997; Straus 2010). The medical model portrays disability as a flaw of the body that is “inherently abnormal and pathological” (Goodley 2011c). Historically, for cases such as in mental illness, the diagnosis was created by the medical community to help categorize groups of symptoms. The psychological terms invented by medical professionals are simply the best fit by the medical community and, for many mental illnesses, only defined within the last 50 to 100 years. As Walker puts it,

“the next level of abstraction, the word “schizophrenia”, and the next, ‘mental illness’, only exist through consensus and only persist by convention. Even if the correlations of defining symptoms was perfect (which it is far from), in light of the linguistic paradigm we have to ask ourselves whether using a pathologizing, deficit-based vocabulary is useful in helping people improve the quality of their lives” (2006).

Autism, under this medical lens, is a disorder, and a cure must be sought (Straus 2010). Individuals with autism need to be “normalized” or rehabilitated to become a part of society or their disorder must be eradicated (Garland-Thomson 1997; Straus 2010). This medicalized view of autism began in the 1940s when the term “autistic” was first described (Straus 2010). While it should be noted that many of the physiological and psychological symptoms are very real for these individuals, the tendency of the diagnosis is to focus on “symptoms” as deficits, even when some of them may not be perceived as deficits. Not all of those diagnosed with mental illness focus on these deficits, instead embracing the positive aspects of their differences. These medical labels can be interpreted as oppressive; being used to deny social goods and services to the disabled (D. T. Mitchell and Snyder 2015; Walker 2006). As I describe members of the Autcraft

community, following their lead, I incorporate both the noted positive and negative aspects of their disabilities, as well as all of their other presented identities.

In concert with the social model of disability, I use intersectionality as a lens to understand the different facets of the Autcraft community members' identities. The concept of intersectionality helps avoid reducing a person's identity to a single trait (Goodley 2011b; K. Crenshaw 1991). Intersectionality is the understanding that race, class, gender, sexuality, ethnicity, ability, and age are not mutually exclusive parts of one's identity (K. Crenshaw 1991; P. H. Collins 2015). Solely labeling a person by their gender is problematic in the same way as labeling someone as disabled (Goodley 2011b). Intersectionality supports the understanding that individuals will often identify with multiple groups (*e.g.*, gender, race, class, dis/ability) (Goodley 2011b; McCall 2005; Söder 2009). These various identities may or may not be distinct categories, but they flow between and influence one another. Intersectionality occurs across all ages, but preteens and teenagers may be especially impacted as they are working to solidify their identities (Penuel and Wertsch 1995). This is especially salient as many of the Autcraft community members are youth looking to assert their own identities and understanding of the world.

4.1.1 Autism Community

The community of disability is itself a means of othering those with disabilities (Barnes and Mercer 2003). Again, othering is the setting of a group of people apart, creating a self/other dichotomy (Brons 2015). Disability community implies a coherent group of people (with disabilities) who are like-minded and also implies that they are separate from the rest of society, or at least a subset of the rest of society (Barnes and Mercer 2003). For example the Deaf



Figure 4.1. A Facebook post that reads, “Autism is not a choice. Acceptance is. -Stuart Duncan” from the Grantham Autistic International Network.

community has its own norms and tends to be set apart from the rest of society, especially from those in society who are hearing-abled (Barnes and Mercer 2003). Likewise, the Autism community, as discussed by Straus, includes much more loosely affiliated groups of individuals (e.g., classifying women or LGBTQ people as a community) (2010). These separate, other communities are reinforced by nondisabled societal representations of those with disabilities (Barnes and Mercer 2003). This reinforcement can be seen in media, such as literature and film, where individuals with disabilities are absent or their disability is used as a plot device (Garland-Thomson 1997). Where media portrayals of individuals with autism may include movies (e.g., *Rain Man*, *Adam*, and *The Accountant*), characters in popular television shows (e.g., *Parenthood*, *Eureka*, *Criminal Minds*), and novels (e.g., *The Curious Incident of the Dog in the Night-Time*),

modern day autistic celebrities² have begun changing the stereotypes of what it means to be autistic. This trend includes children’s programming, with *Sesame Street* recently adding a new autistic character to their program³. The founder of the Autcraft community has become something of an internet celebrity in his own right, having given an invited TEDx talk⁴ about the creation of the Autcraft community and autism and with quotes from his Twitter and Facebook pages often being circulated throughout various online autism networks (See Figure 4.1).

But where the terms of disability are used to flatten and other individuals, they can also be a source of empowerment and strength (Haller 2010). As in the Deaf community, a subset of the Autistic community has chosen to accept the label of Autism and claim the name as their own. The quote in Figure 4.1, “Autism is not a choice. Acceptance is,” is a telling one. For many who have been labeled with an autism diagnosis, from a medical perspective, their label will follow them for the rest of their lives. Hence, many with (possible) mental illness choose not to seek a medical diagnosis (Rüsch, Angermeyer, and Corrigan 2005). Medical diagnosis is potentially complicated by the age of the individual—children do not necessarily have a say in when or how they are diagnosed. Therefore, it is quite possible a person could have the label of autism from a very early age, whether they are aware or told about it or not, but only really begin to grapple with it as an identity later (for instance, when they are preteens). However, whether that individual then decides to join a particular autistic community is their choice. While members of Autcraft do not necessarily have a medical diagnosis of autism, they have still opted into the Autcraft community, which is first and foremost a community for children with autism.

² For example, Temple Grandin has written several popular books about life with autism (Grandin 2006, 2014) and a biopic movie has been made about her life (Jackson 2010).

³ <http://autism.sesamestreet.org/video/meet-julia/>

⁴ <https://www.youtube.com/watch?v=n5AUjQyFAaw>

For Autcraft community members, a lens of autism as a community and social construction rather than as a medical diagnosis may be more apt. However, many in the Autcraft community are grappling with both these autistic identities at once or, at the very least, dealing with each in the various contexts of their lives. While a social model may be acceptable when engaging with the Autcraft community, members may have other therapies, school, or a home life that entertains a more medical model approach to autism. As with other disability identities, individuals need to find a balance, dependent on the current context, that allows them to get the services they need as well as the desired social outcomes.

4.1.2 Finding Autism in the Autcraft Community

Those who join the Autcraft community are connected to autism in some way—they may or may not have a formal diagnosis or they may have a close loved one who is autistic. There is evidence throughout the Autcraft community of those who are expressing this facet of their identity. As many members are still coming to understand their autism, there is also learning that occurs in this space. Autcraft community members may be learning to understand and accept themselves or their child as an autistic individual, but they are also learning to deal with challenges found outside the Autcraft community where they may not find themselves accepted and face opposition.

Autcraft community members identify themselves as autistic or a part of the autism community through self-labeling. For example, one Autcraft player described responses to the word “Autistic” as part of his username when playing Minecraft on another server:

*“people would swear call me names break my builds etc...becuz i am defrent... i didnt relize people would be mean about [the username]... and i liked the name... theres other people on here [Autcraft] with *autism* or *Autistic* in*

[their] names... Yeah... thats another reason i am happy to have [autism]"
(interview)

For this Autcraft community member, having autism was something he wanted to disclose to others until that label led to negative responses from other Minecraft players. Recognizing this commonality with other Autcraft players then led him to play exclusively on the Autcraft virtual world rather than other places in Minecraft. Giving himself this label may have caused some heartache in the beginning, but it eventually led him to find his community of likeminded, autistic-friendly people.

Having an association and label of autistic helps Autcraft community members frequently articulate their membership as being part of the Autcraft “family.” In much the same way players of massively multiplayer online games (MMOs) might feel a strong bond with their guild members in the games space (Nardi and Harris 2006; Williams et al. 2006) or the bond among group members within other online communities (*e.g.*, (Ridings and Gefen 2004)), members of the Autcraft community bond with each other and feel connected to one another. Particularly for adolescents, who are actively exploring their identities and places in the world, this “family” membership allows them a sense of connection and affiliation with others beyond their biological family.

Being a part of the Autcraft “family” means being a member of the group, having a support network to lean on, feeling included, and participating in activities and events together.

A participating parent said,

Well, I love being a member of the [Autcraft] community and love spending time with my 'family' here. ...finally just felt like I found a place that I fit in. A place I was accepted for being shy ... and just being "different" than others. ... Most of my life I've never felt like I fit in anywhere and never could make friends my age. Here--it doesn't matter where I live, my age, how shy and/or anti-social i can be at times, that I have anxiety over really weird things, or that

*I
can
talk*

Autosome - New word created and used daily
by the children on the @Autcraft server.

too

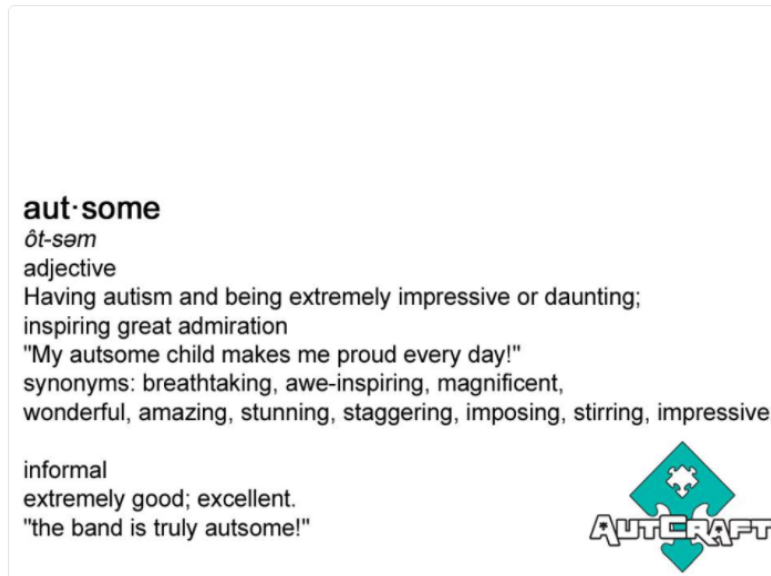


Figure 4.2 Social media post defining the word "autosome."

*much--I'm accepted. And for that, I want to go to these events and just either
hang out and have fun with other people, or help make an event happen.
(Autcraft forum)*

In the above quote, "family" as it relates to the Autcraft community, incorporates the idea of being accepted for who you are, including faults and quirks. Acceptance is a cornerstone to making being "different" more tolerable and reducing the social isolation and loneliness that frequently surrounds difference. The Autcraft community displays this acceptance through the creation of autism-centric words, such as "autosome" (See Figure 4.2). These act as signals to community members they are accepted as autistic.

Autcraft community members also engage in learning and educating about autism. They write educational pieces and essays and post them in the forums (See Appendix H). Their research projects and essays about autism are also often presented to their classes at school, with



Figure 4.3. A statue at the head of a classroom labeled with a sign "Professor Enderman."

the student reporting back to the Autcraft forums with the results. These acts of learning and educating about autism help solidify what it means to be autistic as part of the Autcraft community. This identity may be different from how an autistic identity is performed in school or at the doctor's office—given the varying expectations of others in these spaces. In Autcraft, community members engage in an education process that ultimately defines what it means to be autistic in the space of the Autcraft community. And this form of education process spills out into other spaces when community members work to educate those outside of the Autcraft community, such as when they create YouTube videos.



Figure 4.4. Educational postings on the wall of a school in Autcraft.

Parents also educate each other on their children’s autism through a forum dedicated specifically to parents, as well as through other social media. Here they swap information on how to deal with “meltdowns” or how to get their children’s needs met at school. There is a mix among the parents of those who have their own diagnosis of autism and those who are considered neurotypical. The parenting board on the forum also includes autistic adults who often give advice to neurotypical parents about why their children may be acting in specific ways. These parents end up, through the Autcraft community, aligning themselves in some ways with the autism community while looking for ways to support their children.

For example, in the Autcraft virtual world, one father built an entire school campus where other Autcraft community members could visit and learn about autism. Some of the classrooms even have golems walking through them and statues set up to be professors at the head of the class (See Figure 4.3). The building has many classrooms, with informational and inspirational signs posted throughout. In Figure 4.4, the material reads as follows:

What’s the problem with body listening? Eye contact can be physically painful for some. You don’t have to look to be good at listening. Your ears can do their job all by themselves. Sometimes verbal stims help to process. And that’s ok if



Figure 4.5. Colorful sheep wander through the rows of names in a memorial to those with disabilities as victims of filicide.

making sounds helps you listen and learn. Flappy hands happy hands. Your hands can be loud and you can still listen. You can move your feet and walk around and still listen. Your boundaries are just as important as anyone else's. Your brain is always thinking even when others don't understand. You are 'aut'some just the way you are. Your heart is caring about others & you deserve the same.

This posting educates autistic members about some of the ways they may process information differently. This gives the members a way to speak about their own needs and communicate these needs to others. The end of the post reaffirms that being different and being autistic is okay, showing again the inclusive nature of the autism community as found within the Autcraft community. Beyond inclusion, the naming and describing of symptoms in a positive light reshapes the discourse about autism as an identity. As discussed in Section 4.1, symptoms are typically seen as a deficit, but are reframed by the Autcraft community into positive identity markers.

In this same school, there is a secret chamber that was built to memorialize victims of filicide. The builder has recorded the names of approximately 420 victims from 1980 to May 2016 (the date of the interview). When asked about where he obtained the list of names from he answered, *“I was a chapter [coordinator] for the autistic self advocacy network and they sent it to me.”* The Autism Self Advocacy Network (ASAN) provides a Anti-Filicide Toolkit⁵ on their website that coordinates with the Disability Day of Mourning⁶. The memorial contains light glass walls and signs with names, ages, and dates of victims. The chamber itself has cathedral ceilings and colorful sheep wander through the rows of names, giving the place a light, open feeling despite the sad nature of the motivation for the space (See Figure 4.5). The father explained to me in the interview that he does not allow the children to enter this space, because of the content, saying, *“I don't really talk [to] any of the [players] about this because there are young kids who might get upset. I try to keep it age appropriate. If anyone asks me I just tell them it's a memorial for disabled people and leave it at that.”* But despite the fact he does not invite young children to see the space and that building the memorial *“took a lot out of [him] to do this,”* he still felt the need to create it. Because Disability Day of Mourning is a day set aside by many advocacy groups (e.g., ASAN), this seems to have translated into sites of mourning not only in the physical world, but also in the virtual.

While this site can be seen as a place of sadness and mourning, there is also a sense of pride. Pride in the beauty of the architecture, which this parent designed and built single-handedly. But also pride in the sense of belonging to the Autcraft community. If the educational

⁵ <http://autisticadvocacy.org/projects/community/disability-community-day-of-mourning/anti-filicide/>

⁶ <http://disability-memorial.org/>

classrooms invoke a sense of learning to accept and be accepted as someone with autism, then this memorial chamber invokes a sense that while others may hurt you (be it physically or emotionally), you are not forgotten and you have a safe place to belong—albeit virtually.

Learning and educating others about autism is a way for Autcraft community members to align themselves with the autism community and to empower themselves as informed autistic individuals. These practices also allow for the Autcraft community members to shape their own version of autism community, one that is inclusive and understanding of children and their neurotypical family members.

4.1.3 Expressing Identity in Autcraft

Being able to explore and express their identities is important for all youth (Grotevant and Cooper 1985), but it is especially salient for the autistic youth of Autcraft. The Autcraft community has a variety of social media that support expression of these identities. As Autcraft is a community that supports autistic children as part of their mission statement, having the freedom to be able to play with and perform autistic identities is important to members. Engaging in activities such as self-labeling and education help to both assert membership into autism community as well as reshape the autism identity of the Autcraft community to meet the overall goals of inclusion.

Identifying as part of the autism community is important for Autcraft members. They explore and uncover their autistic selves through their actions within and without the community spaces. Activities such as labeling themselves as autistic and through education help reshape and reinforce what it means to be autistic. In the next section, I will explore an equally important identity—being a gamer in Autcraft.

4.2 *Gamer as Identity*

Having discussed disability and autism focusing on the social construction of these identities, my discussion of gamers explores how the community of gaming emerged, the current trends in gamer community, and the implications for scholars. Further, I discuss the dismissive discourse about the sociality of both autistics and gamers. Due to this dismissal of autistics and gamers and the othering that occurs to both identities, some choose to forgo being members of either of these communities. Some, as I explore with members of the Autcraft community, actively engage in activities that redefine and reshape what these identities mean for Autcraft community members.

The large public debates around playing video games or gaming have focused on diversity in gamers—in particular, women who play video games—and the effects of violent videos games (Duggan 2015). In recent years, mainstream media has hailed the end of the stereotypical gamer. No longer reserved for the cisgender, heterosexual white man, video games are now for everyone. NBC News titled an article in 2014 as “*Basement-Dweller No More: Gamers Shed the Stereotype Nerd Image*” (Coldewey 2014). According to a 2015 PEW study, 48% of women in the general population play games (as compared to 50% of men) (Duggan 2015). However, in this same study, researchers found that many people still believe gaming is a male-dominated hobby, and 60% of American adults believe that men make up the majority of those who play video games, with this being split somewhat evenly across men and women (59% of men, 61% of women) (Duggan 2015). This belief that men make up the majority of gamers is deeply rooted in the history of the distribution and marketing of arcade games in the 1970s and 1980s. According to Kocurek, the masculinity of video games stemmed from early days of the arcade, when these machines were being marketed as masculine, technological sports venues

(2015). Indeed, this is also where the concerns of overly violent video games and their effect on (male) youth stems from (Kocurek 2015). Kocurek states that in the 1970s and 1980s there is a “connection among youth, computers, gaming, and the military,” which explains some of the mainstream ideas of linking gaming to adolescent violence. Even before arcades and video games, gaming was linked to the military, such as *Dungeons and Dragons* emergence from Tactical War Games after the second World War (Fine 2002). This differs from computers themselves, which were originally the work of women—interestingly now glorified in movies such as *Hidden Figures*. Not until much later did the value of computing gain prominence and become a male-dominated field (Light 1999). Diversity in games and its ties to concerns over violence continues to be an ongoing debate not only among scholars, but also mainstream media and within the gaming community itself.

In the 1980s, discourse around the gamer also became linked with hacking and cybercrimes. Video game companies vilified hackers and cheaters in order to stop them from abusing or taking control of the intellectual property of the game—industry only condoned certain sanctioned forms of cheating (*e.g.*, the user of cheat codes) (Consalvo 2007). Those who were gamers became conflated with the tech-savvy, with all the positive and negative connotations that came with it. This may have contributed to the gamer community closing ranks and the gamer discourse began to include policing tactics for “newbs,” as well as women and other minorities (Adrienne Shaw 2015a; Fine 2002).

For the gaming community, there is a continued debate around who should be allowed access to game play and who is allowed to assume the gamer identity. As part of this debate, tension has arisen over the disparity between who is being marketed to as gamers (*i.e.*, stereotypical young, white, male game players) and who is actually playing the games (Adrienne

Shaw 2015a; Salter and Blodgett 2017). This tension has bubbled up into the controversy known as “GamerGate” (Chess and Shaw 2015; Parkin 2014). GamerGate is most widely known for online harassment and threats towards outspoken marginalized gamers. These threats were carried as far as police being called to innocent people’s homes and some women gamers electing to leave their homes for undisclosed locations for their own safety. In a reflection on GamerGate, Kocurek states, “*if a fund-raising campaign seeking voluntary donations to make a simple video series on sexism can provoke this kind of rage, then something somewhere in contemporary gaming culture has gone rancid*” (2015). These cultural events and the historical context of gaming, be responsible for only 15% of men and 6% of women referring to themselves as “gamers” (as opposed to the 50% of men and 48% of women who play games), leading to a kind of distancing between the label and the activity—especially among marginalized players (Duggan 2015; Salter and Blodgett 2017). GamerGate exemplifies some of the ways marginalized players are harassed and excluded from the larger gaming community—although this has not stopped them from playing games.

The discourse about games and gaming has also shifted in the last twenty-years because of the proliferation of “casual” games (*e.g.*, Farmville⁷) and eSports. There is some contention among the gaming community as to whether those who play only casual games can truly call themselves gamers (Salter and Blodgett 2017). On one end of the spectrum, casual games, as denoted by their name, can be played in short bursts, require little in the way of complex user interfaces, and have minimal social interactions (McEwan et al. 2012). Casual games are also thought of as feminine, which is threatening to hypermasculinized gamers (Salter and Blodgett

⁷ <https://www.facebook.com/FarmVille/>

2017; Soderman 2017). On the other end of the spectrum, eSports seeks to professionalize and legitimize gaming as a worthwhile activity (T. L. Taylor 2015). Professional eSports players have gained notoriety as well as lucrative winnings through sanctioned competitions. Others have also professionalized and monetized their gameplay through livestreaming. The University of California Irvine opened an eSports arena in 2016, with the first sanctioned college-level eSports team⁸. Again, eSports has been masculinized to the point where women are thought to be cheating if they play well (Salter and Blodgett 2017). Recently, a 17-year old woman won a highly competitive Overwatch tournament and then was accused of cheating (Ashcraft 2016). University of California Irvine has hosted public panels to educate students on merits of diversity in eSports teams (Bond 2017).

With this backdrop of mainstream media and popular culture around the concept of “gamer,” a few dominant narratives about the potential and impact of video games have emerged amongst scholars. These include a narrative about the domination of mass media over an individual with the potential to lead to isolation and addiction and a narrative about video games being the future of work including the advent of “serious” games. Along with concerns about violence portrayed in video games, scholars have sounded the alarm for potential harm through video games such as addiction and social isolation (Micah O. Mazurek and Engelhardt 2013; M. O. Mazurek and Engelhardt 2013; Turkle 2012). The worry over this potential harm goes as far as including the potential for Internet Gaming Addiction (IGA) in the DSM until the most recent version (American Psychiatric Association 2013; Lemmens and Hendriks 2016). In Lemmens and Hendriks, they examine IGA using a survey and found that online games—specifically role-

⁸ <https://esports.uci.edu/>

playing games (RPGs) and shooters—had the highest correlation with IGA. As Games Studies scholars have moved on from the rhetoric of addiction, mainstream media still use addictive language when talking about those who play video games (Cover 2006; Bean et al. 2017). The issue of “problematic” usage becomes especially prevalent when talking about youth and youth with autism, specifically. Clinicians call this “problematic game use” in children with autism (Chung, Vanderbilt, and Soares 2015; Micah O. Mazurek and Engelhardt 2013; Micah O. Mazurek and Wenstrup 2013). Problematic game use is described by Mazurek and Wenstrup:

“...spending more time playing video games than with friends or family, thinking life would be boring without video games, thinking about video games even when not playing, feeling upset when not able to play, looking forward to the next gaming session, and having trouble disengaging or stopping from playing” (2013).

As I explore throughout this dissertation work, this particular brand of “problematic game use” privileges a specific type of sociality. Even in this definition, the authors assume that the player is not playing with friends or family when they are in a game world. As a gamer, part of the community would be to discuss favorite video games and types of play even when not playing—a fact not lost on marketing teams for games such as Minecraft that have licensed Minecraft to be distributed as Legos⁹, costumes, and on various toys and memorabilia. While this narrative about addictive games has begun to fall out of favor among some scholars, its study remains relevant to this work because parents and mainstream media still worry about the potential negative impacts on young players.

Some parental pushback against the negative rhetoric about games can be seen for children with disabilities. While fear about video games is still a pervasive worry, parents and

⁹ <https://shop.lego.com/en-US/Minecraft-ByTheme>

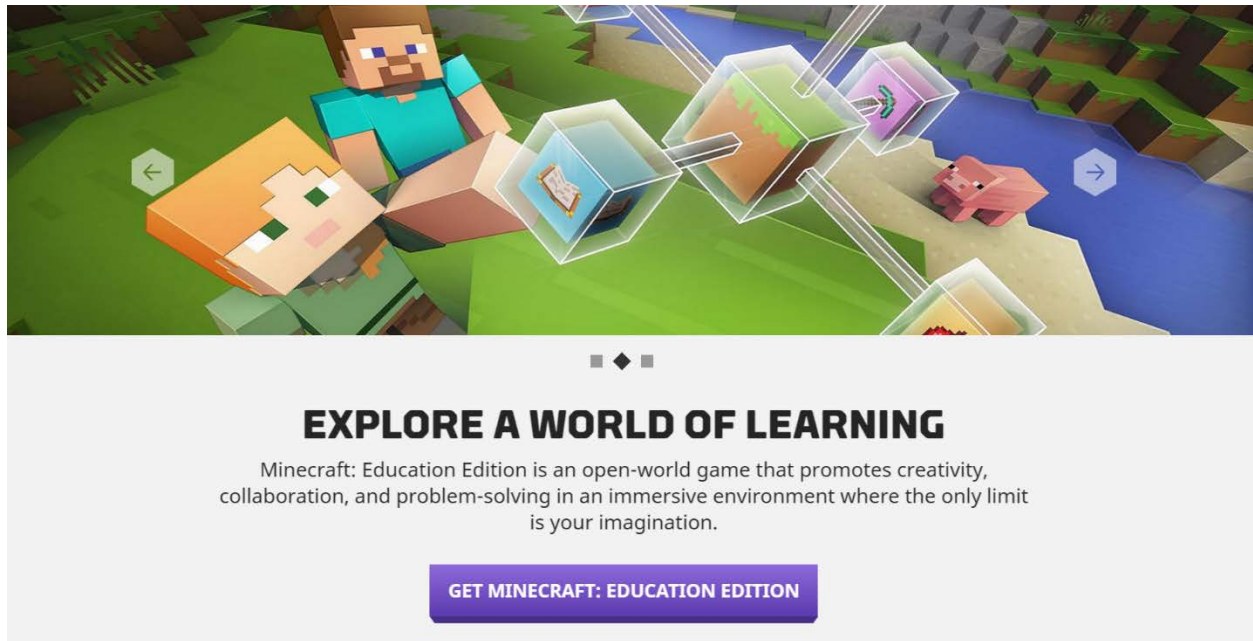


Figure 4.6. Screenshot from the Minecraft Education Edition homepage.

teachers have become more accepting of the use of tablets and other devices as a means of communication for children with disabilities (Alper 2014, 2017). In work examining children’s play in virtual worlds, researchers have found that children socialize and play seamlessly between the virtual and physical worlds and carry on relationships in both (A. Burke 2013). While fear-based rhetoric is still common, especially for children and video games, there is a growing body of work aimed at showing some of the more positive aspects of video games for children and those with disabilities (*e.g.*, Alper’s work with youth with disabilities (Alper 2014, 2017) and virtual worlds for disabled individuals (Stendal 2012; Stendal, Balandin, and Molka-Danielsen 2011)).

Counter to the narrative of video games being addictive or negative is a narrative about video games offering opportunities to learn and be productive. Scholars both in Games Studies and in Education have explored the ways in which games can be “serious” or “educational” (C. Steinkuehler 2010; C. A. Steinkuehler 2004; Squire 2005; Jenkins and Squire 2004). Serious

games are often marketed to older players and usually have some inherent purpose beyond that of “having fun” or play. For example, a simple 3-D puzzle game was created to help scientists find new ways to fold protein molecules (Cooper et al. 2010). Others have studied the potential impact of using video games and virtual worlds to earn currency, turning play spaces into places of work (Goldiez and Angelopoulou 2016; Castronova 2005; Nardi 2010). “Gold farming” is the term used for those who buy and sell game accounts and objects for physical-world currency (Heeks 2009). In *Diablo 3*, the “real money auction house,” for a time, allowed players to spend and earn real currency for in-game equipment. Educational games have been marketed to educators and parents for almost as long as video games have been in existence, with schools deploying games such as Oregon Trail¹⁰ in their computer labs in the late 1980s and early 1990s. Even Microsoft has created an entirely new Minecraft system, titled Minecraft: Education Edition¹¹, to cater to the needs of schools, therapists, and parents. On their website it states, “*Minecraft: Education Edition is an open-world game that promotes creativity, collaboration, and problem-solving in an immersive environment where the only limit is your imagination*” (“Minecraft: Education Edition” 2017). This narrative of educational games serves to both alleviate parental fears about the negative impacts of video games, while legitimizing video games as a place to play. When parents are choosing sites of play for their children, having the additional value of skills or lessons learned may alleviate some of the concerns about a video game. However, by couching games in terms of productivity and education, the essence of, and emphasis on, play simply for fun or pleasure is potentially diminished.

¹⁰ (Rawitsch, Heinermann, and Dillenberger 1992)

¹¹ <https://education.minecraft.net/>

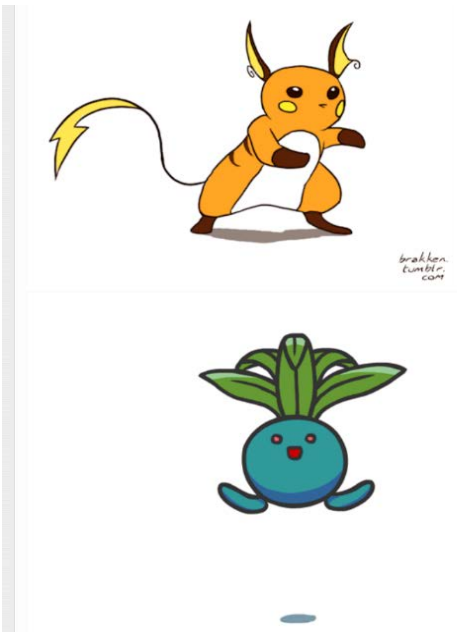


Figure 4.7. Signature block that includes gifs of Pokemon characters.

With the above narratives in mind, as I explore in the next section, I propose a third narrative about video games. In their study about Internet Gaming Addiction, Lemmens and Hendrike speculate in their conclusion that “[future] research may determine whether pathological gaming is mostly encouraged by the social competition or the sense of community provided by these online games” (2016).

These authors, and those more widely who have studied problematic game use, are citing a “sense of community” as the reason for playing the game. Perhaps, the authors of these studies are concerned about *what* communities these individuals are engaging in and *where* that engagement takes place. The actions of the members of the Autcraft community demonstrate video games do not necessarily have to be profoundly negative nor do they require the player be “productive,” but rather game spaces can be places of sociality that are more accessible to the participants than other places. Sites, such as Autcraft, do foster a sense of community and create access to social play previously inaccessible to the players.

4.2.1 Gamers in the Autcraft Community

As the Autcraft community is centered around a Minecraft virtual world, the entire community is steeped in

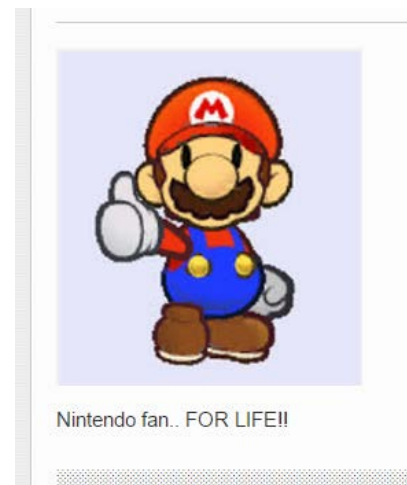


Figure 4.8. Signature block that includes an image of Mario and the caption, "Nintendo fan.. FOR LIFE!!"

Big Mario and Minecraft fan. Heat hater and Cold lover

Joined: 3 June 2015 POTW: 27 July - 3rd August 2015, and again 20 - 27th November 2016 Buddy: 5 October 2015, JrHelper 28 December 2015.

Trekkie

Dragons are cool!



Thanks to [redacted] 😊

Want yours? go here: [http://www.autcraft.com/forum/m/\[redacted\]ranks-for-fourms](http://www.autcraft.com/forum/m/[redacted]ranks-for-fourms)

Figure 4.9. Autcraft member signature block.

gamer community. While autism is the focus of the Autcraft community, gaming is, of course, another important aspect. However, other than playing within the virtual world, Autcraft community members also align themselves as gamers through their interactions with others in the Autcraft community. They discuss not only Minecraft, but other games as well, and engage with other technical aspects of gaming (e.g., computer upgrades, programming and modifying software).

Autcraft community members align themselves with gamer community through their interactions with others in the community, such as through chat in the virtual world or on the forums. In those spaces, they share their opinions and information about other games beyond Minecraft, as well as everything they know about Minecraft. In the Autcraft community forums there is an entire board dedicated to “Other Games.” Subject lines such as “*Something I found interesting about super Mario 64*” are common. Autcraft community members also add images to their “signature” block that appears at the bottom of every forum posting they write. These images denote a member’s interests, including the video games they play (See Figure 4.7 and Figure 4.8). Other items in community members’ signatures include badges to show rank (e.g.,



Figure 4.10. Home environment for child in Autcraft community complete with laptop, television, and two additional monitors.

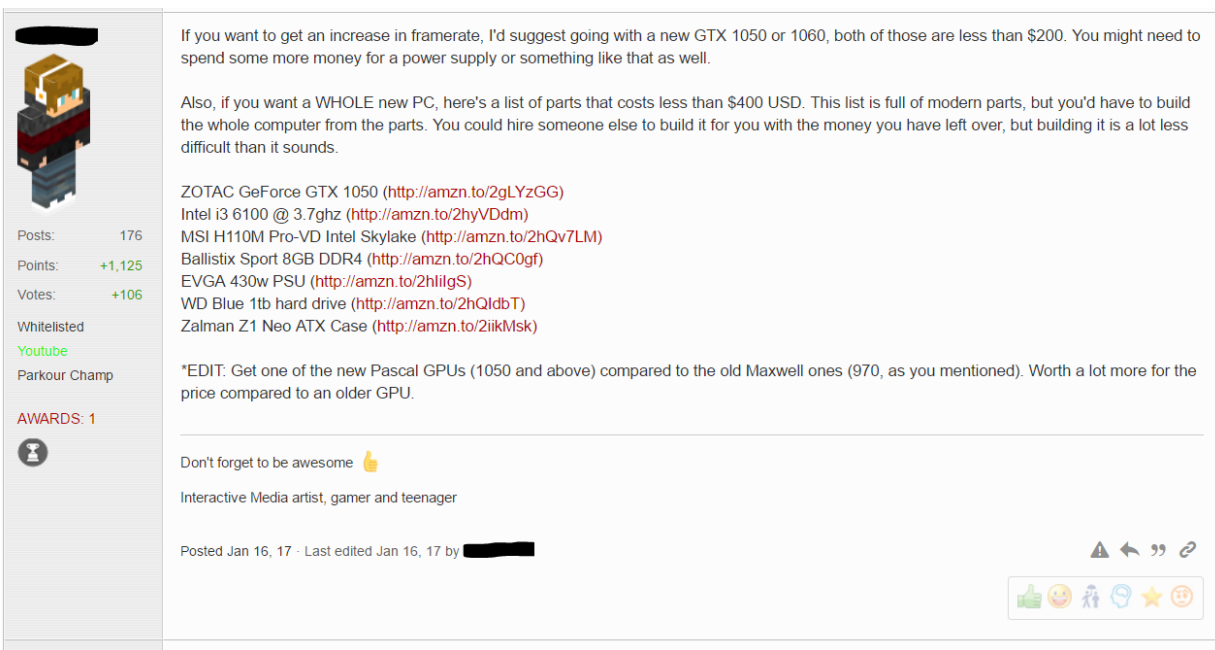
“junior helper”) and when a member earned “Player of the Week,” other interests (e.g., “trekkie”), and gifs and images of interests (See Figure 4.9).

Community members use a gamer discourse, referring to trivia and events in other games beyond Minecraft. For example, when I first introduced myself to the Autcraft community members on the forums, I was greeted with questions and comments of welcome. One member asked me, *“Do you work for aperture science? Jk x3”* Aperture Science is a reference to another game, Portal, in which a homicidal floating computer (GLaDOS) tests the player with a number of puzzle levels (Swift 2007). Aperture Science is the fictitious research company responsible for the creation of GLaDOS. Needless to say, my response to this question was, *“HAHA! Fortunately for you I do *not* work for Aperture Science.”* These sorts of “inside jokes” not

only cement Autcraft community members' identities as gamers, but also serve as a test for newcomers. This exchange helped prove that I was more than just a university researcher, but someone who knew and appreciated the community into which I was stepping.

Autcraft community members engage with others to share their knowledge about gaming specifications, hardware, and other technical expertise. To this end, the forums have a dedicated board, "Technical," where members can post tips, questions, and offer guidance on how to configure and use their technical systems. The topics in this forum go beyond just setting up a computer to play in the Autcraft virtual world. Topics such as "How to Get More Memory on a Ps4?" and "So, I've recently started dabbling in coding and plugin development" show the range from hardware specifications and configurations to discussions about programming software coding and modifying base computer games.

As I explored in Chapter 3, the physical spaces where the computer is located often get blurred with the social experience online, as children share their hardware specifications online and seek advice from others. As children get older, some get the privilege of having their own



The image shows a forum post with a user profile on the left and the post content on the right. The user profile includes a custom avatar, a list of statistics (Posts: 176, Points: +1,125, Votes: +106), and a list of awards (Whitelisted, Youtube, Parkour Champ, and AWARDS: 1). The post content begins with a recommendation for a GTX 1050 or 1060 GPU and a list of other PC parts totaling under \$400. The parts listed are: ZOTAC GeForce GTX 1050, Intel i3 6100 @ 3.7ghz, MSI H110M Pro-VD Intel Skylake, Ballistix Sport 8GB DDR4, EVGA 430w PSU, WD Blue 1tb hard drive, and Zalman Z1 Neo ATX Case. An edit note mentions a comparison to Pascal GPUs. The post ends with a signature and a timestamp.

Posts: 176
Points: +1,125
Votes: +106
Whitelisted
Youtube
Parkour Champ
AWARDS: 1

If you want to get an increase in framerate, I'd suggest going with a new GTX 1050 or 1060, both of those are less than \$200. You might need to spend some more money for a power supply or something like that as well.

Also, if you want a WHOLE new PC, here's a list of parts that costs less than \$400 USD. This list is full of modern parts, but you'd have to build the whole computer from the parts. You could hire someone else to build it for you with the money you have left over, but building it is a lot less difficult than it sounds.

ZOTAC GeForce GTX 1050 (<http://amzn.to/2gLYzGG>)
Intel i3 6100 @ 3.7ghz (<http://amzn.to/2hyVDdm>)
MSI H110M Pro-VD Intel Skylake (<http://amzn.to/2hQv7LM>)
Ballistix Sport 8GB DDR4 (<http://amzn.to/2hQC0gf>)
EVGA 430w PSU (<http://amzn.to/2hliigS>)
WD Blue 1tb hard drive (<http://amzn.to/2hQldbT>)
Zalman Z1 Neo ATX Case (<http://amzn.to/2iikMsk>)

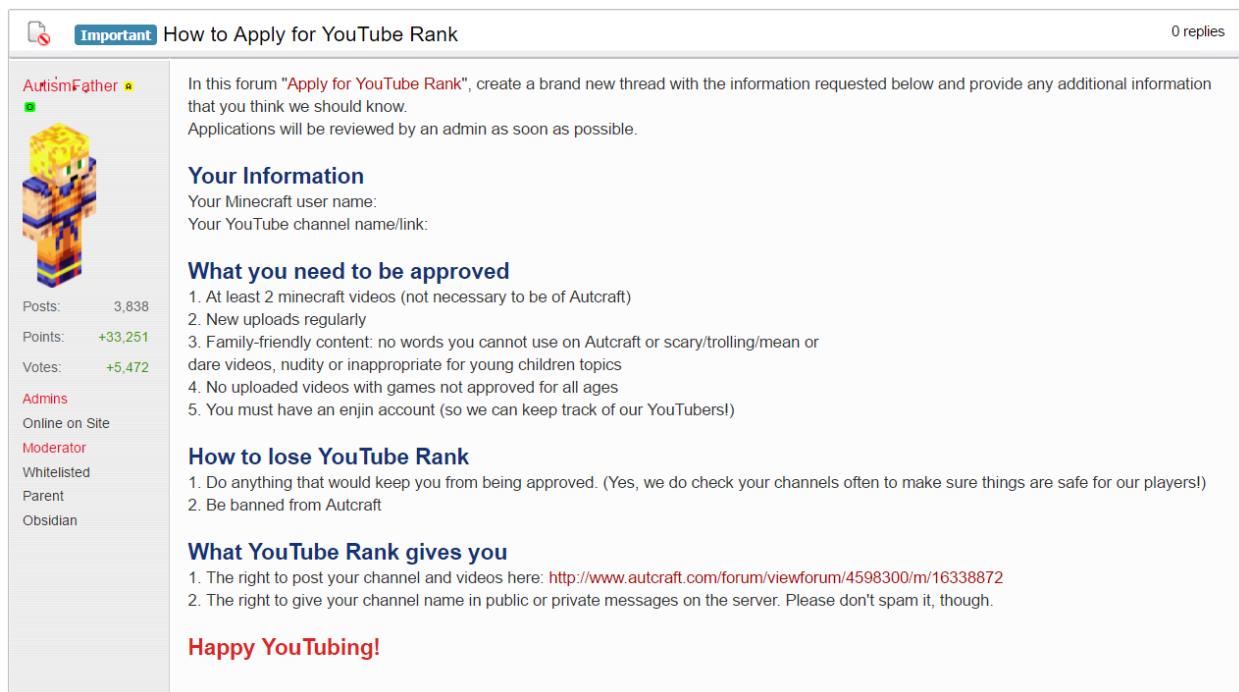
*EDIT: Get one of the new Pascal GPUs (1050 and above) compared to the old Maxwell ones (970, as you mentioned). Worth a lot more for the price compared to an older GPU.

Don't forget to be awesome 🍌
Interactive Media artist, gamer and teenager

Posted Jan 16, 17 · Last edited Jan 16, 17 by [redacted]


Figure 4.11. Forum post listing specifications for a computer that would run Minecraft for under \$400.

computers in their bedrooms. This is a source of pride for them and they post the specs of their computers and even pictures of their computing setups in the Autcraft forums (See Figure 4.10). They also seek each other's advice on the best hardware to upgrade to for Minecraft to work better. One Autcraft community member wanted specifications on upgrading their computer for less than \$500 to run Minecraft and watch YouTube videos. Other posters responded with various specifications they use themselves or have found on the internet (See Figure 4.11). This can also have the effect of leading these children to a sense of responsibility and accomplishment. They learn skills of how to customize their own hardware systems, what kinds of components they can add on, and how these different changes affect their gameplay. This work of arranging their physical space is a social experience that blends both offline and online spaces, and through advice-seeking, creates points of access both in their physical and digital interactions.



Important How to Apply for YouTube Rank 0 replies

AutismFather ■



Posts: 3,838
Points: +33,251
Votes: +5,472

Admins
Online on Site

Moderator
Whitelisted
Parent
Obsidian

In this forum "Apply for YouTube Rank", create a brand new thread with the information requested below and provide any additional information that you think we should know.
Applications will be reviewed by an admin as soon as possible.

Your Information
Your Minecraft user name:
Your YouTube channel name/link:

What you need to be approved

1. At least 2 minecraft videos (not necessary to be of Autcraft)
2. New uploads regularly
3. Family-friendly content: no words you cannot use on Autcraft or scary/trolling/mean or dare videos, nudity or inappropriate for young children topics
4. No uploaded videos with games not approved for all ages
5. You must have an enjin account (so we can keep track of our YouTubers!)

How to lose YouTube Rank

1. Do anything that would keep you from being approved. (Yes, we do check your channels often to make sure things are safe for our players!)
2. Be banned from Autcraft

What YouTube Rank gives you

1. The right to post your channel and videos here: <http://www.autcraft.com/forum/viewforum/4598300/m/16338872>
2. The right to give your channel name in public or private messages on the server. Please don't spam it, though.

Happy YouTubing!

Figure 4.12. Forum post explaining the rules for applying to the YouTube Rank in the Autcraft community.

Those in the Autcraft community express their connection to gamer community. Video streaming has become a cultural norm in gaming, especially with the advent of eSports (Kaytoue et al. 2012; Pellicone and Ahn 2017; Smith, Obrist, and Wright 2013). Streaming becomes a way for Autcraft community members to reify and reproduce their cultural connections to gamers at large (Pellicone and Ahn 2017). The Autcraft community has created infrastructure for community members that have their own channels, through a YouTube rank. To attain this rank, an Autcraft community member must apply and follow the guidelines set by the community administrators (See Figure 4.12). These guidelines for the YouTube channel include: minimum of two Minecraft videos, regular uploads, “family-friendly content,” games featured in videos must be approved for all ages and must have an account linked to the Autcraft community website. In the first six months of 2017, the YouTube board of the forums had 54 threads of Autcraft community members seeking YouTube Rank status. One of the rules, that the channel must have at least two videos about Minecraft, does not require the videos be about Autcraft specifically. Here, there is the assumption that the Autcraft community membership is about playing the game Minecraft, not solely to be a member of Autcraft for the community’s sake as a site for individuals with autism. While being a part of the Autcraft community may facilitate access to the game (through the promise of safety and inclusion), the members are first and foremost interested in gaming for the sake of gaming.

A community that centers its focus on a game platform, in this case, Minecraft, inherently becomes a community about gaming. Some Autcraft community members, particularly parents, may not themselves be gamers, but as with their children’s autistic identities, they learn to navigate the game and gamer community in order to understand and to play with their children.

4.3 *The Shape of the Body: How Identity Impacts Access to Play Online*

Throughout this chapter I have explored the intersection of autism and gamer as identities for members of the Autcraft community. To understand more fully how these identities affect access to social play, I explore the similarities in discourse around the sociality of those with autism and gamers. However, autistic and gamer are not the only identities these community members have—they may be siblings, parents, children, ascribe to certain genders, race, ethnicity, or socioeconomic status. In this discussion, I drive home the need for using a lens of intersectionality in future work by examining, in particular, the intersections of gender, autism, and gaming. Finally, I discuss how members of the Autcraft community work to show others the value in their identities and seemingly try to effect change in the perceptions of their various identities.

While it was impossible for me to collect certain demographic information, I was able to glean some information during conversations and interviews with Autcraft community members. For example, I am not able to analyze the socioeconomic status of individual Autcraft community members. The literature tells us that those with disabilities are often marginalized and are in a disadvantaged socioeconomic position (Fujiura and Yamaki 2000). However, mass media also implies that those with autism, especially those who are, according to mainstream media, “high functioning,” are upper and middle class, with families who work in the technology sector (Silberman 2015). Of course, families with autistic members are not relegated to one socioeconomic class or another. In one interview, a father said that they could not afford a car, but lived in a rural area. Allowing his autistic child to play with his friends in the Autcraft virtual world was the only way his child could participate in afterschool play. There is no way to know

the circumstances of each family within Autcraft without them volunteering this information. Similarly, I could not define race or gender for many of the community members.

4.3.1 Similarities in Discourse around Autism and Gamers

Autistic individuals and gamers are each steeped in their own cultural history, but these histories, in the past 70 years, have been intertwined. Both the modern autistic and the modern gamer grow out of the cultural heritage of post-World War 2. Indeed, one might say that these identities were truly constructed in the post-war era of the 1950s and 1960s (Silberman 2015; Fine 2002). Later, in the 1990s and early 2000s, during the rise of Silicon Valley, nerds, geeks, gamers, hackers, and autistic all became synonyms for one another (Silberman 2015; Nadesan 2005). These connections have left indelible marks on society at large, leaving people to understand the sociality of these individuals in a similar way, however they may identify.

Scholars, similarly, have followed society in their discourse about the sociality of both gamers and autistics—although, mostly not the intersection of both. In both cases, specific kinds of sociality are privileged as “better” than others (*e.g.*, face-to-face is better than text messages). Scholars within Psychology, Games Studies, and HCI have their own ideas of what social may look like in gameplay.

For the gamer, scholars often make certain assumptions about what types of sociality may or may not be happening during gameplay. Shaw writes, “*alternative socialities of gaming are rarely acknowledged. However, games can be played alone, together, alone together, or together alone*” (Adrienne Shaw 2015a, 116). Here, “alone together” refers to those who play single-player games in a co-located space and together alone is someone on their device alone in the physical world, but connected with others through the game interface (Adrienne Shaw 2015a).

We see this in the Autcraft community when members play together in the virtual world, but may or may not be playing with others, such as a sibling, concurrently in the physical world. Privileging specific types of sociality in gamers occurs in two different ways in the scholarship. First, as Shaw describes, Games Studies scholars tend to study those who are playing together online, such as in MMOs (Adrienne Shaw 2015b). Whether intentional or not, a focus on specifically the “together alone” paradigm emphasizes this sociality as the important one. Other socialities such as playing “alone together” get far less attention and are often discounted as a social experience (Adrienne Shaw 2015b). However, psychology researchers privilege physical world interactions over virtual world interactions. Gamers are seen as being anti-social when plugged into their devices and the relationships they are forming online to be not as authentic as offline social interactions (Engelhardt, Mazurek, and Hilgard 2017). The fallout from this discourse can be seen in things such as the Diagnostic and Statistics Manual authors’ interest in further research on Internet Gaming Addiction (American Psychiatric Association 2013). The criteria for Internet Gaming Addiction includes risks to relationships and loss of interest in hobbies. There is an inherent assumption in the discourse around games that those who play are not being social. Gamers appear isolated or only interacting with pixels on a screen. However, as many scholars in Games Studies have pointed out, there is a rich social life occurring behind and through—not to mention within the living room or gaming lab—the computer screen (A. Shaw 2010). As discussed in Section 4.2, similar rhetoric about sociality can be found when discussing the sociality of those with autism. By focusing on trying to “solve” specific kinds of sociality challenges, scholars (unintentionally) ignore other kinds of sociality. In this way, scholars are silencing/diminishing these other kinds of sociality as less than.

Otherring of their sociality means that both gamers and autistic individuals must search for places where they can be social and their sociality is given validity. However, those who are autistic gamers may find themselves othered twice—first, by society at large and, second, by gamers. Gamer discourse hypermasculinizes the act of gaming, making the activity only acceptable (and socially accessible) to those who identify as heteronormative white men (Salter and Blodgett 2017). To help reshape the discourse around sociality in mainstream media, scholars can work to combat this othering by understanding and designing for other ways in which people can be social. One solution to this is to search for the other ways in which people are being social both online and off. Elevating different ways of mediating sociality, rather than focusing on one, will begin to broaden how sociality is viewed in general. This will also empower those who until now have been told by both the academia and mainstream media they must change the way in which they are being social.

4.3.2 A Need for the Intersectionality Lens: Autism, Gamers, and Gender

Just as scholars must begin to study alternative ways of being social, more emphasis needs to be placed on the intersectional identities of those whose sociality they are studying. Mainstream media often portrays a similar picture of the anti-social gamer and the anti-social autistic. Envisioned, both are cis-hetero men, technologically savvy, and unable to create and maintain relationships with other people. In understanding the connection between autism and gender, Jack writes, “[e]quating Asperger’s with computer geeks has shaped definitions of the syndrome as associated with science and technology – and with maleness and masculinity” (2014, 106). As I have discussed in Section 4.2, maleness and geekiness is tightly associated with gaming. This becomes problematic when the women who are also autistic gamers become

invisible. Following, I use a lens of intersectionality to understand how autistic, gamer women are systematically silenced within the larger scholarship.

In the past couple of decades, women gamers have been getting more attention from scholars. This is particularly true of scholars using a feminist lens to understand how women gamers have been excluded from and oppressed by the gaming community (Adrienne Shaw 2015a). Masculinity has shaped gaming culture since the 1970s and 1980s (Kocurek 2015). This emphasis on masculinity has placed women who game in direct opposition to this idea. Games are often marketed to men, full of violence and objectification of women (Salter and Blodgett 2017). As in other sports, the discourse of playing “like a girl” shows the underlying assumption that women are not as good at playing games as men. In fact, some have gone as far as to say that women are physiologically incapable of playing as well as men—prompting researchers to study this phenomenon to test its validity, finding this presumption to be untrue and potentially damaging to women who wished to participate in gaming (Shen et al. 2016). This culture of objectifying and belittling women gamers then feeds into the accepted violence against women—both game characters and actual women alike (Salter and Blodgett 2017). The silencing and dismissal of certain groups of gamers goes beyond women—other marginalized groups such as LGBTQ and people of color, for example, also face widespread oppression in these spaces.

Autistic women have had far less attention paid to them both in mainstream media and in academia. First, there are overwhelming rates of diagnosis of autism in men, which some now say is not because men are more likely autistic, but rather women just present autism differently and are being misdiagnosed (Gould and Ashton-Smith 2011; Davidson 2007). In fact, some scholars have created theories such as the “Extreme Male Brain of Autism” that emphasizes the differences in the male and female brain, leading to the understanding that autism is a result of

someone having an extreme version of the male brain (Baron-Cohen 2002). In fields such as HCI, scholars often must excuse an uneven sampling of male to female participants because they are much more likely to recruit men than women (*e.g.*, (Ringland et al. 2014)). This uneven recruitment is due to requiring a diagnosis of participants—one which women often do not get until later than their male peers, if at all. In scholarly work, this further obfuscates the experiences autistic women have.

When taken together, women with autism who also game face a great deal of oppression, especially when trying to engage in gaming activities. Disability is already used frequently in the gaming community to other marginalized individuals, whether they are visibly disabled or not. In fact, the events of GamerGate were launched after a woman developed a computer game meant to help people better understand depression¹². For scholars, using a lens of intersectionality is essential for understanding the lived experiences of those who find themselves at the intersection of multiple oppressed identities. As other scholars have recently pointed out, using intersectionality as a lens in fields such as HCI is an important step in creating more inclusive technologies (Schlesinger, Edwards, and Grinter 2017). Schlesinger *et al.* suggest researchers report more thorough demographic information in their articles to give readers a better understanding of *who* is being studied, as is done in other fields such as Psychology or Education. This can be especially difficult when studying virtual populations where demographic information may not be readily available. This approach also runs the risk of creating more categories and labels in which to place people—something that the concept of intersectionality runs counter to. A good first step is awareness that by limiting the identities of those

¹² <http://www.depressionquest.com/>

participating in research, we, as scholars, are effectively silencing the voices of those we exclude.

4.3.3 Proving They are Valuable to Others

As autistic gamers, community members in Autcraft find themselves having to justify being allowed access to play both because of their autism and because of their love for games. Because they identify as autistic, other gamers dismiss and deride them. Autistic is often used as a derogatory term in gaming communities. Also, their autism makes them vulnerable to the opinions of expressive others, who may find their game play problematic. Autcraft community members engage in activities to make autism more acceptable to mainstream society, but also to make their gaming more acceptable to other gamers.

As I described in Section 4.1.2, as autistic individuals, the members of Autcraft engage in activities that reshape perceptions of autism both inside and outside of the Autcraft community. In main stream media, there is a tension between what is considered the “good” disabled person and the “bad” disabled person (McRuer 2006). The “bad” disabled person is as Garland-Thomas in *Extraordinary Bodies* discusses Douglas’s work, in which one of the ways society deals with the otherness of disability is to label it as dangerous (1997). If the disability cannot be fit or shaped into something “normal” then it becomes a threat to “normal” society. The “good” disabled person is portrayed in the context of how “normal” they are, even though they may have a disability. The other is often normalized through transformation of the disabled person into something more acceptable (Garland-Thomson 1997; McRuer 2006). This discourse is only slightly changed when focusing on autism in particular. While autism is considered a disability, with those “lacking in social skills”, the ability to speak or communicate, or being unable to

process parts of their environment, there is also the counter-narrative of the “genius autistic” (Rocque 2010; American Psychiatric Association 2013). Those with high intellectual ability are regarded as special and, while they may be a bit eccentric, are to be revered as those who will contribute great intellect or product for society (Rocque 2010). Journalists and writers have gone so far as to diagnose famous men of Silicon Valley such as Bill Gates and Mark Zuckerberg as autistic geniuses (Jack 2014).

Autcraft community members actively work to reshape the mainstream dialog about autism. First and foremost, members try to lead by example, following a set of tenets set out by community founders that encourage and promote pro-social behavior. Community members also engage in outreach to both educate others and to make their own expressions of their autistic identities more visible to others. Members of the Autcraft community also specifically target gamers outside their community. Much of the rhetoric is in the form of anti-bullying campaigns, but community members also write blog posts and make videos for other gamers to understand and accept Autcraft community members as part of the gaming community. These efforts are examples of how those with intersectional identities regain their voice and fight back against oppression. As scholars, by listening to these community members and understanding their activities, we can begin to elevate the voices of those who have long been silenced.

4.4 *Conclusion*

Members of the Autcraft community, the majority of which are children and teenagers, not only experiment with and explore their own various intersecting identities, but they are finding versions of these identities that work for them and for the Autcraft community at large. Autcraft community members may not only be disabled, but are going through various life

transitions, coping with their own identities, and generally dealing with all that non-disabled people do (Goodley 2011b; Warner and Brown 2011). Beyond this identity work, they are finding forms of sociality that mesh well with their identities. Autcraft community members find themselves othered in many ways. First, they are the targets of harassment, bullying, and trolling in online spaces, including in various Minecraft virtual worlds, for one or more of their identities (e.g., young woman autistic gamer). Second, Autcraft community members find they are assumed to not be social because they do not conform to neurotypical and non-gamer sociality. When Autcraft members are othered in this way, they are being denied access to social play. They spend their time defending themselves or avoiding the harassment instead of engaging in truly meaningful play. This need to find a form of social play that works for them has motivated many of the Autcraft members to join the Autcraft community in the first place.

In the next chapter, I explore further how access to social play for Autcraft community members is created through the work of the caregivers within the community.

5

Taking Care During Play: Children & Caregiving

In this chapter¹, I examine the role and activities of caregivers within the Autcraft community. Caregivers are those community members either formally or informally responsible for the caretaking of others within the community and are found in a range of ages and abilities across the Autcraft community. This caretaking takes many forms including parental roles, protective and policing roles, and through mentorship and friendship. Children are in a unique population in online spaces because, as in the physical world, they are still developing and face more potential risks. Because of this, caregivers are an important aspect of childhood—they affect what a child experiences and is exposed to. Through the role of caregivers, members of the Autcraft community can shape and create access to social play within the community. The question I seek to answer in this chapter is: *Who takes care of the body?*

5.1 *Caregiving of Children*

Before delving into caregivers explicitly, we must understand those who need care. Specifically, for the Autcraft community, the primary group in need of care are children. Children are often viewed as representations of the future (Kafer 2013) and, therefore, those

¹ Some of the writing from this chapter comes from or is inspired by the following previous published works: (Ringland et al. 2015; Ringland, Wolf, Faucett, et al. 2016; Ringland 2017).

looking after the children—the caregivers—have a responsibility for shaping that future. Both in society and scholarship, emphasis is placed on the importance of caregiving in children’s lives:

“When children do not have secure attachments with a primary caregiver, they are more likely to show higher levels of hostility and negative interactions with other children, less autonomous behavior, low self-confidence, and poor academic performance” (Siegel 2012).

Children, like all other human beings, are shaped and influenced by their environments and their relationship with others.

Childhood scholars argue that play is an important aspect of childhood development. As Autcraft is a community that caters to children with autism, we must first understand what caregiving of autistic children in online spaces entails. Following, I describe some of the previous work in children and their caregivers in online spaces and some of the perceived risks for children, particularly in these digital communities.

5.1.1 Caregiving and Children’s Play Online

Caregivers must find ways to give access to play to the children they are caring for. This is challenging for any caregiver, given the current push to decrease playtime across many areas of a child’s life (P. Bateson and Martin 2013). One solution for children has been to relocate some of their play to online spaces. There is a great deal of tension around children’s online activity. Scholars, parents, other caregivers, and social media designers must consider the risks, as well as specializing content to be appropriate and accessible for developing minds. Society’s acceptance of children’s use of online media has been fraught with controversy, including the idea of “screen-time” (*i.e.*, how much time an individual spends in front of screen media, particularly for entertainment) (Alper 2014; Micah O. Mazurek et al. 2012; Hiniker, Schoenebeck, and Kientz 2016). As I discuss in Chapter Four, especially when regarding games,

there is a great deal of concern about how much time a child spends consuming “screen” media because people fear children will become addicted or not be social with the people around them (Micah O. Mazurek and Engelhardt 2013). The American Association of Pediatrics (AAP) recently changed its screen-time guidelines for young children to allow more screen-time, especially in younger children, as long as that screen-time is to be social (*i.e.*, with a long-distance grandparent) (AAP 2016). This is a relaxation of previous rules that forbade screen-time in children under two. These guidelines also state that in “school-aged children and adolescents, the idea is to balance media use with other healthy behaviors” (AAP 2016). However, there is much debate among researchers, still, over what is a healthy amount of screen-time. Alper points out in her review of media consumption in children with disabilities that even in the last century there has been a consistent concern about media consumption, even during the era of radio before there were “screens” (Alper 2014). There is concern for parents about what is the “right” amount of screen-time and how to enforce it, which has the potential to strain the child-caregiver relationship (Hiniker, Schoenebeck, and Kientz 2016).

Much of the work examining children in virtual worlds has focused almost exclusively on the educational merits of interacting in these virtual environments, including virtual worlds and virtual reality. For example, Roussos *et al.* found that children were able to maintain a sense of presence within the virtual environment, allowing them to fully engage in the learning process (1999). Virtual worlds can impact literacy among the young users, which helps maintain online social cohesion (Marsh 2011).

Marsh examined children’s play in virtual worlds and challenges the notion of “real” versus “virtual” in the context of play online (2010). She found that children’s play in virtual worlds looked very similar to what their play would look like in the physical world. This has

implications for all virtual world research concerning children at play. As perceived risks of the outside world increase, children's use of online platforms has also increased with the norm to spend much more time in their own rooms on their own devices rather than gathering together in public spaces to socialize (Bovill and Livingstone 2001; boyd 2014). This, however, does not mean these children are any less social than their historical counterparts. Several researchers have studied how children are social online. This includes their use of social networking platforms (*e.g.*, (boyd 2014)), forums (*e.g.*, (Itō et al. 2010)), and blogs (*e.g.*, (Black 2008)). In all these scenarios, children are doing a great deal of socializing and interacting, albeit virtually. The same adolescent "drama" and relationship building that happens at school or at the mall also occurs online (boyd 2014).

5.1.2 Caregiving of Children Online: Risks and Bullying

With the growing number of children entering online spaces, concerns of parents and caregivers about online safety range from children viewing inappropriate content to sexual solicitation (boyd et al. 2009). Government agencies and other entities, such as schools and community programs, have begun to educate parents and children about online safety ("What Is Cyberbullying" n.d.; "Internet Social Networking Risks" n.d.). Attempting to understand the scope of the problem, researchers have conducted large surveys assessing the risks that online activity poses for children. These studies have found that some youth are more at risk than others when using the Internet (Livingstone et al. 2010; Ybarra et al. 2006). For instance, very young users in particular do not have the safety skills (*e.g.*, bookmarking websites so they can easily find a website again instead of having to search blindly online and accidentally happening upon

inappropriate or unsafe websites, or blocking messages from unwanted people) necessary to use the Internet safely (Livingstone et al. 2010).

Researchers have examined the risks of children's exposure to inappropriate content, such as pornography, and ways (*e.g.*, technological tools) to protect children from being exposed in the first place (Livingstone and Palmer 2012; Wolak, Mitchell, and Finkelhor 2007). For example, researchers have determined the effectiveness of spam filters and content blockers to reduce potential exposure of sexual content to children (Wolak, Mitchell, and Finkelhor 2007), finding that 42% of youth (ages 10-17) had been exposed to pornographic content within the last year and that filters and blockers did have some effect on reducing this exposure (Wolak, Mitchell, and Finkelhor 2007). Findings from the Second Youth Internet Safety Survey show a decrease in the number of youth reported receiving passive sexual solicitation (*e.g.*, ads or spam) from 19% in 2000 to 13% in 2005 (Ybarra et al. 2006), with targeted sexual solicitation (*e.g.*, unwanted chat messages) remaining stable during this time period (K. Mitchell, Finkelhor, and Wolak 2007). Despite these low statistics, parents continue to worry about sexual predators online (boyd and Hargittai 2013; boyd et al. 2009; Dombrowski, Gischlar, and Durst 2007).

Bullying in schools and other physical spaces has long been a concern. However, cyberbullying (*i.e.*, bullying that occurs online) has raised new worries for many parents and educators. There is no consistent definition of cyberbullying, other than it is very similar to physical world bullying (Bowler, Mattern, and Knobel 2014; Levy et al. 2012; Mishna, Saini, and Solomon 2009). Cyberbullying can consist of activities such as spreading rumors, making derogatory comments, and making threats (Mishna, Saini, and Solomon 2009). Cyberbullying is more often perpetrated by individuals who are known to children in their offline world (*e.g.*,

classmates) rather than strangers or individuals known only through online interactions (Mishna, Saini, and Solomon 2009).

In addition to fears about strangers, inappropriate content, and bullies, parents also worry about what inappropriate content their children might *generate*. There are always at least two people involved in any social aggression: the bullied and the bully. A national survey of parents found that children with autism were not only more likely to become victims of bullying, but also perpetrators (Anderson 2012). Parents are concerned with both sides of bullying: they do not want their children to bully nor to be bullied (boyd and Hargittai 2013). In a post on the Autcraft Facebook page, the founder warned of the potential for children becoming bullies. He states,

“The fact is, your child in the real world could be a completely separate person from who they are online and unless you are there to see if for yourself, you may not know who your child really is on the Internet.”

He discusses how parents may not know how their child is behaving on the internet, unless they are there to witness it themselves. He writes, *“The most polite and well mannered child could be a cold, ruthless bully on the Internet and their own parents would never even know it.”* There are any number of reasons that a person’s behavior may change when they go online. Anonymity is often cited as a motivating factor for trying out new and different behavior (Myers 1987; Christopherson 2007). This concern about who is the bully extends beyond the Autcraft community.

Definitions of what behaviors count as bullying vary by community. Outsiders may view many forms of negative social behavior as cyberbullying, whereas members of a particular community may have distinct classifications for these same behaviors and practices (Chesney et al. 2009; Foo and Koivisto 2004; Marwick and boyd 2014). Parents may also view some activities within virtual worlds—such as destruction of in-world property, harassment, and

theft—as cyberbullying, while participants in these virtual world communities term it grieving (boyd and Hargittai 2013; Chesney et al. 2009; Foo and Koivisto 2004). In fact, children and adults who participate in these online communities differentiate between trolling, grieving, bullying, and drama (boyd and Hargittai 2013; boyd 2014; Chesney et al. 2009; Foo and Koivisto 2004; Marwick and boyd 2014). However, parents who do not spend time in world tend not to differentiate between these different terms (boyd 2014). Because of the differing viewpoints about cyberbullying between parents and children, solutions to creating safe spaces can also differ, creating tension among the various stakeholders in online spaces for children.

Autistic children, despite being labeled as not understanding social relations, do understand when they are being bullied (Nadesan 2005). In his blog, the founder of Autcraft wrote about the prevalence of negative experiences both online and off for children coming to the Autcraft community:

“Most players come to us with tales of bullying and hate from other servers. Many of those same players experience the same thing from school and in other aspects of their life. They feel they have no friends, no one to talk to and they are angry.” (AutismFather, blog post)

Not only does bullying and targeting these youths pervade many different aspects of their lives, but there is a real emotional toll for them. This can be seen through forum posts by young Autcraft members.

“Everything I do just makes me more and more unhappy and stressed.....it's not like [me] to feel depressed but I just feel so depressed and down and stupid and just bad about myself. People are saying mean things to me. I.....don't want to post this but I need to get out of my system...” (Autcraft forums)

The emotional burden of being constantly bullied physically affects these children, even if the bullying is happening online. However, these children are finding outlets for their hurt and frustration through communicating with other Autcraft community members.

“When I’m getting to the point that I’m freaking out over something ... everything feels really overwhelming (like if I had to be out in a loud place with loads of people for a while it all builds up) and when it is being I guess let out everything feels horrible. Like I get to the point where I want to cut my hair off because the feeling of it on me gets too much. I’m not sure if anyone else gets like that or if it is just me being weird but it feels really horrible ...” (Autcraft forums)

Autistic children who must deal with bullying may not have the skillset needed to process their emotional trauma—something that would be hard for *any* child.

Caregivers are responsible for children in a variety of settings. Restricting and regulating children’s play spaces is not limited to the internet. This regulation affects children’s access to variety in their play. In some cases, this regulation is limiting and hindering (*e.g.*, children no longer run freely in the neighborhood or, in some cases, outside at all) (boyd 2014), and in other cases makes the play space safer and more inclusive. In the next section, I describe in more detail the role of the caregiver to situate my analysis of caregiving in the Autcraft community.

5.2 *Caregivers*

Caregiving and the role of caregivers is a crucial aspect to the Autcraft community, with all the members deferring to the hierarchy of caregivers (dubbed “helpers”) within the community. Broadly, caregivers are those who take care of others, either for monetary compensation or voluntarily. In fact, “[*in*] most countries, [*the care industry*] makes up the largest sector of the economy” (L. J. Davis 2010). Caregiving is an intricate part of the lives of children and of those with disabilities. Understanding the interactions of caregivers and those with disabilities allows us to understand caregiving for children and other vulnerable groups. As Garland-Thomson wrote, “*Disability itself demands that human interdependence and the universal need for assistance be figured into our dialogues about rights and subjectivity*” (2010).

For children, caregivers, such as parents and teachers, are responsible for a range of care from feeding, clothing, educating, and housing a child, to being responsible for their education and development. In Disability Studies literature, there is much debate over caregiving—who is responsible for individuals with disabilities and what kind of care should be taken (Kulick and Rydström 2015; Ginsburg and Rapp 2010). In this section, I discuss how caregiving relates to those with disabilities, who becomes caregivers, understanding the “disabled family” unit, some of the challenges in caregiving, and, finally, an in-depth exploration of caregivers of autistic children.

Most people in society have some type of relation to those with disabilities. They may know someone who has a disability or they may only think of disability in the abstract. For those who only think cursorily of disabled individuals, Titchkosky refers to them as those who care “carelessly” (Titchkosky 2011). As she puts it, “*As contradicting as it may seem, ‘disinterested caring,’ or better yet, ‘careless caring,’ is an ordinary way for people to achieve an ordinary relation to disability*” (Titchkosky 2011, 88). Indeed, some people find that they are hedging around those with disabilities, as Kulick and Rydström put it:

“by asking a question like ‘Why should I care about people with disabilities?’ – does not dispense with or annul a relationship so much as it affirms one. The fact that the question can be asked at all acknowledges that however one answer it, one already has a relation to people with disabilities” (Kulick and Rydström 2015, 275)

The problem with this type of “careless caring” is that much of the inclusion for those with disabilities becomes superficial. Titchkosky states, “*‘carelessly’ using the universal icon of access does the work of dis-attending to disability while gesturing toward a caring inclusion*” (Titchkosky 2011, 88). This type of superficial inclusion may sometimes do more harm than good, increasing the work for caregivers, and decreasing the odds of being able to live more

independently for disabled individuals. For example, creating child-safe online communities that are not monitored by adults, but only monitored through technological interventions (*e.g.*, blocks inappropriate words or only allows for select text in chat, but otherwise does not monitor the children’s activities). Children will often find work-arounds for these sorts of systems and can engage in whatever social behavior they wish (Meyers 2014). Without the presence of caregivers, bullying and other unsafe behavior can occur, leaving children—especially those already vulnerable to bullying, such as autistic children—open to risk.

Disability Studies scholars argue that one of the reasons we, as human beings, are obligated to care for those with disabilities is because they are different from us, and *“from this position of difference they make demands that enmesh us in a relationship – whether we like it or not”* (Kulick and Rydström 2015, 274). Other scholars postulate that there is an obligation for people to become caregivers because every human being, at some point in their lives, is dependent on others. Kittay asserts that there will always be those who are dependent in society and, currently as well as historically, the task of “dependency worker” falls onto women (Kittay 1999). Dependency work highlights the task of caregiver as something that takes time, energy, and other resources to complete, even though this “work” often goes unpaid.

Some people take on caregiving roles as their occupation or they find themselves invested in helping those with disabilities (as allies), while others end up in caregiving roles because they (feel they) have an obligation. Caretaking often gets placed as a burden on the family rather than making caretaking a broader systemic issue (Mladenov 2015). *“Despite a quarter century of activism, policy innovation, and the substantial provision of public services, the securing of care for disabled members rests with the family”* (Ginsburg and Rapp 2010). This

burden includes the financial burden of caretaking as well as the time and energy from various family members (D. T. Mitchell and Snyder 2015).

To help understand how families adopt caregiving roles, Disability Studies scholars have explored the “disabled family” as a unit of analysis:

“The notion of the ‘disabled family’ conceives the family unit as a whole and takes this as the starting point for analyzing the material, cultural and personal challenges faced by disabled children and their families” (Goodley 2011a, 43)

In studying this “disabled family” unit, McLaughlin et al. found a number of challenges faced by such families, including: relying on benefits that are difficult to obtain, living in poverty (as working parents must take time away from work to care for the disabled family member), lives disrupted by medical appointments, and, perhaps most pertinent to this discussion, children being excluded from friendship groups and parents excluded from parent groups (McLaughlin et al. 2008). Children are not able to access social play groups as they are excluded for a number of reasons including their own physical and emotional challenges, lack of time, or lack of access due to caregiver constraints.

These challenges to caregiving do not end when the child grows up. Adults with disabilities are often also reliant on caregivers of various forms—including in-home nurses, aids to manage household tasks, and full-time live-in caregiving. As adolescents and adults seek to gain independence, there comes a tension to what kind of caregiving is appropriate. The notion of dependence, whether it be a child or a disabled adult, creates an asymmetrical relationship between caregiver and caretaken (Kulick and Rydström 2015). Those with disabilities are often infantilized, even as adults, which has the potential to greatly reduce quality of life (Kulick and Rydström 2015).

Some scholars have found that access to technology and the internet has the potential to help regain some sense of independence for those with disabilities. However, even with the benefits and freedoms of going online enjoyed by individuals with disabilities, there are some who cannot live completely independently, some needing physical care throughout their lives (Anderberg and Jönsson 2005). These individuals rely on their caregivers to help them access the infrastructure needed to go online. For those with mobility impairments, for example, a caregiver may be required to help set up the machines or even do some of the input on the device. There is the potential for tension here between the caregiver and those dependent on them as to when, how, and what content is being accessed (Hiniker, Schoenebeck, and Kientz 2016; Kulick and Rydström 2015). However, when able to gain access to the infrastructure that enables online access, there is the potential for a better quality of life for disabled individuals wishing for more independence, as I explored this technology infrastructure in more detail in Chapter 3.

5.2.1 Caregivers of Autistic Children

Having a child with a disability can be stressful for any family, no less so if the child has autism. In particular, caregiving plays a significant role for autism, as the challenge of caregiving responsibility—including the amount of time, energy caregiving takes—increases (Silverman 2012). In both the case of children and disabled individuals, caregivers are supported by infrastructure in place by larger governing bodies—how much and what kind of support this entails varies across regions and individuals. In the case of autism, getting a diagnosis sometimes does not happen until the child is three years or older (Grinker 2007). Obtaining the diagnosis is both difficult for parents to accept and also a relief because the diagnostic label allows for infrastructure and supports to help the family (Grinker 2007; Thompson 2007). A family's

reaction to a diagnosis of autism can be varied, as well as their view of how to handle the symptoms of autism (Ferguson 2003; Straus 2010). Historically, parents, in particular mothers, were to blame for their child's autism (Sousa 2011). The narrative of the 1940s-1960s was that mothers were too cold and aloof towards their children, which caused these children to shut down emotionally (Sousa 2011). This was the same era where parents were encouraged to institutionalize their children if they were impaired (Ferguson 2003; Grinker 2007). More recently, the cultural trend has been to see these mothers of children with disabilities as “warrior-heroes” triumphing against society and their own child's disability to raise their children (Sousa 2011). This historical context colors both how caregivers of children with autism are viewed and how they interpret their own roles.

Individuals with autism and parents of those with autism have published books describing their experiences with autism (*e.g.*, (Grinker 2007; Willey 1999)). These tend to describe the great lengths those with autism have to go to blend into society or to get by as best they can, and the message is generally of acceptance of their autism, rather than searching for a cure. Many parents of children with autism become advocates for their children and find different ways to champion the “cause of autism,” either by seeking ways to find a cure and/or by joining in with the culture of autism (Rocque 2010; Straus 2010). For example, Solomon describes many different family variations, from those participating in many different therapies for their children and those who fully embrace their child as being forever autistic (2012). Further, there have also been several books published by those with autism that act as both handbooks for the recently diagnosed and as guides to others who may be seeking to understand what it is like to be autistic (*e.g.*, Willey's *Pretending to be Normal* (Willey 1999)).

Preissler advocates for play to become more of the pivotal focus in early intervention therapy for children with autism (2006). She states,

“It is often difficult for parents of children with ASD [Autism Spectrum Disorder] to take a step back from administering therapy and just take time to be a parent and enjoy interactions with their child. Play is one way parents can interact with their children in a natural and supportive way” (Preissler 2006, 240).

As caregivers, parents can use play as a way to mediate their sociality.

Parents are not the only caregivers responsible for autistic children—teachers, therapists, and doctors, for example, all must play a role in a child’s development and growth. These different caregiving roles help distribute some of the “dependency work” and rely on the expertise of the different caregivers to give each child what they need to thrive. Parents must balance their own needs and that of their family as they engage with their other child’s caregivers. As I explore in the next section, Autcraft community members in caregiving roles have implemented several strategies for keeping children safe.

5.3 Caregiving in the Autcraft Community: Creating Safety

In the Autcraft community, caregiving takes place both in formal and informal capacities. Autcraft administrators have devised a hierarchy of roles that various community members can be given. This infrastructure helps distribute the responsibility of caregiving across the community, which is necessary given the large number of community members active at any one time. In turn, community members volunteer for caregiving roles to feel good and give back to the Autcraft community.

The Autcraft community is set up in such a way as to reduce the potential for negative or inappropriate behaviors that might emerge over time. Parents explicitly control access, monitor

and regulate chat communications, and restrict content they deem as potentially problematic (*e.g.*, frightening, inappropriate) to the children. These actions go beyond the definitions of risk the parents provide in interviews, chat forums, and websites, which are largely focused on specific concerns around bullying, and move into a set of risks that are much harder to define and may vary from parent to parent (*e.g.*, content that is inappropriate for one age group of children, but not another).

Following, I describe the hierarchy of caregiving roles, the rules of the community as decided by the caregivers, encouraging others to become caregivers, and how making safety in the Autcraft community creates access to social play.

5.3.1 Autcraft's Caregiving Infrastructure

The primary function of caregivers in the Autcraft community is to keep members safe, thereby creating one way to access to social play. Caregivers are also responsible for care of the overall community with roles such as maintaining cohesion of the group—that is, stopping fights and meltdowns from spreading—and maintaining the technical infrastructure of the community so that it is accessible.

Certain members of the community are promoted to higher ranks to help other players and to enforce the rules. These ranks include administrators, senior helpers, and junior helpers. Administrators have the ability to be invisible in the game in order to monitor activity unobtrusively and to maintain the game without being bothered by other players. They do not use this functionality all the time, but find it useful when they are just checking in on the community chat or need to do infrastructural work within the virtual world (*e.g.*, building maintenance or testing out new modifications to the world). Administrators are viewed as the leaders of the



Figure 5.1. Large statues of the community administrators.

Autcraft community and hold a place of high honor, including having statues built of them (See Figure 5.1). Helpers are both adults and children that have been selected by the administrators as being responsible enough for the position. Junior helpers are children, while senior helpers are adults in the virtual world. There is no formal application process for these positions. Rather, they are “earned” through helpful behavior exhibited throughout the community. Because of this, many community members “act” as helpers before they are ever officially assigned the role.

Administrators, senior helpers, and junior helpers monitor all chat within the virtual world. In addition to administrative monitoring of chat, the players also monitor each other’s chat and activities while in the virtual world. This evidences the extent to which the players have internalized and come to rely on the emotional security the world's predictability affords via enforced rules. Players frequently chime in via chat that a rule is being broken. This behavior creates a self-sustaining safeguarding practice. It speaks to the way in which the rules created by the parents have become important to the children as an embodiment of safety. Below is an

excerpt from field notes describing an incident in which players were all role-playing at another player's castle, "bellum," who happened to be offline at the time. One player, "piratescurse," was attempting to police these other players for not asking for permission to be in the castle and was in turn chastised for yelling:

The player, piratescurse, tells off some other players for being mean by going into another player's, bel's, castle without permission. Another player counters by saying that piratescurse is "taking over" the castle by policing it. Piratescurse insists that the players ask permission, this time with force, "guys ASK BEL FIRST." Another player chimes in to admonish piratescurse for the use of all caps. More arguing unfolds, with another player in the chat complaining that players are taking their things from the castle. Finally, one player calls for another player to be banned from the game. Piratescurse does not give up the fight easily, and begins calling for anyone to help him, "someone came into my [castle] without asking HELP HELP". (from field notes)

As in the example above, when piratescurse first wrote in all caps, another player noted the rule breaking by reminding everyone in chat, "*caps piratescurse.*" In this instance, the argument ended when a senior helper stepped in and defused the situation. The most common activities that are policed are that of inappropriate language, use of caps, and spamming. This above example is a common form of caregiving that occurs within the Autcraft community. As other community members chime in, caregiving is a responsibility that is spread across the community. As this example illustrates that rules—following them and enforcing them—are one way caregivers stake out their responsibilities.

Tightly controlled access and explicit rules to Autcraft is key to its operation, because any given parent might view particular actions or content differently from another. For example, some sexual content might be viewed by one parent as a normal part of adolescence and by another as deeply inappropriate. Likewise, humor and jokes are highly contextual and person



Figure 5.2. Herobrine from Minecraft lore. The horror story is perpetuated as fan fiction through various websites.

dependent: one person's joke is another's bullying or offensive behavior. Rude behavior, name-calling and bullying are explicitly prohibited by the community rules of Autcraft:

No one likes to be called a name, no one likes it when someone is mean to them, and no one likes to be bullied.

Explicit rules also regulate acceptable chat discourse, including the prohibition of chat spam or caps, swearing, name-calling, and bullying (See Appendix E for full list of rules). These rules govern both the chat content (*e.g.*, dating, scary content, etc.) and the mechanisms by which the conversations may take place (*e.g.*, no bullying, spam, all caps, etc.). Due to the tension between conflicting parental opinions, the rules of the community are explicit. For example, the community actively discourages and restricts potentially "scary" content by regulating avatar appearance and chat content. Given the wide age range of players, the community restricts the use or discussion of fictional monsters associated with the game, often referred to as the "no

Herobrine²” rule, because such content may be intimidating and frightening for younger players (See Figure 5.2).

A parent justifies the rules on the community forum: “*We want [this server] to be a safe, happy, comfortable place for all our players to enjoy no matter what they're afraid of or who they're talking to.*” This parental stance, focused on protection, particularly for younger children, can lead to some resistance from the older players. For example, the “no dating” rule prohibits players “to talk about dating, or love, or marriage, or being a boyfriend/girlfriend” as well as “pretending to talk about these things...[including] role playing.” These explicit rules engender meta-discussions among the players about dating via discourse around the rules themselves:

```
<matt_awesome> *hugging Candy3421sis*
<matt_awesome> This is just friendhugs
<matt_awesome> Dating is not allowed on autcraft
<(Donator) babes4> whats dating
<Candy3421> no plez
<cryptic1200> there are apparently a lot of things not allowed on autcraft
<matt_awesome> Dating is what you do with your girlfriend
<(JrHelper) bb1135> matt_awesome please stop
<matt_awesome> Ok sorry
<matt_awesome> I just told about the rules
<cryptic1200> we wouldn't want autistic people to breed, obviously...
<cryptic1200> that was sarcasm
<matt_awesome> Listen to bb1
<(SrHelper) GlovedPlayer> Hey, Cryptic, that's not the point and it's a mean thing to say, even if you're joking :/
```

² Herobrine is a fan fiction monster in Minecraft lore.

Caregiving goes beyond just simple rule enforcement. Community members are not just told they are breaking rules and punished, as is reported happening on other Minecraft community virtual worlds. Rather, the rules are explained where they are broken. As in the above example, “it’s a mean thing to say, even if you’re joking,” illustrates the reason for the rules, not just that the rules arbitrarily exist. Punishment is only meted out when a community member is being particularly disruptive and clearly needs a “time out” – a determination which is made in the moment by the caregivers present. Caregivers must use their judgement in these moments and react accordingly. Senior helpers and administrators are given seniority and final say if a punishment is contested.

Of course, rules must be enforced to be effective. And, as in this example, several types of players—junior helpers, senior helpers, and other players—may work together to stop someone from engaging in what has been deemed inappropriate discourse. This becomes especially important for the Autcraft community as the anonymity of the internet allows for community members to potentially hide behind usernames. This is a boon for the community in that they are safe from those who wish them harm knowing their “real” identities, but potentially problematic for keeping track of the demographics of membership or being able to aid a child in the physical world should they need it. In the next section, I examine how caregivers mentor others and even encourage others to take on the role of caregiving.

5.3.2 Mentoring Other and Encouraging Caregiving in Autcraft

Parents are encouraged to participate in the Autcraft community. This encouragement is to help parents monitor their own children’s activities—to moderate and teach their children while online. In an Autcraft Facebook post (See Figure 5.3), AutismFather writes,

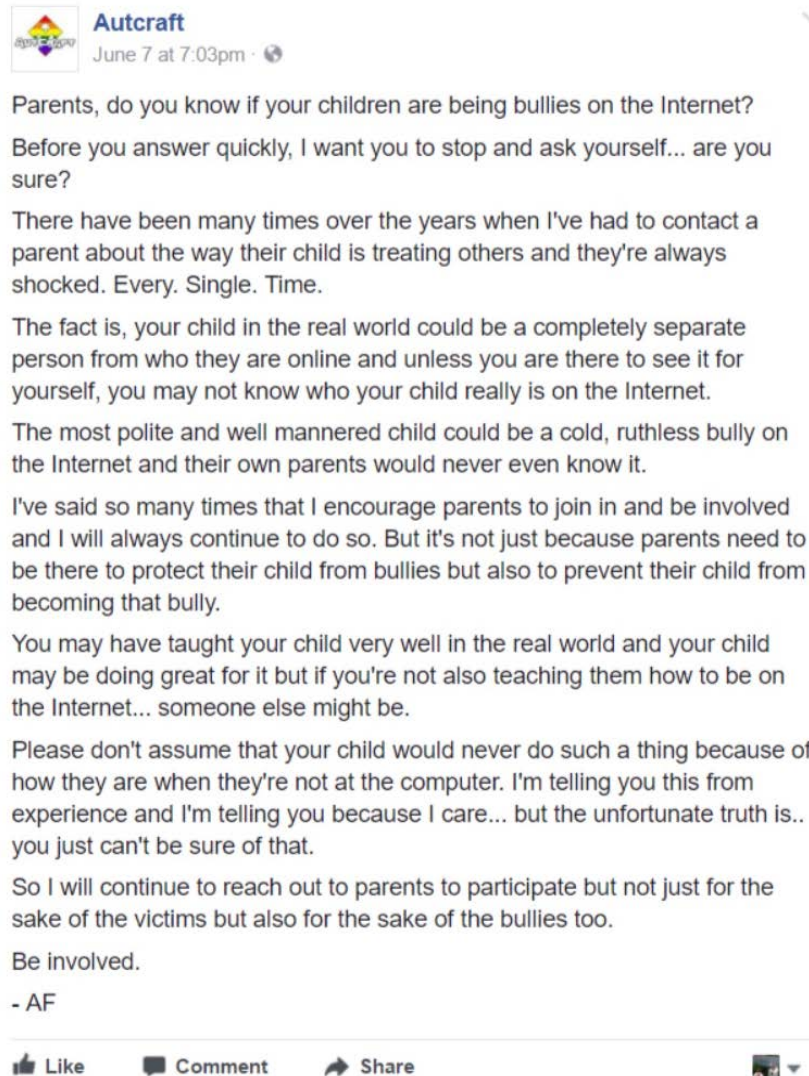


Figure 5.3. Screenshot of a Facebook post about children in the Autcraft virtual world.

“I’ve said so many times that I encourage parents to join in and be involved and I will always continue to do so. But it’s not just because parents need to be there to protect their child from bullies but also to prevent their child from becoming that bully.

“You may have taught your child very well in the real world and your child may be doing great for it but if you’re not also teaching them how to be on the Internet... someone else might be.” (AutismFather, facebook post)

As discussed in Section 5.1.2, children not only have the potential to be bullied online, but also to become bullies. This encouragement goes beyond friendly advice to be a caregiver to the

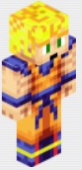
children not only offline, but online. This also includes a warning—if parents are not careful (and caregiving) they run the risk of having their children learn bad and bullying behaviors from strangers online. Here, parents’ responsibility is laid out for them—they are responsible if their child becomes a bully (or is bullied), especially if they do not know about it. And parents are responsible for “teaching” their children how to behave. This could become problematic for parents who must work or are simply not technologically savvy enough to understand what their child is doing online. Here, the Autcraft community steps in to help distribute some of this caregiving across community members.

Parents who can be online with their children, then, inevitably are also caregiving within the community for other children. Parent-administrators (admins) and Senior Helpers are parents and adults who have been officially recognized as caregivers within the Autcraft community. This causes trouble when the caregiver resources are stretched too thin and there are not enough caregivers to maintain the integrity of the interactions. This is perhaps one reason for the plea for more parents to become involved—especially as the popularity of the community has grown and the number of community members has increased.

A second point of tension is agreement on *how* to be a caregiver for someone else’s child. In an interview, one mother discussed her reason for ultimately leaving the Autcraft community. She did not agree with decisions about the rules and how to enforce them, especially for children who were less communicative in the chat than others. While this could be interpreted as the equivalent of sending a child to school or daycare where they are overseen by another caregiver, here the structure is less clear. Less personal information is recorded and, in some cases, if a child has a problem, there is no way to inform the parents of the incident. There are also less safe-guards in place; if a child reports a problem in their home or school, due to lack of

Helping a Suicidal Person 4 replies

AutismFather ▲



Posts: 4,110
Points: +33,551
Votes: +5,679

Admins
Online on Site
Whitelisted
Moderator
Parent
Obsidian

For me, I try to do a few key things...

1. make sure they know that I understand what they're feeling. I know how dark it can be and how it feels like it will never change. I let them know that I can't promise that it will change or get better for them, only that it did for me. And if it can for me, it can for anyone. No false promises, only understanding how hard it is. Be honest.
2. let them know that I don't see what they see. Whether they see it, their parents see it, the bullies at school, the kids that won't be their friends.... I see them differently than all of that and if I can see a good person in there, other people can too.
3. get them to either recognize something that is good about them or something they can do; or get them working on something. In Lucas's case, he was destroying his home. It took a while until he was calm enough but I got him over to Skip's bully board to use his skills as a builder to start creating something instead of destroying something. He was contributing. This is where my memory of thousands of kids comes in handy. I can usually tell each of these kids something I've noticed in them during their visits to the server. Not everyone has that luxury but you can usually dig out something good about them if you get them talking enough.

Last night ██████ talked to one kid for a few minutes and felt she got no where and said to me "I don't know how you do this". First of all, if you've talked to someone and didn't get angry with them or make them feel defensive... you helped. A lot. Just being the person that gave them one on one attention for a little bit without being angry or judging them is often enough to at least buy some time until they can get more help.

9 times out of 10, a suicidal thought is actually a scream for someone to just listen.

That's where 1 and 2 come in from my short list. Stating that you understand tells them that you didn't just see words on the screen, you heard what they said. Letting them know you care tells them that they're not as alone as they thought they were 10 minutes ago. All they really want is for someone to listen when they try to tell other people how hard it is.

I didn't stop ██████ from wanting to killing himself because I got him building rather than destroying, that was just the clincher. I got him to stop wanting to kill himself by letting him unload on me for 3 hours in chat. He's still being bullied. He still hears all those bad things from other kids. And he'll likely fall back to the point where he may consider suicide again.

But for now, he knows that there's at least one person that will listen to him and that cares.
For most people, that's all anyone ever really needs.

Figure 5.4 Forum post on helping suicidal community members.

information and the problem of international borders—where child protection laws vary by country—there is sometimes little that can be done to help them. For example, when one child became overly stressed and was acting out in the Autcraft virtual world chat, admins eventually had to mute her to maintain the chat for the other children. When she threatened self-destructive behavior and then logged offline, there was no way to contact her parents and tell them what had transpired. Fortunately, in this event, she did eventually return to Autcraft and seemed to have overcome her emotional challenges. More frequently, children will log on the Autcraft virtual world and profess suicidal ideation. While I was never witness to one of these events, the founder of Autcraft states they happen at least once per week. The trouble, again, is no easy access to a child's parents (if the child has not given any contact information to administrators)

when this is happening—with sometimes no way to know a child’s location to warn authorities. When this happens, administrators bring the child into a private chat channel and try to talk through the problem in text chat (and sometimes via voice chat). Administrators and senior helpers have exchanged information in the forums to help each other deal with these situations as they arise (See Figure 5.4). These events occur as this population of children is challenged with their own emotional regulation and stigma and harassment from others.

While the hope is that parents can be caregivers to their children consistently and constantly, this, of course, is not reality. Parents have obligations to work, care for other children, and maintain their homes. The tensions around when and how much a parent can surveil their child when they are in online spaces continue to shift and morph as their child grows and the types of media available also changes. Here, the Autcraft community has tried to both make sure there are caregivers online at all times within Autcraft community spaces, but also to encourage other parents not yet a part of the community to join and help be part of the caregivers.

5.4 *Safety as Access to Social Play*

Safety is a large part of caregiving—keeping children safe and balancing the risks children must face in their daily lives to grow as people is a balance that caregivers must find on a daily basis. Defining what is “safe” is the first challenge for caregivers. Caregivers readily label certain practices as *unsafe* (e.g., bullying); an agreed upon, coherent definition of safety eludes caregivers’ explicit discussions (e.g., blogs, chats, forum posts, even posts about rules, etc.) and for good reason. Safety must be made, it cannot just be discussed. Any attempts by

caregivers to explicitly define the practices that form safe conduct will have a limitation in that what is “safe” cannot be universally applicable to all situations and contexts.

In the context of Autcraft, safety comes out of a continually negotiated process through which both caregivers and children strive for a balance between risk and autonomy in a given situation. Through both social and technological means, the concept of online safety emerges as one that is dynamic, contextual, rapidly shifting, and continually negotiated. Through their interactions, caregivers and children continually define and redefine the fluid boundaries between safe and unsafe, allowing for the evolution of both the technological platform’s capacity to allow for safe practices and the inhabitant’s social practices the platform is meant to guard. No static definition of safety can account for what we see in the Autcraft community: safety is a process.

The boundaries between “safe” and “unsafe” are tightly controlled by the caregivers. The administrators of Autcraft must navigate the tension between inclusion of those who need such a space, with protection of the space from the general public who might want in. Likewise, they must balance the needs of developing emotional maturity—through questioning discourses and promoting helpers—with the need to protect those inside the boundaries of the safe space from harm. Access to Autcraft is regulated through a vetting process, which culminates in individuals being placed on a whitelist, allowing players to access the game. This gatekeeping practice ensures that players have a connection to the autism community (*e.g.*, have autism or are a family member or friend of a player with autism). This personal connection to autism attempts to alleviate the stigma towards autism and reduce the likelihood that members of the group will victimize one another (R. L. Collins et al. 2012). Typically, the vetting process occurs when individuals describe their connection to autism and agree to follow the rules of the community.

Allowing only those with a direct connection to the autism community helps ensure safety by allowing players to express their differences without fear of repercussions such as experiencing stigma. This helps prevent some of the “careless caring” as discussed above in Section 5.2, by ensuring individuals have some investment in the community (Titchkosky 2011). As the founder has said of those who wish to join the Autcraft community without a connection to autism: they have communities everywhere else, Autcraft is the only place that is explicitly trying to keep autistic children safe. He has also speculated that if every server community could do the work that Autcraft community members do to keep their young players safe, then the Autcraft community would not need to exist. Work like this is now happening on other servers for children, such as the Connected Camps³ summer and after school programs. As I explore in Chapter 4, the Autcraft community has set up explicit boundaries, and the requirement of having a connection to autism is one of them.

There is one group of individuals who are explicitly excluded from the Autcraft community and denied access to the play space—trolls and those who mean harm to the players with autism. This exclusion is controlled mainly through the whitelist of permitted players. The administrators maintain a list of banned usernames that keeps most of the mischief makers at bay. However, one hacking incident led administrators to take more stringent precautions. Hackers had managed to redirect the IP address of the Autcraft server so that when players tried to log in they were sent to another virtual world instead. As reported in an administrator’s blog⁴, *“Once there, they were encased in a bedrock box from which they could not leave and were told*

³ <https://connectedcamps.com>

⁴ <http://www.stuarduncan.name/autism/the-day-hackers-told-6-year-autistic-children-that-they-should-kill-yourself/>

that they were rejects from society, degenerates and that they should kill themselves.” When administrators of Autcraft were able to stop the hackers from redirecting Autcraft players, the hackers then launched a DDOS (Denial-of-Service) attack on the Autcraft virtual world, which is a means of technically denying access to the virtual world for everyone. As the administrator put it in his blog, the hackers attempted *“to make Autcraft unplayable for everyone because if they couldn’t tell the children to kill themselves directly, then they’d at least try to take everything away from them that they could.”* These attacks eventually caused the Autcraft administrators to change the Autcraft IP address—meaning community members had to understand how to reconfigure their own settings in order not to be locked out along with the hackers. This required quickly educating Autcraft members how to change their settings in order to gain access to the virtual world again. Autcraft administrators had to do this education covertly in order not to alert the hackers to their fix. Administrators made obscure public announcements about “news” that could then be found within the password-protected Autcraft website that would hide the new IP-address from the hackers. This caused some confusion for Autcraft community members, particularly those who are less technologically savvy. Creating access for some inevitably means denying access to others—especially when the goals for one group are in opposition to the goals of another group.

This inclusion of some individuals and the exclusion of others may be an inevitable consequence of trying to create a safe play space for children. How the Autcraft community defines social play—and who are the privileged players—also directly affects those who are excluded. Children with autism are the privileged players within the Autcraft community. While these children are educated when they have misbehaved—explicitly told when they have hurt someone’s feelings, for instance—the hackers in the above example are not given that luxury in

the same way. The hackers' kind of play runs counter to the ideals of the Autcraft community. In fact, to Autcraft community members, the hackers may not be viewed as players at all because they are involuntarily involving the Autcraft community members in what could be deemed as *anti-social* play.

Others may not be explicitly denied, but still feel excluded, such as older adolescents. Catering to the needs of the very young runs the risk of alienating older teenagers who want to explore more mature material and identities. To help mitigate this problem, the Autcraft community created a spin-off virtual world called Obsidian that is for those 16-years-old and older. To access this virtual world, the community member must pay a monthly access fee to help pay for the extra server load. However, here the rules are relaxed as the community is not protecting those younger than 16-years-old in this space. In future, more research needs to examine what happens to these Autcraft community members as they “age-out” of these play spaces. There is no requirement that they leave at a certain age, but older players may find the rules overly restrictive or infantilizing.

Gatekeeping certain people out of the community and maintaining the space for the youngest community members is part of the way caregivers within the Autcraft community maintain and create safety for the community as a whole. Making safety for the community is a key element in creating access to social play for community members. Without a feeling of security and safety, the children would not be able to play as freely, diminishing the quality of their experience. This becomes especially important for those children who report they are being bullied and harassed in other online spaces and at school—the Autcraft virtual world becomes one of the only places where they feel safe enough to engage in social play.

5.5 When Play Becomes Work When the Work is Supposed to Be Play

As discussed earlier, many scholars agree that the work of children is play (Piaget 1962; Vygotsky 1978; Paley 2004; Cross 1997). However, the dichotomy between work and play seems to be blurred as children in the Autcraft community also engage in caregiving behavior. While adult caregivers may often engage in the work of care while simultaneously playing with their children, children may not be as equipped with the skills required to do this. In this section, I explore what it means when children become caregivers in the Autcraft community and the implications for what this means for their access to social play.

5.5.1 Children as Caregivers

In the Autcraft community, children may find themselves in caregiving positions both intentionally (*e.g.*, through the hierarchy of caregivers) and unintentionally (*e.g.*, electing to do caregiving tasks without explicit direction from others in the community). These caregiving roles and activities are beneficial to the community and to the child as they learn responsibility and leadership skills, but there are also drawbacks to having children serve in the capacity of caregiver.

Server administrators provide individual players with greater access and responsibilities over time. This practice has the dual effect of taking some of the workload off the parents and empowering some more senior child-members of the community to develop greater social skills and confidence by becoming “helpers.” Although most in-world policing occurs by players reminding one another of the rules, those who have been promoted to junior and senior helpers can mute and jail players who are breaking rules (See Figure 5.5). The ability to jail other community members is a great deal of power and responsibility for junior helpers. In some ways,

this goes beyond the comparison of “hall monitor,” where the child is not simply issuing citations, but also actually meting out punishment.

As the position of junior helper comes with a great deal of power and perceived prestige, many of the young community members desire the position. New community members who are vocal in the virtual world chat are often asking how to get promoted to junior helper soon after joining. In the spawn area, there is a sign, which new members are directed to, that describes how junior helpers are selected (See Figure 5.6). It reads:

“Jr. Helpers ~ Always helpful. Helpers are picked because they help others and they help the community. They also follow the rules. The [administrators] are always watching. Don’t ask to become a helper. We will ask you when we think you are ready.”

Helpers are selected by the administrators and tend to be the children who are active in the community chat – both in the forums and in the virtual world. Helpers are given a special label for their name to indicate their status. Children are encouraged to engage in pro-social, caregiving behaviors within the Autcraft community by being told this is how they will “earn” their position as a helper. In this way, many young Autcraft members act as caregivers, while only some of them are elevated to the status of “helper.”

Selected players also earn titles such as “Player of the Week” and can receive the “AutismFather Sword” (See Figure 5.7). These are seen as desirable objects and the children of the community strive to earn them as they interact throughout the Autcraft community. To receive these, the children know that the administrators are “always watching” and are even depicted as such in a build within the virtual world (*i.e.*, giant statues looking over the landscape) (See Figure 5.1). Also as a symbol, the sword shows how tightly notions of protection and caregiving are tied together for this community. Perhaps here, also, the violence of the trolls—

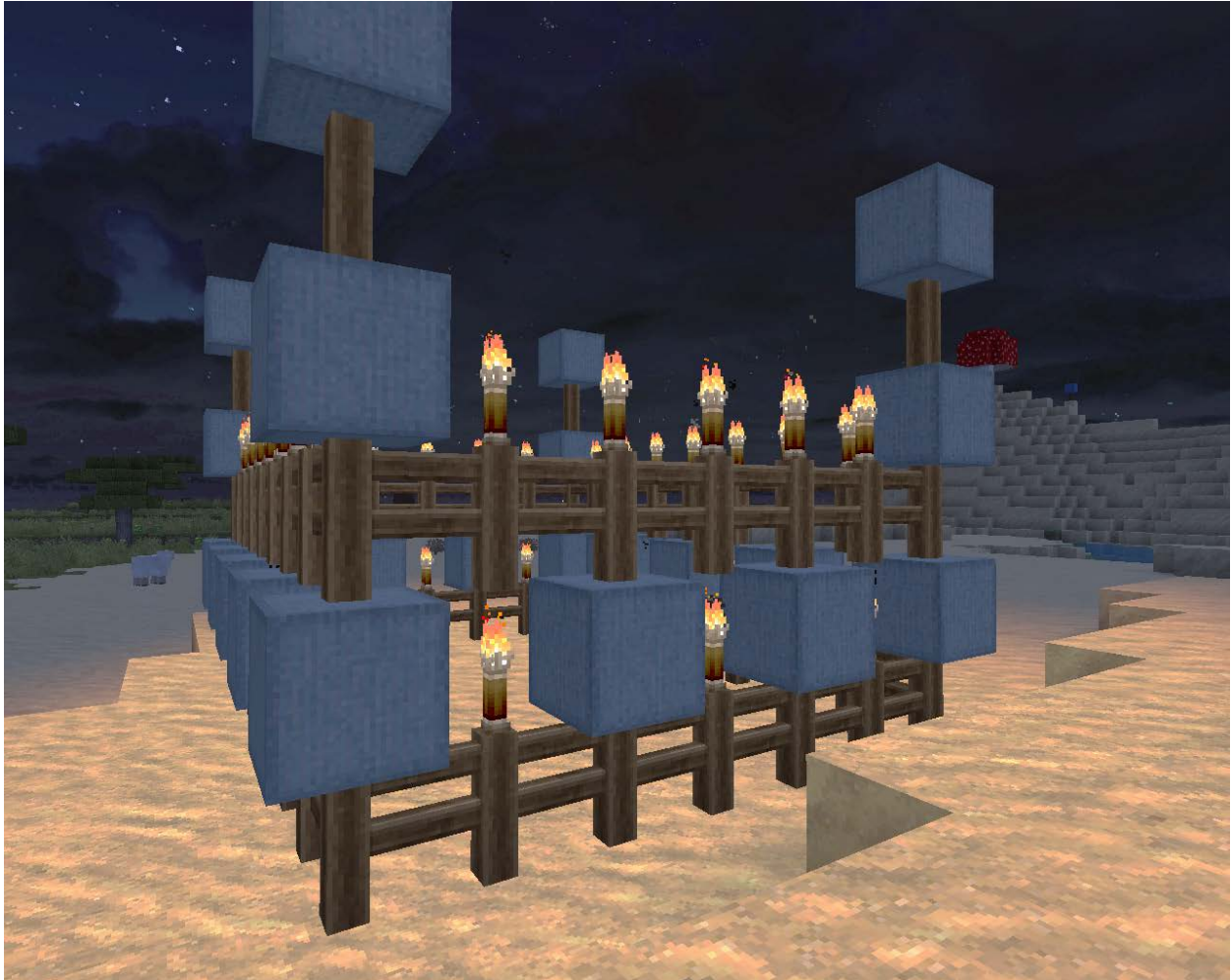


Figure 5.5. A jail cell where players may be transported for a "time out."

those who wish autistic children harm—is met with the symbolic violence of the protective diamond sword.

Those children who engage in caregiving activities without the official status of caregiver are helping to maintain the community and aid other members. However, this sometimes leads to problems if the child does not know the best way to conduct these caregiving activities. For example, one community member tried to help the Autcraft community, and AutismFather explicitly, through livestreaming video and asking for donations. When she failed to garner more than 15 views, she became distraught and even had to disengage from her online activities for a



Figure 5.6. Wall of Junior Helpers with instructions on becoming a helper.

while. Not all the caregiving activities end this way, but this exemplifies some of the problems that may arise when asking children to engage in these kinds of activities without enough support or education. In the next section, I discuss the benefits and costs to having child caregivers in the Autcraft community and how these directly affect community members' access to social play.

5.5.2 “Going Back to Work”

Work and play are not mutually exclusive—particularly for children. Often people might play during their work or turn their play into work. In video games some players have monetized their play, blurring the boundaries between when a player is playing or working (Goldiez and Angelopoulou 2016). In the Autcraft community, the emphasis is on creating access to social play for autistic children. Creating access to social play for the majority of community members is often a balancing act between work and play for the caregivers.

Overall, caregivers in the Autcraft community must prioritize doing “work” for the community rather than engaging in play. Some of the adult caregivers in Autcraft have reported taking time away from the Autcraft virtual world in order to play in a private virtual world with



Figure 5.7 Screen shot of AutismFather Sword wall, with images of the members who have earned it.

their own children. This allows them space and time to engage in play with their children without having to act as caregiver in the larger community setting. For parents, their caregiving activities never cease, but they have options to tone down how much caregiving of *other* people’s children they participate in.

Giving certain child members of the community caregiving roles has the potential to teach them leadership skills. These policing functions help maintain the rules while requiring players with autism (*i.e.*, junior helpers) to police their friends. This can be quite a responsibility, as one young player referred to logging onto Autcraft as a junior helper as “*going back to work.*” On the one hand, peer enforcement may improve the in-world experience dramatically for both the helpers and the players they monitor—much like the traditional “hall monitor” in schools. On

the other hand, by offloading the enforcement of rules developed by adults with concerns, parents may inadvertently be increasing the stress and social anxiety of their children, another kind of risk.

For the children in the community, there is status in having these higher roles, but they are also in essence work and take their toll on community members—especially the children, who often end up taking “breaks” from being helper. A tension arises when these junior helpers find the responsibilities overwhelming. During an interview, one mother reported some of the junior helpers describing getting online in the Autcraft virtual world as “work.” With a label next to their username, junior helpers find their position is constantly broadcast. Unlike a hall monitor who might be on duty for only part of a day, the junior helper status is “on” around the clock. Many junior helpers have to eventually “take a break” from the position in order to really engage in play.

Children stepping into leadership positions can be beneficial to their self-esteem and social skills (Fraser-Thomas, Côté, and Deakin 2005). However, the safety of these young caregivers must be safeguarded to ensure that they are able to engage in social play as well as their peers. This tension highlights the challenges in creating a work-play dichotomy. Rather than work and play being an either/or, they seem to exist on a continuum. Finding the right spot on the continuum for the younger Autcraft community members will be an on-going challenge as prioritizing access to social play remains the overarching goal of the Autcraft community.

5.6 Conclusion

Caregiving serves a vital role within the Autcraft community. Caregivers do the work of maintaining safety and, therefore, access to social play across the entire community. This is one

of the ways in which the Autcraft community is unique among Minecraft communities. However, the distributed caregiving infrastructure of the community is not without its challenges. Caregivers must agree with one another on the kinds of activities that constitute caregiving and what rules must be enforced. Further, as children step into caregiving positions, their own personal safety must be safeguarded in order to make sure they are able to engage in social play along with their peers.

6

Toward Topos-Mediated Ludic Sociality

In Chapter 1 of this dissertation, I posed the question: *who fits into what worlds?* Through this dissertation, I examined how the body represents children and adults in the world of play: the playground—a delineated space where children (and some accepted adults) engage in play. How these playground spaces are demarcated are dependent on the space—some have walls, some fences, and others simply where the grass ends. Within the playground, tools, toys, structures, and other players all make up the children’s world of play. To understand who has access to play, I examine how their embodied experience *enables* or *disables* them in a particular play context or, put another way, how the body (*i.e.*, the medium in which children and adults interact) does or does not “fit” in the world of play. Exploring this idea of fit further, I ask the questions: *Where is the body? How does performed identity shape the body? Who cares for the body?*

All forms of communication are mediated in some way—whether they are face-to-face, written word, or an avatar on a computer screen. Therapists, educators, parents, and researchers tend to privilege face-to-face communication—some even mistakenly believe that face-to-face is “real” and unmediated communication (Miller and Sinanan 2014). However, face-to-face communication *is* mediated communication. This becomes apparent when examining how those who are disabled experience the world—if the body used to mediate communication does not work in expected ways, then there is a breakdown in communication. The able-bodied

expectations of an interaction create a context in which those who cannot meet those expectations cannot participate. If a deaf child is not offered an interpreter, they cannot participate in the conversation. Taking this a step further, the difference between online and offline interactions is not whether interactions are mediated or not, but rather in what ways interactions are mediated. If the playground occurs in a digital context, then the play is not less “real” or more mediated. The experience of play online is simply different. In this dissertation, I analyzed my data keeping the following research questions in mind:

1. How do children and caregivers engage in social play in an online community centered around a virtual game world for children with disabilities?
 1. How does play take place in the constellation of interwoven platforms that make up this online community?
 2. How does the intersectionality of multiple identities impact access to social play online and how does social play affect the performance of these various intersecting identities or not?
 3. How do adults and children interact with each other to create an accessible play space?

6.1 *Summary of Findings*

In Chapter 1, I defined play as the embodied experience and how the disabled embodied experience impacts access to play. In Chapter 2, I reviewed the ethnographic methods for collecting and analyzing data from the Autcraft community.

In Chapter 3, I describe the different platforms the Autcraft community uses through the lens of embodied experience (describe the physical, liminal, and virtual spaces of Autcraft) and how the community uses mods to change the platforms. The embodied experience matters for

how people access play (*i.e.*, face-to-face might be less desirable for some and that will impact the play experience). In addition, the "walls" of the community work in keeping those in the community safe, but also act to other community members to those on the outside of Autcraft.

In Chapter 4, I describe gamer and autistic as forms of identity with related communities. There are similar discourses around gamers and people with autism - both are still stigmatized identities in mainstream media. However, both are also responsible for a few "superhuman" individuals who are especially good for society because of their abilities with technology. In this chapter, I also issue a call for more intersectional work in these research spaces. Finally, the Autcraft community works to change the discourse around their identities, so as to not be othered anymore (*i.e.*, giving evidence which shows they are valuable to society).

In Chapter 5, I describe the children and their caregivers in the Autcraft community and how these roles are potentially blended at times. Safety helps to create access to social play. The embodied experience of play requires the players be able to trust their environment (and the others in the environment) to fully engage. As children take on the role as caregivers a balance must be struck for the children to still be able to access play time.

6.2 *Summary of Dissertation Contributions*

My dissertation contributes an empirical understanding of how access is granted to some individuals and not to others, creating an uneven distribution of experiences when interacting with technologies. This includes understanding how the intersectionality of multiple identities of community members, such as gamer, autistic, and child, impacts social play online and how social play enables the performance of these identities. This insight can help shape our scholarly understanding of how users approach technology, as well as some of the work marginalized

users do to fully experience interactions. This includes some of the “Do-It-Yourself” activities individuals engage in to make systems more usable for themselves and their communities. By following the lead of these community members, designers and researchers find what access works and what kinds of interactions are desired.

Results from this work also highlight the value of virtual social interactions for marginalized users. When scholars privilege physical, face-to-face social interactions over virtual ones, they run the risk of making invisible those who prefer, or have better access to, virtual social interactions. My dissertation contributes to the discourse of normalizing social play as it occurs in virtual spaces for children with autism. Often, these children are told they should focus solely on their physical-world engagements, while their online relationships and experiences are discounted. They are just one example of a subset of people who may prefer virtual interactions.

Finally, my work contributes the conceptual framework of topos-mediated ludic sociality. Shifting the focus to prioritize playful places as the mediator of sociality equalizes the technology or tools used to mediate this communication. The choice of techne (*i.e.*, tools or technology) then happens in situ, based on the context and desires of the players. This shift creates greater access to play—especially for those who are currently marginalized. I discuss topos-mediated ludic sociality in more detail in the following section.

6.3 A Place to Play: The Embodied Experience & Access to Play

Children need a place to play. There are two things to consider: creating a sense of place and allowing for both the real and unreal in these places. First, as discussed, therapists, educators, parents, and researchers tend to privilege the physical realm over all others for mediating sociality. Members of the Autcraft community turn this notion on its head, instead

privileging virtual interactions over physical ones. But further still, I have shown how all these spaces—physical, liminal, and virtual—must work together to make play possible. The spaces the Autcraft community uses make the place that is Autcraft possible. Second, these spaces, though some of them are digital, are no more or less “real” than the physical spaces making up a school yard or playground.

6.3.1 Spaces Become the Autcraft Place

The physical, liminal, and virtual spaces all intersect to create the place that is Autcraft. Bodies occupy all these spaces simultaneously. How bodies interact in these spaces—how engagement is mediated—depends on the context. A person could play with words at home at the dinner table, play a game of tag in the school playground, play with computer settings on a laptop in the library, or hide and seek in a Minecraft virtual world. If “space is the opportunity,” then Autcraft becomes the “understood reality” (Harrison and Dourish 1996). The constellation of platforms used by Autcraft community members—from social networking sites, streaming video, specialized computer hardware to, lest we forget, Minecraft—converge into one giant space, or maybe many smaller spaces linked together with bridges. Through careful setting out of social norms and rules by the administrators, the Autcraft community takes the “opportunity” of this space and creates a sense of place, or, as at least one Autcraft member has called it, “home.”

6.3.2 What is “real”?

The common complaint about computer games and children’s online activity is when they are engaging online (“on screens”), they are not engaging with “the real world.” I am deliberate when labeling the spaces used in the Autcraft community—physical, liminal, and

virtual. All of these spaces can hold aspects of the real and unreal (Boellstorff 2016). The Autcraft community—through their play—demonstrate this.

One of the aspects of play is the suspension of belief by players. In play, we can accept both the real and unreal side-by-side. “Children’s play fantasies are not meant only to replicate the world...; they are meant to fabricate another world that lives alongside the first one and carries on its own kind of life, a life often much more emotionally vivid than mundane reality” (Sutton-Smith 1997, 158). Play includes shared imagining and creation of shared fictitious worlds; “...the relationships between the members of the community of players are relationships of collaboration in creating a fictive world” (Marjanovic-Shane 2010, 56). Minecraft, as a platform, makes possible the realization of the children’s fantasy worlds. Just as a block tower in a school might become a knight’s castle, Minecraft gives the children the tools to make their own fantasy castles and act out their play with each other through their avatars. But what is real here and what is not? A block tower, many would argue is real in its physicality, but not necessarily really a knight’s castle. Is a digital block tower in Minecraft not real simply because of its digital-ness? The two should be treated similarly. The children of Autcraft play with their digital towers with more gusto than they might in the physical world—where they are made disabled by the chosen environment.

The outcomes of play in Autcraft have yet to be measured statistically. I cannot say for certain if children from the Autcraft community “transfer” their social “skills” into other aspects of their lives. Anecdotally, parents have reported back to the community that their children seem more confident and happier. This does not need to be the end goal of the Autcraft community, however. The Autcraft community, through their constellation of platforms, gives members a place to play. Having access to play for play’s sake is an important means in itself.

6.3.3 Topos-Mediated Ludic Sociality and the Able Body

Place either aids or hinders access to play. As in the example of the playground, a place is not simply a demarcated area of space. Place is imbued with cultural meaning and social cues—that is how a space becomes a place. In a playground, the place is full of cues for play—a playground invites play. In other words, a playground is a playful place, meant to be full of play. Topos is “common ground” or “place” in Ancient Greek. The playground—in this case, a Minecraft virtual world—becomes the topos or “common ground” where ludic sociality occurs. In this section, I discuss how place or topos becomes the mediator for ludic sociality.

All communication is culturally mediated (Miller and Sinanan 2014), but the impact of technologies such as smart phones and virtual worlds is more noticeable by society—both because of what is seen and not seen. Technologies are “sometimes unsettling largely because they make us aware and newly self-conscious about those taken-for-granted frames around direct face-to-face encounters,” making us see how sociality is mediated (Horst and Miller 2012). But technology is also disconcerting to people because of what they cannot see. For example, watching children in virtual worlds is more challenging especially for caregivers who do not understand the technology. Children who prefer these digital engagements may be seen as anti-social or casting-off the “real” world (Turkle 2012). However, there is more happening in these virtual worlds than is first apparent. In Chapter 1, I discussed the concept of “misfits”—those who are considered disabled are such because the environment does not support a particular body (Ginsburg and Rapp 2013; Garland-Thomson 2011). The children (and adults) of the Autcraft community have been made to feel like misfits because they prefer—and are more comfortable with—interactions that are mediated via text or digital avatar. They are denied access to—that is, they are made disabled—when forced to use the mediations that do not fit. I look at play, and the

access to play, as a way to understand the importance of sociality to autistic children, but also to show how we can leverage technology to create more inclusive social experiences through *ludic sociality*.

If “play is the work of children,” (Cross 1997) then what is the product of their work? Ludic sociality can be understood as the ways in which play mediates being social. All communication is culturally mediated (Miller and Sinanan 2014) and “culture arises in the form of play, that it is played from the very beginning” (Huizinga 1949, 46). However, neither play nor sociality require one another. One can play without others, and one can be social without play. Play can be one of the layers of mediation that helps support sociality and create community. Marjanovic-Shane writes, “...playful acts have a potential to change relationships between the players, giving them new points of reference and enabling them to experience themselves and others as co-authors of the situations.” (2010, 41). Social play occurs when people come together, decide upon rules, and then all join in the play world (Sicart 2014). As in all forms of play, the players must be engaged in the play willingly or voluntarily. Then through the engagement of playing, they can participate in social interactions. Marjanovic-Shane found, “[p]laying together may produce multiple meanings,” “[p]laying is mutually voluntary,” and “[j]oining the community of players makes a difference in the quality of the relationships between the players and based on that may lead to a difference in understanding of the situation, self and others” (2010, 50). In the context of the Autcraft community, their play was one layer of mediation that created and enabled their social world.

The children express their sociality through play. Play could occur because the children had access to play in a context in which they “fit.” When educators, therapists, parents, and researchers privilege face-to-face interactions, they are, in effect, creating disability in children

who cannot or will not play in that medium. In the Autcraft community, members can recreate the playground in an environment that is more comfortable for them. Community members leverage technology to create a playground *where the body is most able* to play. And, having done this, autistic children engage in social play of which people thought them incapable.

Technology can be an aid to ludic sociality¹. As I noted above, the Autcraft community has used a constellation of platforms to *enable* ludic sociality for autistic children. Here the Autcraft community is using the constellation of technological platforms to help create the sense of place. These platforms cross into physical, liminal, and virtual spaces, working together to create access to play. Topos-mediated ludic sociality is how the place mediates and creates access to ludic sociality.

The question then becomes what other technologies, or configurations of technologies, can we leverage to enable ludic sociality for other children? Reframing the “problem” of sociality to be one about creating access to play, rather than focusing on the platform or medium of the sociality, could create a multitude of possible playgrounds. One example is the inclusive playground recently built in Bellevue, WA for children who might engage with the physical-world in a variety of ways (*e.g.*, those in wheelchairs or visually impaired) (Missine 2017). A research project, MOSOCO, also used Augmented Reality to create access to social play in the school playground, but was framed as creating more normalized social interactions (Escobedo et al. 2012). Augmented reality and virtual reality are now technologies available for personal use and may very well change the play landscape (and make it more accessible) for children with disabilities (Boyd 2018). However, I must sound a note of caution here. In the rush to implement

¹ I'm using technology here in the broad sense, to mean the tools at our disposal.

new technology to solve the problem of access to play, those in marginalized positions—especially those with intersecting marginalized identities—must not be left behind. In including those from lower socioeconomic backgrounds, creating accessibility to play does not have to be expensive. The reframing of access to play, rather than medium of play, can be as simple as adjusting the play space to accommodate text interactions or differing sensory needs.

In other ways, the Autcraft community has chosen a different way to use technology to create access to play. Access to play happens in Autcraft when the administrators and helpers create an open dialog with community members and allow players to occasionally “bend” the rules. This was the case for the child who was losing their eyesight and need to “spam” symbols in the text chat to make it more readable. As other researchers have also found, fully automating rule enforcement in digital communities for children can impede children’s access to play and children eventually find “work-arounds” to the automation (*e.g.*, inventing novel words to stand in for blocked swear words) (Meyers 2014). More research must be done on how to best use technologies to create access to social play for children and careful consideration must be made before simply adding in technology to solve the problem.

6.4 Safety and Policing of Children in Topos-Mediated Ludic Sociality

Parents must balance the needs of their children to explore, learn, and grow with the potential risks such exploration inherently includes. Anyone who has watched a child take a first step, jump from a high height, or ask a crush on a date knows the anxiety that comes with these acts. When those children have special needs, this anxiety can become even more profound, leading parents to define and redefine their own thoughts about safety, independence, and even childhood itself through both their discussions and their actions. In this work, we explored how

parents make “safe” spaces for their children online, a place that has both the potential for limitless learning and exploration, but also terrifying risks. Our results demonstrate that it is not enough to define safety based solely on what parents are able to articulate. Actions of the parents in the Autcraft community make safety through their monitoring and enforcement of rules through a variety of social and technological means. Safety is accomplished in these settings by actions that prioritize and balance risks and rewards and attempt to align viewpoints of various members of the community.

In this online community, there are several key complications associated with attempting to reduce risk. Reducing one risk can increase another. Actions to mitigate risk can infringe on a child’s personal growth. The community has to prioritize certain risks over others due to resource constraints. Finally, children sometimes resist being controlled.

Members of the community—largely led by parent administrators but including child players, parent players, and helpers—collectively determine which risks to mitigate and how to resolve them (*e.g.*, through the mods to the software, rules, and so on). The prioritization of safety-related actions takes place through various channels. Parents negotiate with one another through forum and chat discussions, through social networking sites, and also through the software code. Throughout these processes, the outside world is consistently seen as threatening. It is perhaps unsurprising that such fear would exist amongst community members given the reason for Autcraft’s creation in the first place. Parents with children of special needs have a unique set of lived experiences that may make the social world feel inherently unsafe. Parents who are accustomed to hearing about their children’s deficits (Kras 2010; Mankoff, Hayes, and Kasnitz 2010) are understandably more likely to fear the dangers that surround them. They may see a need to control not only dangers from the outside world, but also the dangers found in the

differences in their own child. However, at the same time, many parents of children with special needs regularly lament that their children can learn more, do more, and be more than the outside world allows. Thus, parents must balance the risk of harm from others with the risk of enabling enough control over the environment to allow their children to grow and mature. Safeguarding—keeping out the dangers of the outside world—can have the unintended consequence of reduced opportunities to learn and perhaps even infantilizing children as they grow into adolescents and adults.

In practice, parents must continually work to align themselves with the interests and actions of other parents as well as children on the Autcraft server. Without this alignment process, their efforts to make a safe space cannot be effective. Parents and their children must agree and enact the same practices to mitigate risk. This tension can be seen when children and young adults push back on their parents' control and create their own practices. Through this virtual world, parents have created the means by which their children can gain more responsibility in enforcement of rules through the junior helper role. This role, as well as informal policing by server members who are not officially designated as junior helpers, may help children learn self-regulation and how to read the social cues necessary to regulate others, important skills for children with autism. There is, however, a tension between the potential benefits from learning these types of regulating behaviors and their potential to create stress or social anxiety from the undue burden these types of responsibilities can create. As we see, 'play' begins to feel like 'work' for some children taking on these junior helper roles.

Parents must also find alignment between each other, determining not only for themselves what practices to employ and which risks to prioritize, but also aligning their beliefs and practices with other parents. Parents must agree on the "right" way to safeguard each other's

children while in the online space. Meanwhile, administrators and players, parents and children, continually redefine the boundaries of “safe.” Safety is never complete, and can never really be achieved, because it is continually developed and produced.

Given the challenges parents face in their daily lives, the creation of Autcraft as a safe online space for children with autism to play is in itself rather astonishing. Parenting is an inherently fraught endeavor, with numerous schools of thought. From debates about co-sleeping or sleep training and cloth or paper diapers to the merits of a gluten free diet or ABA therapy, parents align with, judge, and argue with other parents in nearly every aspect of their child rearing. Thus, the very existence of Autcraft, a collective endeavor created by thousands, is impressive. Ultimately, the process of balancing and aligning views and actions allow a disparate community with a shared goal to make a safe space in the online world. At the same time, they are making a new concept of online safety.

By examining both their production of safety through appropriation of the Minecraft platform and their discourse around safety, we can develop a deeper understanding of the evolving meaning of “safe” in online spaces. Community members—both caregivers and children—continually manage the dynamic boundaries between safe and unsafe in an online virtual world. The production of a safe space is a feat unto itself, and the communal processes by which parents negotiate with one another to create this space is worth exploring in detail in future work. A deeper look at what happens when parents do not agree on what “safe” means and how they resolve that tension could illuminate further how safety is crafted in online spaces. Further work also needs to address the tension between children and caregivers, as the policing of children potentially disables children in the quality of their play.

Safety is a key need in creating access to ludic sociality. Even in playful places such as virtual worlds, safety is not a given. As demonstrated throughout this work, and particularly in Chapter 3.8, individuals are vulnerable in digital spaces as well as physical spaces. In order for ludic sociality to occur, the place must *feel* safe. Whether a person is physically and emotionally safe is going to depend on the context and the actors at play.

6.5 *Using Topos-Mediated Ludic Sociality as a Form of Resistance*

Not every activity and engagement described in this dissertation or witnessed during my ethnography was an act of play. In fact, and importantly, many of the activities and communications were quite serious. This includes memorializing the dead and actively fighting against hate and abuse. As I will explore here, because Autcraft is a *playful place* in which community members are able to engage in ludic sociality and use that as a form of resistance against stereotype and oppression. Following, I describe how topos-mediated ludic sociality enables resistance against the discourse about autism and against the negative discourse about play.

6.5.1 Resisting the Discourse about Autism

The medical discourse around autism and labeling of autistic individuals is at once beneficial and harmful. The autistic label enables access to services and places—including the Autcraft community. However, as many scholars in Disability Studies have pointed out, the labels are also oppressive. This discourse around autism provides a range of possible options for constructing identity (Burr 2015). “Thinking of oneself as oppressed rather than depressed fosters a different view of oneself and of how to attack one’s problems” (Burr 2015, 141). In this way, the autistic label gives individuals some amount of power and the label gives them a sense

of community—identity. Having access to a community, such as Autcraft, gives community members the means to resist against the oppression of the autistic label.

Play is a key aspect of this resistance against oppressive discourses about autism. Play is by its nature somewhere in between real and unreal. Play is ephemeral, yet some of the consequences are long lasting. For example, children learn valuable skills and form life views that follow them into adulthood. Play is how an individual might explore ideas or even a different identity. Play is the safe way to do this because it isn't really “real.” Autcraft community members play in the Minecraft virtual world as children might on a playground. They also play with creating videos, chatting in the forums, and creating fanfiction, as can be found in other communities such as with Harry Potter or Doctor Who (Tosenberger 2008; Black 2008). Through all these activities, they are pushing back against the discourse that they are not creative and not social. Some community members take it upon themselves to turn these activities into educational opportunities—helping other Autcraft community members and those outside the community. They work to change the discourse around autism. In turn, what was once playing at an identity becomes real.

6.5.2 Resisting the Discourse About Play

While adults value certain kinds of play, especially children’s play, play is still often relegated to the sidelines as frivolous or meaningless. Play is only ever brought to the forefront as important when it can be used for learning or habit improvement through medium such as educational games, as discussed in Chapter 4. However, the Autcraft community has shown that play is not meaningless, even if the play is not being done specifically to learn something or change behavior. Play is not always done in solitude and even when someone is playing by

themselves, they do it in a larger context of the community and in the playful place. As shown in Section 6.4.1 above, play itself can go deeper as an act of resistance itself. In engaging in ludic sociality, members of the Autcraft community are redefining the norms both about autism and about play itself.

6.6 *Conclusion*

This work examined the Autcraft community as a playground for children with autism, showing disabled users from a holistic standpoint—with the social model and intersectionality as lenses. Shifting the focus from using technology to assist children with disabilities engage in normative play to using technology that supports children’s play—whether normative or not—better supports access to play for these marginalized communities. Topos-mediated ludic sociality reframes the problem of how to support “being social” from using technology as a normalizer, to one of supporting the activity of play—normative or not—to enable sociality. Further work is needed to show how this topos-mediated ludic sociality can be used to design technology in multiple contexts across physical, liminal, and virtual spaces to enable children in a variety of play engagements. This work has shown that given the right tools and community support, children thought as disabled and anti-social are, in fact, abled and social.

7

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Appendix [A] Information Sheet

University of California, Irvine Study Information Sheet

A Study of Communication in Virtual Worlds by Children with Autism Spectrum Disorder

Lead Researcher

Kathryn Ringland, PhD Student
Department of Informatics
360-601-3112, kringlan@uci.edu

Faculty Sponsor

Dr. Gillian R. Hayes, Associate Professor
Department of Informatics
949-824-1483, gillianrh@ics.uci.edu

- You are being asked to participate in a research study to explore how children with Autism Spectrum Disorder use Minecraft to interact.
- You are eligible to participate in this study if you play in the Minecraft world for children with Autism Spectrum Disorder.
- The research procedures involve Ms. Ringland observing players in Minecraft.
- Possible risks/discomforts associated with the study are possible discomfort while being observed.
- There are no direct benefits from participation in the study. However, this study may explain how children with Autism Spectrum Disorder socialize and how to best assist them with technological interventions for communication.
- You will not be compensated for your participation in this research study.
- All research data collected will be stored securely and confidentially electronically on a laptop computer in an encrypted file and is password protected and physically in a secure location at UCI. Screen shots may be taken, but will be de-identified (usernames removed) as soon as possible (within 1 month) of capture.
- The research team, authorized UCI personnel, and regulatory entities may have access to your study records to protect your safety and welfare. Any information derived from this research project that personally identifies you will not be voluntarily released or disclosed by these entities without your separate consent, except as specifically required by law.

- If you have any comments, concerns, or questions regarding the conduct of this research please contact the researchers listed at the top of this form.
- Please contact UCI's Office of Research by phone, (949) 824-6662, by e-mail at IRB@research.uci.edu or at 5171 California Avenue, Suite 150, Irvine, CA 92617 if you are unable to reach the researchers listed at the top of the form and have general questions; have concerns or complaints about the research; have questions about your rights as a research subject; or have general comments or suggestions.
- Participation in this study is voluntary. There is no cost to you for participating. You may choose to skip a question or a study procedure. You may refuse to participate or discontinue your involvement at any time without penalty. You are free to withdraw from this study at any time. **If you decide to withdraw from this study you should notify the research team immediately.**

Appendix [B] Recruitment Flyer

Minecraft Study



Meet ResearcherKate.

ResearcherKate is a PhD student at the University of California, Irvine and will be playing on the AutCraft server to observe how people play Minecraft. To find out more about this study and how it affects you, please scroll down for the study information sheet or visit ResearcherKate's website. If at anytime you have questions about the study, please feel free to contact ResearcherKate by email or through Minecraft.

kateringland.com/minecraftstudy

kringlan@uci.edu

Department of Informatics
University of California, Irvine

Appendix [C] Interview Protocol

Questions for players:

1. Let's talk about your experiences playing Minecraft.

1.1. General Minecraft warm-up questions.

- 1.1.1. How long have you been playing Minecraft?
 - 1.1.1.1. How did you get started with Minecraft, if you remember?
- 1.1.2. What do you like about Minecraft?
- 1.1.3. Are there things you wish Minecraft could do, but doesn't?
- 1.1.4. What are your favorite things to do in Minecraft?
- 1.1.5. What mode do you like to play in (peaceful, survivor, etc)?
 - 1.1.5.1. Explain why that is your favorite.
- 1.1.6. What devices do you play Minecraft on? (laptop, tablet, phone, etc)
- 1.1.7. Which device do you like playing on the most? Why?

1.2. More specific Minecraft questions. [Ask depending on above answers]

- 1.2.1. Do you like to play with mods?
 - 1.2.1.1. If so, which ones? Why?
 - 1.2.1.2. If not, what makes you play the original?
- 1.2.2. What do you like to build/craft in Minecraft?
 - 1.2.2.1. Do you build things by yourself? With other people?
 - 1.2.2.2. How do you know how to build things?
 - 1.2.2.2.1. Do you learn it from other players? Youtube? Twitch?
- 1.2.3. Do you like to go on adventures (for example to the Nether, the End, etc)?
 - 1.2.3.1. What do you like about adventuring?
- 1.2.4. Do you like killing monsters? Why or Why not?

1.3. Behavior questions.

- 1.3.1. Do you like to think and talk about Minecraft even when you're not playing?
 - 1.3.1.1. Who do you talk about Minecraft to?
 - 1.3.1.2. Why do you like to talk to them about Minecraft?
 - 1.3.1.3. Do you talk to kids at school about Minecraft?
- 1.3.2. Do you play Minecraft with other people?
 - 1.3.2.1. Who?
 - 1.3.2.2. How did you meet them?
 - 1.3.2.2.1. Do you know them in real life?

- 1.3.3. How did you start playing Minecraft with them?

1.4. Servers [if they say they play with other people]

- 1.5. Do you play on servers with other people?
 - 1.5.1. What servers?
 - 1.5.2. How many other people are on that server?
 - 1.5.3. Why do you play on that server?
 - 1.5.4. Is there anything special about that server?
 - 1.5.4.1. Does it have special rules? (Like some servers only let you build in certain themes or only have survivor mode)
 - 1.5.5. Does the server have a website?
 - 1.5.6. Does the server have forums?
 - 1.5.6.1. Do you ever post?
 - 1.5.7. Explain - what kinds of things do you post about? Can you give me an example?

2. **If on Autcraft.**

- 2.1. What made you join Autcraft?
- 2.2. Do you know about the ranking system on Autcraft? Can you tell me about it?
- 2.3. Do you know about the rules of Autcraft? Can you tell me about the rules?
- 2.4. What do you like about Autcraft?
- 2.5. Are there things you wish were different about Autcraft?
- 2.6. What do you do on Autcraft?
 - 2.6.1. Do you play the games?
 - 2.6.1.1. Can you tell me more about that?
 - 2.6.2. Do you role play?
 - 2.6.2.1. Can you tell me more about that?
 - 2.6.3. Do you build things?
 - 2.6.3.1. With other people?
 - 2.6.3.2. By yourself?
 - 2.6.4. Do you ever leave notes or messages for other people?
 - 2.6.4.1. How do you do that?
- 2.7. Who do you play with on Autcraft or do you play by yourself?
- 2.8. Do you ever post in the Autcraft forums?
 - 2.8.1. Can you tell me more about that?
 - 2.8.2. What kinds of things do you post? Can you give me an example?
- 2.9. Do you ever post on the Autcraft Facebook page?
 - 2.9.1. Can you tell me more about that?
- 2.10. What kinds of things do you post? Can you give me an example?

3. **If talk about Youtube/Twitch.**

- 3.1. What kinds of videos about Minecraft do you watch?
 - 3.1.1. Can you tell me more about that? - do you use them to learn how to play? To see what other people are making? Just for fun?
- 3.2. Do you ever make your own videos?
- 3.3. Can you tell me more about that?

Questions for parents of players:

4. Tell me a little bit about your child.

- 4.1. Does your child have many friends in real life? On Minecraft?
 - 4.1.1. Do they go to a mainstream school? Specialized school?
- 4.2. How does your child communicate?
- 4.3. Who does your child interact with on a daily basis?
- 4.4. what kinds of therapies does your child use?
 - 4.4.1. how have these changed over time?

5. Minecraft questions.

- 5.1. Tell me about Minecraft. Do you play?
- 5.2. What aspects of Minecraft do you like?
- 5.3. If you could change anything about Minecraft, what would it be?
- 5.4. Can you tell me a bit about your child playing Minecraft?
- 5.5. What do you think about them playing Minecraft?
- 5.6. What do they like about Minecraft?
- 5.7. What kinds of activities do they do in Minecraft?
- 5.8. How often do they play? Do they talk about Minecraft even when they aren't playing?
- 5.9. Do you see Minecraft as being therapeutic in any way for your child?
 - 5.9.1. If so, how so?

6. Multiplayer.

- 6.1. Do they play with other people?
 - 6.1.1. If so, who?
 - 6.1.2. Do they ever get bullied in Minecraft?
 - 6.1.3. How does your child communicate with others in Minecraft?
- 6.2. Do you know if they are playing on any servers?
 - 6.2.1. Do these servers have rules?
 - 6.2.2. Do these servers have a website or forums?
 - 6.2.2.1. Do you ever post to the forums?
- 6.3. Does your child ever post to the forums?

7. Autcraft.

- 7.1. Tell me about Autcraft.
 - 7.1.1. Explain the rules of Autcraft.
 - 7.1.2. Explain the ranking system in Autcraft.
- 7.2. What do you like about Autcraft?
- 7.3. Are there things you dislike about Autcraft?
- 7.4. Do you play on Autcraft with your child?
 - 7.4.1. How often do you play?
- 7.5. What kinds of activities do you/ your child do in Autcraft?
 - 7.5.1. Do you ever build?
 - 7.5.1.1. What kinds of things?
 - 7.5.2. Play the games?
 - 7.5.3. Role play?
 - 7.5.4. Hunt monsters or go adventuring?
- 7.6. Do you ever post in the forums?
- 7.7. Does your child ever post in the forums?

7.8. What about Facebook? Twitter?

8. **Videos.**

8.1. Do you ever watch videos about Minecraft online? Where?

8.1.1. Why or why not?

8.2. Do you know if your child watches videos?

8.2.1. What kinds of videos do they watch?

8.2.2. Where do they watch them? Do you watch them together?

Appendix [D] Sample Directed Forum Questions

Subject: Questions about community events, I want to hear your stories

Body: Hi, ResearcherKate here. :) As I continue doing interviews, I would love to hear some stories from you about Autcraft's community events. I'm thinking of events like Autcraft's birthday, or the 4th of July fireworks, or Wither Fights, or whatever you can think of. Do you have fun stories to tell?

Questions to help you tell your story:

- *What events have you gone to?
- *What made you want to go?
- *What did you like about going?

Subject: Do you have stories about making friends in Autcraft?

Body: Hi, ResearcherKate here.

:) As I continue doing interviews, I would love to hear some stories from you about making friends in Autcraft. Do you have fun stories to tell about the friends you've made while in Autcraft?

Some questions to help you tell your story:

- *How do you tell if someone is your friend?
- *How have you been a friend to someone else?
- *What do you and your friends do together in Autcraft?

Other Subject Areas:

Do you watch videos about Autcraft on Youtube?

Why do you watch these videos?

What do you like about watching these videos?

What makes you want to watch a video instead of just asking someone in game?

Do you ever read the video comments? If so, what makes you want to read them?

Do you have friends in Autcraft?

Is everyone friends in Autcraft? Are there some people you like more than others?

How do you tell if someone is your friend?

How do you show others you are their friend?

Do you think it's different being a friend in Autcraft than in real life? If yes, can you tell me more about how it's different?

How do you keep in touch with your friends when you aren't in game?

What do you say to people who think Minecraft is just a game?
Do you think Autcraft is a special place? What makes it special?

- No gibberish, like this: 'wkejhrlwkjebdlwkjebriwiuer'
- No Ascii or Unicode symbols, like this: '☹∑⊗♥♪#' '
- No repeating chat lines, like this: 'I need wood' 'I need wood' 'I need wood'
- No Harassment
 - You should not use public or private chat to repeatedly ask a player a question, make threats, call names, or send repeated /tpa requests. This makes other players feel uncomfortable and it can be considered as bullying. Please listen to your friends if they ask you to stop doing something or they tell you 'no'.
- No Advertising
 - There will be no advertising of any other servers in any form. No talking about other servers, no telling people to go check your Enjin wall where you've posted your server or anything like that at all either on the Autcraft server or in our forums.
- No Personal Information
 - This information is personal and should not be shared over the internet. This is for your safety! Sharing this information in any form is not acceptable.
- No giving out last names, school names, city names or any other identifying information; sharing your first name only, your age or your country/ state/province is general enough to be acceptable.
- No requesting personal information from others in private or public chat.
- No posting your phone number, email address or IP address.
- No posting any screen name or friend ids for Skype, Discord, PlayStation, Xbox or any other web based device.
- English Only (unless staff approved)
 - We understand that English might not be your first language, but it is the common language that all of our Admins and Helpers use on the server. We can only protect you from bullies and bad language in English. We request that all players speak English while on Autcraft and on enjin unless you have Admin / Helper permission.
- Roleplay Reminders

- We know some of our players have active imaginations and are fantastic storytellers. Chat channels are available for any players who want to participate in an extended roleplays. All roleplay chat needs to be contained in a channel and need to follow all of AC's Chat Guidelines. Sr. Helpers and Admins monitor all chat channels.
- Changing Username
 - If you change your name to be the same as or similar to another player's name (especially ones that make others think you are staff, such as Jr/SrHelper, Admin, Broadcast, Console, ServerTech, etc.) and cause confusion, you will be removed from the whitelist for 30 days until you can change your name again. If you refuse to change your name at that time, or if you change it to be the same as someone else's name again, you will remain off the whitelist until you fix it.

Game Play Guidelines

No cheating

If you feel it gives you an advantage over everyone else, chances are it's cheating.

No using 'duped' items. If you have found a way to do this, please let a helper or admin know.

No using any 'economy' dupes. You may not abuse any issues, glitches or bugs with economy to gain money.

No building AFK Machines/AFK Farms to prevent you from getting kicked due to inactivity or farming items/experience while idle.

No using unapproved mods. We like to keep it fair, so nothing like 'too many items' or x-rays mods can be used. Please review [approved mods](#) for a full list of what we allow on the server.

Protection Limits

To have your area protected you can type '/modreq please protect me', however, the build must be at least 30 blocks away from all other people's builds. We will not protect anything of yours if you build too close to someone else. Also, we will not expand your region if others have built around you. You or they will have to move. If your build is underground, please mark the edges of the build above the ground, so the admins know where to protect without having to go scope out your entire underground base.

No Griefing

Even if you are angry or upset with someone, griefing is not a good way to solve the problem. If you see griefing on your property you can type '/modreq I was griefed' and an admin will take care of it. There is no reason for you try to do anything else.

Griefing is:

- When you take a build that you did not do and you add or remove blocks from it. Even if it is not protected, you should not make any changes to it for any reason.
- When you kill another player's pet, villager or golem.
- Steal crops
- Take anything out of an unprotected chest
- Try to protect a chest or door that is not yours for yourself

Family Friendly Builds Only

We hope that everyone on Autcraft uses good judgement about building things appropriate for use in minecraft on a family friendly server. But, every once in a while, we do find some builds that were made by players using poor judgement. Admins find and remove almost all of these builds before any players ever see them. However, if while exploring you find an inappropriate build, please type '/modreq inappropriate build' while standing nearby. An admin will take a look as soon as possible and remove if necessary.

We will remove builds that we deem inappropriate, including but not limited to:

- Any symbol, emblem, or shape that represents an intolerant or hateful group.
- Any representation of male or female private body part(s).
- Any swearing or hateful words spelled out with blocks, on signs, or in books.

Please do not build "adults only" establishments, including casinos, bars, and nightclubs.

References to alcohol or drugs in builds or item names are not allowed on Autcraft.

Pet Ownership

We understand that people love to have pets and we fully support this! However, we have to set limits on pet ownership and how you handle them.

- Parrots: You may have 10 total parrots at any given time.
- Wolves: You may have 5 wolves at any given time.
- Ocelots: You may have 5 ocelots at any given time.

* Do not leave any pets sitting in any area that is not yours. Admins will not know who they belong to and they will be removed and you will not have the opportunity to get the animal back.

* Pets are not damage-proof! If you take them out of your area, they may not be safe. Wolves and cats are damaged by arrows and flames and wolves can take fall damage.

* We recommend you keep pets safe at home. Take care of your pets in the game as you would a pet in real life.

Chickens: You may have 10 chickens at any given time.

Sheep: You may have 10 sheep at any given time.

Cows: You may have 10 cows at any given time.

Mooshies: You may have 10 mooshroom cows at any given time.

Pigs: You may have 10 pigs at any given time

Horses: You may have 10 horses at any given time.

* You may keep 1 horse out of your virtual stables at any given time when you are not actually riding your other horses, please use /stables store and store them in the virtual stables.

* Admins will store any horses they see on sight.

Villagers: You may have 15 villagers at any given time.

Skins and Banners

If your skin or banner is used with intent to scare, annoy, harass, or impose a view or position on to other players, a helper or admin may ask you to change your skin and/or remove the banner before returning to game play. Skins and Banners need to be family friendly including but not limited to:

- No Herobrine, Creepypasta, or Five Nights at Freddy's skins.
- No blood or gore of any kind on skins.
- No indecent exposure or naked skins.

One Account Per Player

Experience tells us that multiple accounts are often used to avoid consequences of poor choices made on one or both accounts. A player's second account will be removed from our white-list immediately

Public Farms

If you wish to build a public farm (crops, animals, etc) that the community can use, admins will only protect the land from the ground down. Anything else (crops, animals, buildings, etc) will not be protected or fixed by admins. If you build it, it's your responsibility to maintain it.

No Trapping Other Players

You can not build anything, anywhere (your base, resource world or anywhere else) that can trap or kill another player. Any traps we find will be removed.

Consequences

On Autcraft we try to be fair and understanding. We have several tools to help us maintain a safe and family friendly environment. What tool is used is at the discretion of the helper or admin on at the time. In most situations, there will be one or more verbal warnings in public and/or private message.

Note to Parents

If your child experiences any of these general consequences and you have a question, you can contact any admin or helper in game by using private chat or /helpop or you can send a message via enjin or our Facebook page. Please include your child's gameplay name when inquiring via email or Facebook so we can help you as quickly as possible.

Mute

You will be unable to send public or private messages, however, you can reply to messages using /r. You may also use /helpop to gain the attention of any admin who is logged on at the time.

Mutes are temporary and generally used for chat violations.

Jail

Jail is a room that a player cannot break out of nor can they teleport or /spawn out. It is a special place where players are placed if we can't get their attention or we feel the player is making choices that require a 'break' from play. Jail is temporary, however, some players may be asked to stay in that area until their parents can be contacted to help us help the player better understands the rules.

Ban

In extreme cases, players who repeatedly make poor choices will be temporarily unable to access the Autcraft server. The timeframe is at the discretion of the admins, however, some players will

remain banned until their parents can be contacted to help us help the player better understand the rules.

Whitelist Removal

Rarely, but sometimes, players are removed from the whitelist and given a chance in the future to apply again. This is used for players who are continually destructive or show signs that they are not ready to participate in a multiplayer server.

Note to Players

Please remember that these are guidelines to help you to understand the behaviors we want to see on Autcraft. There may be times that a helper or admin ask you to do or not do something that is not listed here. We ask that you please respect their request. If you would like to discuss the request with an admin then you may do so via private message or enjin.'

Appendix [F] Autcraft Application Questionnaire

Following are the questions asked on the application to join the Autcraft community.

Display Name:

Email Address [this is checked against the Enjin¹ accounts to see if it is already in use or registered]:

Password:

Welcome to AutCraft! This server is an *English language only*, white-listed server. We strive to give each player a comfortable and safe place to play Minecraft no matter what their ability.

Waiting time for assessment of applications is currently 2 weeks, due to recent increased interest in our server. When applying for family members with different usernames, please complete a new application for each, remembering to log out of your enjin account after every submission. Otherwise, you will not be allowed access to a new application.

Computer version ONLY, either Mac or PC. XBox and mobile (smartphone/tablet) will not work.

Please keep in mind that this server is **free to play** but that means that we rely on the support of generous people who are willing to spare a little to keep Autcraft running. By becoming a patron, you ensure that children all around the world will have free access to our server.

Please consider becoming a patron at <https://www.patreon.com/autismfather>

IMPORTANT: *Many applications are rejected due to lack of response to comments left during assessment. Please remember to log into your Enjin account frequently and check your notifications for comments added to this application. Assessment waiting time may increase, depending on how promptly our questions are answered!*

About the applicant

These questions are meant to help us get to know the player. Please answer these questions from their perspective.

Name:

¹ Enjin is a service for creating Minecraft servers and community websites (<https://www.enjin.com/>).

Minecraft Username (*not the email address, must be for the computer version of the game*):
This can be found at minecraft.net if you don't know it. We need separate applications for each family member using different user names.

Age of player:

Email address:

Who has autism in your family?

Have you ever played on other servers?

If yes, what servers?

Have you ever been banned from other servers?

If yes, what servers?

What is your primary language at home?

Are you able to read and write English?

It is important players can read and write English well enough to communicate/socialize with other players and staff.

Where did you hear about Autcraft?

How did you find us? If through an Autcraft white-listed friend, please give their MC user name here.

Parental Information

Parent name:

Parent email address:

Do you have any questions or comments?

Appendix [G] Welcome Package Instructions

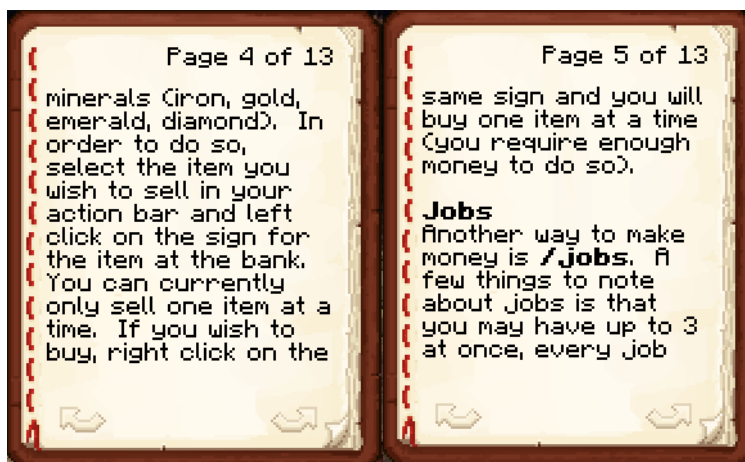
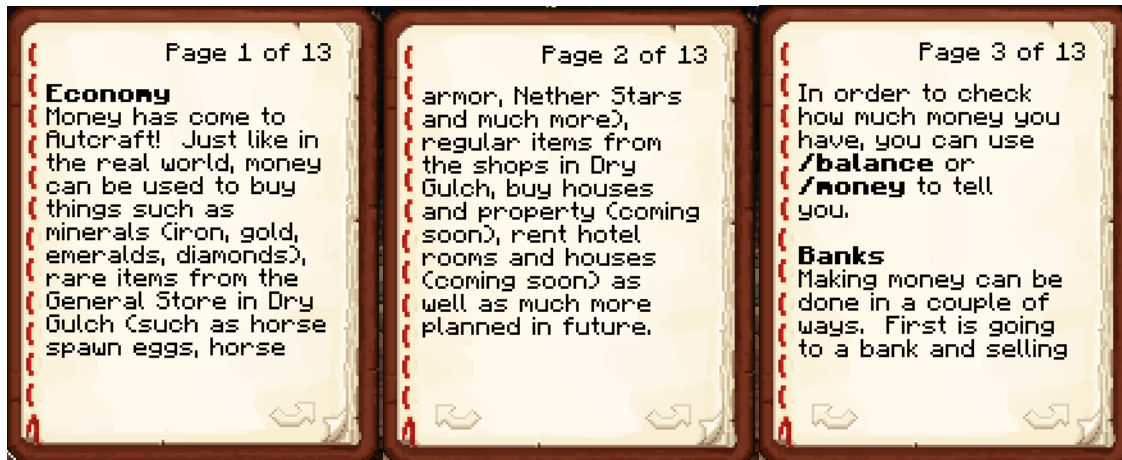
These are images captured of the welcome package books that every new community receives upon entering the Autcraft virtual world.

Book 1:





Book 2:



[missing screen shot of page 6 of 13]

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(info for details),
(jobs have a maximum
(level of 10.
(
(Below is an outline of
(how to use jobs:
(
(**/jobs browse** -
(Will list all currently
(available jobs
(**/jobs info**
(**Jobname** - A

Page 8 of 13

(breakdown of what
(the job pays for
(**/jobs join**
(**Jobname** - Joins
(you to your intended
(job
(**/jobs leave**
(**Jobname** - Leaves
(the selected job
(**/jobs leaveall** -
(Leaves all of your
(jobs

Page 9 of 13

(**/jobs stats** -
(Shows your job level
(for your jobs
(
(Important note, the
(Hunter job will not
(pay you for killing
(mobs if you are close
(to a spawner.
(
(**Money Shops**
(Money shops are still

Page 10 of 13

(in testing. Once
(testing is completed,
(we will only be
(allowing money shops
(in certain areas
((pre-built malls).
(You will not be able
(to use the money
(shop signs anywhere
(other than these
(areas. We will update
(this as more

Page 11 of 13

(information is made
(available and testing
(is completed.
(
(**Houses / Plots**
(We will be selling
(pre-built homes as
(well as plots to build
(on in the near
(future. Players
(currently will not be
(able to sell their

Page 12 of 13

(homes or plots. We
(will update this as
(more information is
(made available and
(testing is completed.
(
(**Rental**
(**properties**
(We will be offering
(homes and hotel
(rooms for rent in the
(near future. Players

Page 13 of 13

(currently will not be
(able to rent their
(homes or hotels. We
(will update this as
(more information is
(made available and
(testing is completed.

Appendix [H] Educational Posts and Essays about Autism from Autcraft Forums

The first diagnosis I got translates to "mild form of autism and severe contact disorder", then it was elective mutism, now its called asperger syndrome. All just words, I am still the same.

Sometimes I don't agree with my family saying that I am autistic. I even tried to argue with my therapist. Its all made up names, invented by humans. I often can't do what I want and what I see other people doing and taking for granted. And then I get told I can not do it because of my autism. I sometimes get upset and blame the word and the people who say I am autistic.

I see how I am like a fish out of water completely stuck and confused with tasks which are considered very easy by most people. Even feel like suffocating, just like the poor fish. And then there are the things I am good at. When I wonder how others have so much trouble to learn, as if they where stupid (which they are not, because they can do the things I fail at). I can see how I am not very average.

At the moment I don't speak to people, so did I for the last weeks. I did not write or play with others, too. But now I wrote something here. Words are strange. They are a rough construct to transfer thoughts from one human to another. It does not matter if they say you are mildly autistic or have aspergers or adhd, in the end everyone is an individual and one word is never enough to describe an entire human.

(age 11, F)

The way my autism works is that I live in my own world. My own bubble. I dont understand other people but I strive to be nice to them and live a positive life where I make other people feel happy because I know thats whats good, and I want to share my happiness. But sometimes I remember that people live their own lives, and theyre different to me. Normally stuff feels like I'm in a video game, and everyone else is an NPC and the people closest to me sort of feel like other players. When I do good things I get XP. I forget that the NPCs are actually real people sometimes and it blows my mind.

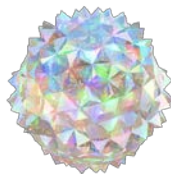
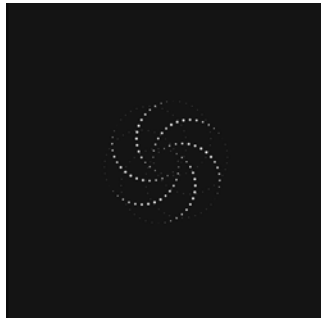
I get scared that maybe I'm not expressing how I see the world properly because other people dont see me through my mind. they see me through THEIR mind and I just think thats really weird. I dont know how they see me. I dont know if they think im sad and quiet because I am quiet sometimes. And I worry they think im strange when I shout and scream and laugh. And I think its really weird that they dont feel the same emotions as I do so they dont see things through the same lens.

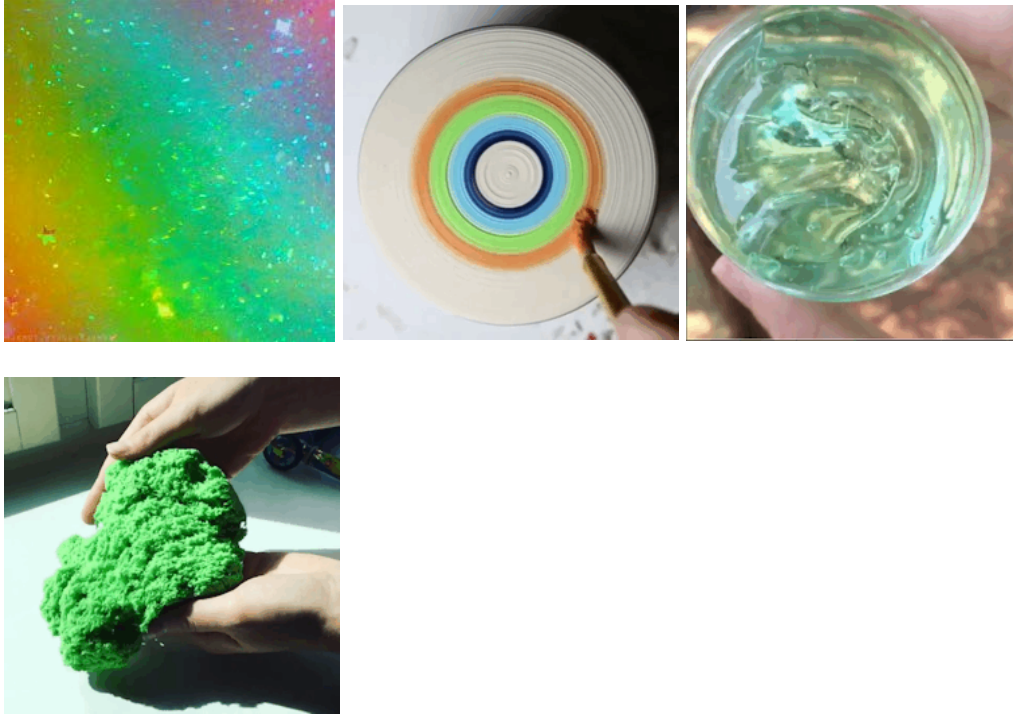
I'm scared of other people seeing things through their own brain and eyes if that makes sense? That in their game, I'm the NPC. I just think its weird and it freaks me out. Does anyone have any advice? And especially do any autistic adults get this? Does it ever stop being weird?

By the way, the music or 'soundtrack to my game' right now is Kero Kero Bonito - Sick Beat; im only saying this because music can affect peoples mood and maybe it can help you see this post through my lens?

(age 15, nonbinary)

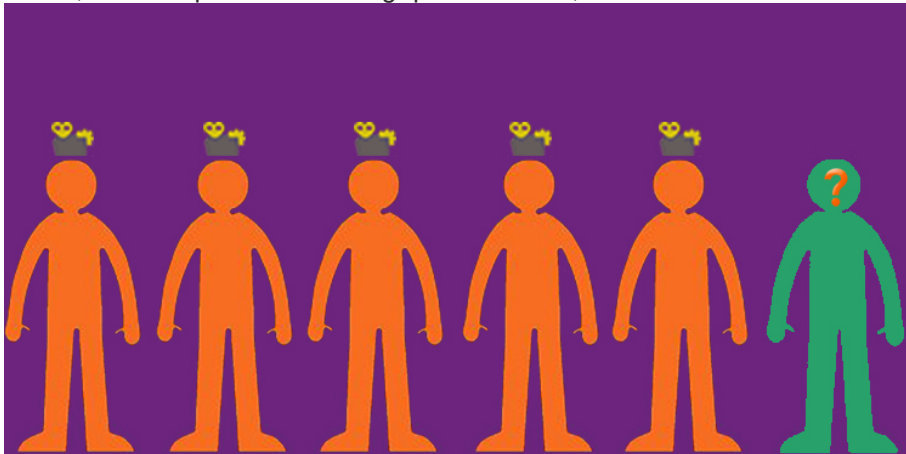
Visual Stimming is stimming with your sense of vision, rather than with others, such as touch. I present to you some stimmy gifs (I did not make these, and I do not own them):





(age unknown, f)

This is how I view autism. I came up with this picture in year 4, four years go, but I've only just made it (using my limited Photoshop skills). In case you don't see it, it's lots of people with clockwork above their heads, and one person with a big question mark, because he doesn't have or understand the clockwork.



(age 13, m)

I'm another person with high functioning Autism; Asperger's Syndrome. My ability to recognise emotions easily, my coordination, and the way i act, think and see things are affected. Sometimes for worse, sometimes for better. I'm into Tech and Drumming as of right now. Drumming helps my coordination a lot as there is many, many different kinds of complicated patterns to play, possibly changing, possibly staying the same, drum fills, ETC. I Also play piano, and between these two things, my coordination is pretty good. Someone with low functioning Autism could have severely impeded speech skills and could even flat out not be able to talk, move or think properly; and these people generally are what people think all Autistics are like, generally provoking hate. Obviously not true to someone who actually does their research and knows all about it. These are two different extremes, As people like me with Aspergers' can speak, type and talk well with very little impact on general movement. I Don't know whether i'm just lucky or whether that's a general story on the matter, but my social skills are where i beat out most people compared to everyone, which is sort of funny, considering how people make fun of Autistics on a daily basis due to their 'Weirdness' and quirkyness . There are some recognized similarities among people with ASD, Such as liking technology and music. Both of these are especially true for me, and have almost become remedial to me at this stage. For instance, whenever i'm angry or upset, i just go and play the piano, or take my anger out on the drums for ten minutes or so. Attachments tend to be very, very important for Autistic people. It's also a general rule that Autistics generally don't like change, as many people reading this will probably have noticed. This is especially true for me too, but again, whether it's just me, or a general rule, i can't say. Wow, This turned into such a ramble xD If you actually read this far, TY. But a bit of insight into the way i am as someone with Asperger's syndrome/High Functioning ASD.

(age 14, m)