The Influence of Video Game Mechanics on Youth's Development of an Esports Team: An Actor Network Theory Analysis

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Abstract

Video games, both casual games and esports titles alike, often take the blame when youth exhibit poor academic performance in school, aggressive behaviors, or anti social tendencies, a tendency that risks the relegation of potential positives gaming can bring. Furthermore, within the academic literature centered on the impact of video gameplay on youth, there also exists a tendency to conceptualize the relationship between video games and players as a singular, 'one to one' relationship devoid of any larger, physical community that is not online, as well as a notable lack of discussion on how specific game mechanics influence gamer communities. This thesis aims to address both of these social and academic issues through an eighteen month long study, employing participant observation methods, of how game mechanics, or non human digital actors more broadly, influenced the formation of a youth esports team within the context of a local youth center in Montréal, Canada. Building off of the work of Bruno Latour and John Law, this study attempts to shed light on the relatively unexamined social processes that permeate physical gaming spaces through the lens of Actor Network Theory (ANT) while also positing a contribution for new ways to use ANT as well. The major findings that emerged from the study reveal the strong influence that non human digital actors had in the processes of youth's identity formation and communication practices, all processes that facilitate strong social connections and bonds that allowed the youth, and the larger community around them, to grow and flourish as both community members and gamers. In displaying some of the positive aspects that emerged from the formation of a youth sports team, this research hopes to dispel some of the bigotry and stigma associated with video games and enable educators / researchers to better understand the often invisible ways that non human digital actors operate within games and gaming communities when seeking to nurture or study said communities in the future.

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Introduction

Maison Des Jeunes (MDJ)[1], located in Montréal, is a community based organization located closely linked with the neighboring school system wherein youth come to attend workshops, participate in community events, or simply hang out with other local kids. I, as part of a team of Social Sciences and Humanities Research Council (SSHRC) funded educational researchers, began organizing weekly gaming gatherings after being exposed to the strong appetite for video games, fighting games in particular, that existed there. It was crucial for us, both as researchers and as people, that we simply got to know the youth that frequented MDJ, on their terms, before engaging in any form of study or organized activities so as to orient any potential activities to the youth's actual interests as best as possible.

During this first phase (lasting six months) of the eighteen month research project, and from which the following vignette is taken, we had only just arrived at MDJ, where a general notion of video games as mere entertainment, albeit loud entertainment, was shared by both youth and staff alike. Though the community's perception of what gaming and esports[2] are would change over the course of our time at the center, and ultimately lead to the creation of MDJ's self run esports team, The DJ Freeze (The Freeze for short), one of the most prominent and noticeable changes upon our arrival there came from within one of the youth who frequented the center, Jeff, and his story offers a window into the transformative power that can proliferate if games and game culture are allowed to be taken seriously.

[1] Youth participants in the study have also been given pseudonyms

[2] Esports is being defined here as any sort of professional organization surrounding a video game title, and a game with said professional infrastructure surrounding it would be an esport title.

During our initial gaming sessions at the center, in which we played Nintendo's *Super Smash Bros. Ultimate* (*Smash*) alongside youth recreationally (meaning no formal, professional tournament setting or explicit educational purpose), Jeff immediately showed promise in his ability to master the game. Mechanically he seemed to be more comfortable with the controls and soon began emerging as a natural mentor to the other youth, ameliorating their game sense--or understanding of the game's big picture tactics and strategies--and overall ability to participate in this after school activity and community they were interested in. When we finally got around to organizing our first formal community tournament, Jeff emerged as the victor amid the cries and cheers of his peers. As a result of this victory, he entered one of the biggest local weekly tournaments for *Smash.* in Montreal, hosted at Montreal's own Smashloft venue which houses some of the best players in all of Canada, and placed at 16th place while contending against hundreds for the coveted trophy prize. The next week the energy surrounding Jeff was contagious, and he proceeded to thank us, as well as the community at MDJ, for inspiring him to actually go through with entering at Smashloft and even thinking of himself as a 'good player'. Jeff's triumph was the communities triumph: as a result of Jeff's top 16 finish, the youth at MDJ grew closer as gamers, as teammates, and ultimately as friends. Jeff went on to captain MDJ's esports team that our research team would eventually co-create alongside youth.

This brief vignette from the larger research project illustrates how transformative it can be for youth to simply take the idea of 'playing a video game as a sport' as a serious one: Jeff, without even actively trying to do so in a sense, found out he had leadership skills he could use, bettered himself and the community around him through strengthened ties and skills, and ultimately succeeded at a truly professional endeavor. However, what was quickly clear as well,

was that none of Jeff's triumphs would have been possible without the supportive shoulders of a strong community. In today's modern schooling and social environments, that often stigmatize gaming and belittle esports as dangerous distractions (Gentile, Lynch, Linder & Walsh, 2004), going so far in the U.S. as to hold a presidential meeting over video game violence (Lee, 2018), it is so easy for youth, like Jeff, to pass by communities that would enable them to flourish and miss out on socially and economically empowering experiences. Jeff and his team, throughout their growth as both gamers and teammates, had to practice relentlessly, negotiate community concerns, and maintain a personal / team identity both virtually and physically. Not a small feat considering all of the other daily activities high schoolers must contend with. Yet what sort of bonds held this gaming community together? What enabled The Freeze to be a place of growth and support for youth at MDJ?

While the youth that frequented MDJ certainly had a strong sense of community at MDJ before the formation of The Freeze, as evidenced by their friendly relationships with the various counselors and event organizers that worked there, the creation of an esports team seemed to nurture a heightened sense of community among the interested youth. Rather than dismissing their interests in gaming, an occurrence that youth reported was not infrequent at the center, our research team felt that something particular to the mechanics of game play, or non human digital actors more broadly, was catalyzing youth's engagement with one another. This paper aims to provide some insight in relation to the questions above, and uncover part of what lies at the core of the strong community ties and bonds we witnessed develop between Jeff and his teammates as part of The Freeze over time. In doing so, a brief rationale will be outlined below, followed by a

comprehensive review of relevant literature, before engaging in a sustained analysis of the research team's experience at MDJ.

Rationale and Focus

"The game of Chess is not merely an idle amusement. Several very valuable qualities of the mind, useful in the course of human life, are to be acquired or strengthened by it, so as to become habits, ready on all occasions . . . we learn by Chess the habit of not being discouraged by present bad appearances in the state of our affairs, the habit of hoping for a favourable change, and that of persevering." — "The Morals of Chess"

Famously lamented in Robert Putnam's (2000) Bowling Alone, technological advancements often take the blame for the modern decline in vibrant civic spaces, and the important community, interpersonal connections, and knowledge exchange fostered within them (Williams 2006 ; Shaw 2010). Video games are no exception to this phenomenon. As both popular discourse and scholarship acknowledge, video games contribute to this perceived increase in modern youth alienation via the often male dominated, antisocial, and toxic behaviors that permeate gaming communities, particularly online (Shaw 2010; Goto-Jones 2016; Sanford & Madill 2006). Coupled with these fears of antisocial behavior lies another frontier of both public and academic concern, namely over the 'violent' nature of video games, a particularly salient problem for esports titles (video game titles with a professional competitive league) given their propensity for competitive combat. These fears resonated with Jeff in particular, as Nintendo's *Smash* is a fighting game and this fact alone caused his family to ban play of the game for some time. However, not only are video games and esport titles statistically not increasing aggressive psychological tendencies and violent behaviors (Anderson & Bushman, 2001; Anderson & Dill, 2000), the potential benefits of engaging in video game play stand to bolster cognitive, motivational, emotional, and social activities within adolescents (Granic,

Lobel, & Engels, 2014), and the often cooperative aspect of engagement in esports stands as a means to truly engender prosocial behaviors within and outside of gameplay itself (Dolgov, Graves, Nearents, Schwark, & Volkman, 2014).

Given the 120 varsity esports programs in the U.S. and Canada and the ever increasing prospect of athletic scholarships for esports (Koetsier, 2018) at major universities across North America (Morrison, 2018; Nguyen, 2017), to disregard video game play, the esports community, and their practices would be doing today's youth, such as Jeff, a great disservice. Instead, recognizing youth's engagement with video game culture must take a much more holistic perspective then has been done. Researchers, educators, and policy makers must see video games beyond the digital, online, violent, and alienating interactions that can comprise them. This thesis develops a research backed case for some of the potential benefits that can arise from youth participation in video game culture and esports more generally through the lens of Actor Network Theory.

Specifically, this thesis aims to bring to light the role of non human digital actors, with a focus on game mechanics, as 'actors' within the processes that cause esport communities to form, and uncover what prosocial benefits or community strengthening emerge as a result of practices centered around these mechanics. Given its attempts to highlight all of the human and non human 'actors' and their interactions within the larger 'network' of nodes they are a part of (Law 2009), an ANT analysis allowed the 'nodal' prominence of game mechanics to emerge as an essential factor in the creation of a an esports team, the Freeze. Indeed, an ANT analysis shows that game mechanics, and the differing ways the community began to react to, identify

with, and use them in concert with other non human digital actors, were crucial to the communities long term cohesion.

This thesis therefore focuses on what roles non-human actors, the controllers, the game mechanics themselves, and the software youth created for example, played within youths engagement with videogame play and what implications they held for youth participation in videogame communities and culture. When we arrived at the center, it seemed as if certain 'invisible' forces were fueling much of the excitement, learning, and engagement we saw within the video game community at MDJ. The youth were having intense affective moments in responses to their involvement in gameplay, affective moments which were coupled with lively discussion using words that we as researchers couldn't quite understand, and thus our interest pertaining to what exactly non-human elements within the game were doing within the MDJ community was piqued. Furthermore, we were also curious as to what social processes permeated physical gaming community spaces as a result of these non-human actors and, if within these processes, there were any forms of learning present. The main research questions that this paper's analysis is ultimately framed around are as follows:

1) How do non-human digital actors influence the formation of a youth esports team / community?

Specifically,

1a) What role(s) do video game mechanics as non-human digital actors play in fostering individual and community identity for this esports team?

1b) What role(s) do video games mechanics as non-human digital actors play in youths' communication practices in developing and maintaining the team?

1c) What role(s) do non-human digital actors other than game mechanics play in youths' communication practices in developing and maintaining the team?

Jeff, when leading The Freeze as coach, managed to make his teammates laugh, grow closer together, and teach them valuable game related knowledge often without ever uttering a word. Despite all of the different cultures and backgrounds that flow through MDJ, with some youth only speaking French, some speaking only English, and some neither, it seemed as if there existed a lingua franca amongst the youth, a language Jeff and the other youth spoke through controller presses, in game avatar choices, and the manipulation of game mechanics on screen. On account of the powerful affective, learning, and community bonding moments these seemingly 'invisible' moments of communication procured, it seemed imperative for our research team to find a suitable framework that would show us how to actually see these game mechanics, and other non human digital actors, as they influenced the youth at MDJ. Actor Network Theory, with it's emphasis on networks of human and non human objects operating in concert, proved to be an invaluable tool in making the often invisible effects of game mechanics visible. If educators and policy makers seriously wish to tap into the good that games can do for youth, an understanding of how game mechanics can operate within a community would be vital in order to better produce the powerful affective and learning moments such non human digital actors can produce. Before unpacking some of the affective moments that occurred as part of The Freeze's development at MDJ, this paper will first provide an overview of ANT, and the ways it has been applied towards video games and video game communities, so as to better contextualize its application within the study conducted at MDJ.

Literature Review

Applicability of Actor Network Theory to Studies of Gaming Communities

The background of the research to be presented below arises from a comprehensive literature review, focusing on the nature and composition of informal gaming communities and the learning that occurs within them. Much scholarship, within education studies and game studies alike, tends to focus on how informal video game communities manifest themselves, and the learning processes that occur within them, in predominantly virtual environments (Lu, Shen, & Williams 2014; Goto-Jones 2016) and operate at a level of analysis situated on individual game titles themselves and their singular relation(s) to individuals (Consalvo 2006; Sanford & Madill 2006; Goto-Jones 2016).

Actor Network Theory (ANT) , while somewhat present within these bodies of research, has been largely left unused as a means to examine interactions between players themselves and the larger community comprised of video game, players, game mechanics, sites of play, and beyond. ANT analyses the complex relations between all human and non human actors, positing them each as 'nodes' whose linkage comprises a larger 'network' of relations (Law 2009). Given the relative unuse of ANT to study physical sites of multiplayer gaming, and that this thesis seeks to explore how non human actors (game mechanics in particular) have pervasive and pedagogically important influences on human actors (the youth at MDJ) and other non human actors (MDJ as a space itself), ANT's 'systems based' or 'networked' based approach makes it an appropriate lens: the gaming community, encompassing the game hardware, related software, and infrastructure found at MDJ would all be nodes of the MDJ network to be analyzed under ANT. Given the holistic and relational approach ANT encompasses, it seemed a suitable

means in determining how non-human digital actors influence the formation of a youth esports team / community and unpacking what roles video game mechanics, and other non human digital actors, play in fostering community identity and communication practices for this esports team.

ANT attempts to view the world and its workings not in a singular, disconnected way, but in a more relational, connected way, where the relational network that drives events forward is comprised of both human and non human elements or actors. To illustrate this shift from more traditional 'non-relational' modes of thinking to the relational modes of thinking espoused by ANT, the example of Louis Pasteur, and his implication within the pasteurization process, is commonly given (Latour 2005). While traditionally it would hold to credit Pasteur as a 'great scientist' who single handedly invented the Pasteurization process, according to ANT, to actually do so would be to omit the relational effects that occurred as part of the network that produced the Pasteurization process. Specifically, to single out Pasteur as the sole cause for the invention of Pasteurization would be to omit the "network of domesticated farms, technicians, laboratories, veterinarians, statistics", and other nodes that comprised the set of "materially heterogeneous relations" entangled in the invention of Pasteurization (Law 2009, p. 141-5). As Law (2009) puts it, the focus of ANT, when analyzing any given network regardless of scale, tends to prioritize the *semiotic relationality* between nodes of the network (where the elements define and shape one another), the *heterogeneity of nodes* (there are different kinds of actors, human and otherwise), and the *materiality of the process* (physical matter is there aplenty, not just "the social"). There is also a distinct focus on process and its *precariousness* (all elements need to play their part moment by moment or it all comes unstuck). There is attention to *power* as an effect (it is a function of network configuration and in particular the creation of immutable

forces), and to space / scale as well (how it is that networks extend themselves and translate distant actors). Only when all of these differing dimensions are observed, can the nature, or the 'how', of a process be understood, according to ANT, and the crucially non-human elements of a network are actually acknowledged in some meaningful way.

Yet, ANT is underemployed in analyses of informal gaming communities like The Freeze. Perhaps one reason as to why discussions on the nature of, and learning potential within, physical gaming spaces and the social processes between people (and non human actors) have been left out from educational research are generally, due to what Williams dubs the "death of the arcade" (Williams 2006). With the advent of game manufacturers shifting their focus from public game cabinets to more domestic, family oriented consoles in the late 80's early 90's, spaces where youth could game together in public simply began to diminish. Gaming soon shifted from a highly social and public phenomenon, with each arcade having its respective community, high score leaderboards, etc. to a more private sort of affair with the advent of home consoles and computing. Yet, for many of Montreal's youth, the arcade, though its form changed, has never left, as evidenced by the continued existence of various fighting game communities, such as Smash Loft, that are still in operation. This research aims to bring such communities to light through the relatively unused lens, within video game and educational scholarship, of Actor Network Theory.

Given that video games and video game play itself inherently consists of a non-human actor (the game) interacting with a human actor (the player), ANT is apt for analyzing video games and the eSport communities that surround them, that is, the contemporary arcade. Before I turn to an ANT analysis of the Freeze and it's community dynamics, I first consider what

researchers have already used ANT to say about games. I further explore how researchers have used ANT to describe the roles of non human game mechanics have within games themselves.

From User-Viewer Relationships Towards Interrelation

At the most basic level, ANT complicates the player / game relation, shifting the focus away from a more conventional user-and-viewer centered interpretation of gameplay towards one where players are actually intertwined with the rules and affordances of machine and game. Writing on Massively Multiplayer Online Games, Cypher and Richardson (2006), note that, in Western society, there lies a tendency to 'black box' technology and assume a humanist perspective wherein computers are mere tools for humans and thus, in a sense, entirely separate entities with their own competencies; yet, if we were to adopt such a perspective when examining players and their interactions within Multiplayer Online Games, all we would really see would be material network of machines connected via the internet as one network, with humans, as separate entities, reaping something of value from said network (Cypher & Richardson 2006). ANT, however, offers us a chance to view the humans and the machines that are both needed for Multiplayer Online Games as inherently intertwined in an expressive sense: "the rules and affordances of a game, the user's offline context, and the online world created with other players and machines" all form networks together that through their "collective actions and intentions accrete a sense of history that will eventually structure social, technical, and material relations towards the development of a collective intelligence" (Cypher & Richardson 2006, p. 5).

By taking into account all of the 'materials' that comprise the Multiplayer Online Game, the humans, the computers, and (perhaps most importantly) the game mechanics, a much more

holistic picture of player expression and manifestation emerges when compared to the 'black box' approach. This phenomenon of video games and their mechanics existing as a means for humans to instantiate themselves, to some extent, within a larger, complex network of actors is perhaps made more clear by Merleau-Ponty's famous description of a blind man's stick:

> The blind man's stick has ceased to be an object for him and
>
> > is no longer perceived for itself; its point has become an area of sensitivity, extending the scope and active radius of touch and providing a parallel to sight. In the exploration of things, the length of the stick does not enter expressively as a middle term: the blind man is aware of it through the position of objects rather than of the position of objects through it. The position of things is immediately given through the extent of the reach that carries him to it, which comprises, besides the arm's reach, the stick's range of action (Merleau-Ponty, 1962: 143).

Much like the blind man's stick, video games and their mechanics can too serve as a 'stick' of sorts, in so far as the choices and actions players make in these Massively Multiplayer Games, which are solely enabled through the game's mechanics, actually serve to represent an extension, a manifestation, or a language of the player themselves.

A brief, but nonetheless important corollary, or additional layer to thinking about video game players' interactions as actors within a network, of which them and their computer (games) are a part, can be seen in examining the physical processes that human bodies go through in the

act of gameplay as well. As Lister et al (2003) note, when using ANT to describe how games as non-human actors influence us human actors, it is also very important to consider how such games force or implicitly goad us to take actual action within the physical world: "the motions of finger, mouse, or stick", the facial expressions caused by intenses gaming moments , the subtle tweaks and twitches that accompany frantic game inputs are all equally a part of "the circuit of the game" being actors within the network (Lister et al. 2003). It follows then that a game that is more demanding of player's fingers/bodies (i.e. Dance Dance Revolution or Mortal Kombat) inherently demands players to make more movements, more sounds, and perhaps produce more sporadicity that leads to this physical component of play being a more central actor within the network. This physical or haptic dimension to gameplay will be shown to be a highly important factor in The Freeze's engagement with *Smash* .

Ultimately, a big component of using ANT to describe game mechanics, or play more generally, lies within appreciating the full range of actors, both human and non human, and, crucially, acknowledging the interrelation, as Taylor puts it, between them all (Taylor 2009). Appreciating the "technological systems and software (including the imagined player embedded in them), the material world (including our bodies at the keyboard), the online space of the game (if any)" , and the broader "social worlds that infuse the game and situate us outside of it", as actors within the network of play might indeed seem overwhelming at first; but, proponents of ANT, or Assemblage theory more generally, argue that a search for the "found objects" within play can be a means with which to tackle this herculean task (Taylor 2009).

The everyday 'found objects' that game researchers seek might range from custom controllers to common body movements among players, one aspect, however, generally missing

from the literature seems to be a focus on game mechanics themselves as a common object through which insight of the network, or community, can be obtained. Some research, however, has nonetheless placed game mechanics, or at least some systems which interact with them, into the focus. Of this work, the literature on "modding", or the act of tampering with game code and software to produce an entirely new artifact, and the modding community standing as a good example.

Video Game 'Mods' As Actors

Within Game and Educational studies, there has been extensive coverage as to what a 'modder' is,what the 'modding community' consists of, and the relations these fan-programmers have with new media (Hartley, 2006; Jenkins, 2006; Taylor, 2006). In short, a modder can generally be thought of someone who makes 'mods' or modifications to video game software, changing the original game or product produced by the development team / company into a new form (Postigo, 2007). As Postigo notes, there are various types of mods/ modders ranging from more traditional 'modders', who alter the game's physics or mechanics, to 'mappers', who focus on adding the terrains and zones of play to the game, to 'skinners', who re-texture existing assets with new graphics and looks. Yet, even though modders and the act of modding can be an important node/ actor within a given network in which youth game, perhaps allowing important technical and social skills to be developed (Postigo, 2007), I want to turn the focus here on the mod as an actor itself, an act oft ignored by many but center stage within ANT.

The lens of ANT allows us to see these fan or player created constructs almost as people, in a sense, as actors in and of themselves: As Taylor notes when studying user interface mods in Blizzard's *World of Warcraft* (WoW), mods can generally add polish to the game and its

interfaces, monitor and record our play, but they can also sometimes feel like / actually be autonomous agents, agents who act upon real players, just as real, human players would, and who are reacted to as if they were real players. Taylor's showcase of the mod CTRaidAssist (CTRA) is a useful example for coming to terms with this notion of 'computer as actor/player'. In WoW, anywhere between 5 to 40 players are needed to complete a 'dungeon', a really difficult level in the game in which players must coordinate their attacks and utilize effective communication to take down a high level 'boss' or final test of sorts. In order to better achieve this goal most, if not all, players turn to CTRA to manage these dungeon and raid encounters.

Yet beyond simply making the user interface and the reams of information pouring in from the game easier to manage, CTRA, as Taylor argues, stands to radically reconfigure play itself, as the mod can play some of the game for us by automating certain actions, monitor how we play and broadcast key information to ourselves and other players, and perhaps assume a life of its own. During the 'Molten Core' encounter in WoW, for example, the boss will randomly turn other player characters into a bomb, essentially, which would, if left neglected, injure said player and any allies around them. At this point CTRA would jump in and, through text, tell you and the entire party '____ is the Bomb!'; yet, this normally would have been achieved through a player manually typing out that they are the bomb. It is important to note, however, that the 'mod as actor' is somewhat ambiguous in nature, as if one were to look at the chat window in WoW, for example, it is the in game designated player who shouts, albeit through CTRA, ' I am the Bomb'. The machine is simply taking some of the players actions for them such that new or inexperienced players might not even know a mod is being used (Taylor 2006). In this sense, the mod can be seen as the 41st, extra member of the dungeon raid, a true actor in a sense, and

when we are taking into account the synergies not simply between one player and their respective mods, but between the competencies between the group as a whole and their collective use of hardware and software, a true distribution of competences between humans and nonhumans occurs (Latour 2005). So if we are to fully examine a gaming community and its player base, it is imperative that we do not let such non human interactions slip between the codes. If we properly want to investigate the role game mechanics play in shaping youth esports communities to form, we must always be on the look-out for the 'hidden' non human members as well, a family of which game mechanics are a big part of.

Character Creation Mechanics As Actors

ANT has also been used as a means to examine game mechanics such as character creation and skill grinding, perhaps two of the most common mechanics found in most Role Playing Games, as well. Again, the overarching theme that seems to emerge from the literature can be described as one of 'blurring' between human and machine, as video games, primarily through their mechanics, translate, in a sense, the competencies, movements, functions, desires, identities, and embodiments of both gamers and game. Leander and Lovvorn (2006) expand on this notion of the embodied translation that game mechanics can bring about through their examination of youth engagement with the character creator mechanic Lucas Art's role-playing game *Star Wars Galaxies*. Like most role-playing games, at the start of *Star Wars Galaxies* players are prompted to create a character, in essence a role, that they wish to embody as a means to move about the game world. Yet players do not engage in making this character one-sidedly, they must do so within the limitations and affordances of the game which only provides a very specific amount of options in the form of species, class type, body types, etc. Thus the character

that emerges from the character creator, as Leander and Lovvron note in their interviews, is not an "empty image" that was brought into being from nothingness, but rather is co-created by player and game and "imbued with particular qualities" decided by the game. The crucial thing here is the notion that this places the player and their character as "co-actants" within play, where the character creator, and eventually game play with said character, 'translates' certain players' desires, such as desires for "identity, identity play, and aesthetic choices" into the game world. Conversely, players themselves translate the expressions, actions, and desires of their virtual characters in a similar way: as their virtual representation of themselves traverses the gameworld, conversing with other characters, engaging in combat, or navigating treacherous terrain perhaps, players bodies would often react, or translate, accordingly, frantically sitting up in chairs, squinting, or engaging in rapid and less rapid movements when necessary (Leander and Lovvron 2006). One of the major things that emerges from such an ANT based analysis of such a game mechanic, which views both the player and character as nodes within the same network, is ultimately a co-constructed identity between player and character. As we shall see later on, this bridging of identities stands to be highly important when we look to the role of game mechanics in how they shape youth esports communities to form.

Skill Tree Mechanics as Actors

Another mechanic that is commonly found in role-playing games, and generally throughout most games, is the skill tree, and it stands as another way to see how this co-constitution between game and gamer occurs from an ANT perspective. A skill tree is a mechanic generally used in games to delineate differentiation or specialization of characters. While choosing a class (warrior, mage, medic, etc.) in a role playing game is perhaps the biggest

way a player's experience can be altered / be different from other players, within each class generally lies a skill tree with which a players character can specialize even further: a warrior, for example, can hypothetically either choose to put skill points into skills that bolster their defences, thereby making them more of a shield for the team, or opt to put skill points into more damage oriented techniques, making them more of a damage dealer for the team but a warrior nonetheless. Inherently, due to the substantial mechanical changes skill specialization would bring, skill trees stand to shape the player and co constitute their actions by simply shaping what moves they can do, what skills they can use; but, as Leander and Lovvron note, it is ultimately each particular skill trees' "sensibility for advancement", or the particular method through which each game's respective skill tree grants the progression towards new skills, that begins to shape players' experiences and ways of being and thinking (Leander & Lovvorn, 2006). Players, on account of the specific nature of these progression systems, make decisions about particular in game actions to take not based on what "one might consider to be practical, commonsensical, or a most efficient means in locally embodied activity", but rather with a strict adherence to whatever metric the skill tree values most so that they may climb the tree as quickly as possible. Thus the skill tree mechanic is able to shape the player's behavior, forcing them to take actions they might normally would have, and in turn the player shapes the game and its world by altering it as a result of said skill tree incentives. Therefore, if we truly want to understand the inner workings of gaming communities and their members, we must, again, pay close attention to these mechanics as they too are clearly a part of the players, their shared experiences, and how they tackle problems and social situations in and out of game, as, as we learned from skill trees, game mechanics have the tendency to shape the limits of our behavior.

Physical Spaces As Part of a Network

While ANT has been used to hybridize the game and the gamer, so too has it been used to hybridize and challenge more traditional notions of game space and traditional space. One of the most commonly found mechanics in real time strategy games, as pointed out by Lammes (2009), the concept of 'fog of war', is most illustrative of this hybridization of game/space brought forth by an ANT perspective. In games such as *Age of Empires III* and *Sid Meier's Civilization IV,* a big part of the game lies in uncovering and exploring a vast unknown space and building a society upon said space. In addition to having a small map in the bottom corner of the screen, the player can see the game world from a bird's eye view from which they can direct their units and take actions in the game world: the catch, however, is that the map only reveals locations you've seen and only in the last state said location was in when you saw it, leaving most of the starting map black or greyed out in the 'fog of war'. As Lammes (2008) notes, throughout this process of explorative cartography "maps become mutable instead of fixed, changing appearances and meaning" (p. 266) according to player actions and travel. Mapping and exploring (or touring), in the game world, ultimately become translatable and thus dominant spatial categories lose their stability and acquire hybridized qualities : maps are often abstract and 'stable', in a sense, whereas exploring is often more personal and changeable and yet here within the game, if we examine them through the lens of ANT, both spatial categories are hybridized as two nodes or parts within a system (Lammes, 2008).

Such a phenomenon is mirrored or paralleled in the physical space wherein gaming takes place within the real world. When examining the physical spaces of gaming sites in the early 20th century cultural historian Huizinga, the concept of the 'magic circle' was mentioned and

quickly became the dominant paradigm through which gaming spaces were viewed academically and culturally for a while (Huizinga 1950). Looking at gaming spaces as 'magic circles' positions such spaces as a "semicosed round space that is at the same time demarcated as separate from daily life while also being a part of it" (Lamme, 2008, p. 261). Gaming, as the cultural theory goes, was a means to bring order from the chaos of life, and magic circles were a means to create an ordered disposition to a spaces; however, if the aforementioned examples of WoW and *Age Of Empires III* are recalled, for example, it quickly can be seen that games and game spaces perhaps might not be so ordered after all. In case you don't trust your gut, scholars too, such as Taylor (2003), who explained that the fact that players have to negotiate the different spatial levels of the real/virtual at once is actually much more chaos inducing than order inducing , and Consalvo (2009), who highlights the diverse, and hence chaotic, set of experiences and meanings that emerge from different peoples' gameplay , have challenged this notion of game world and world as separate entities of (dis)order. Lamme even coins the term "spatial confusion" to describe this phenomenon of being at once both in the game world, influenced and moved by its translations (as we noted above) and the real world with its similar influences.

Gaming spaces taken as such, thus, redefine traditional notions of what is inside and what is outside the game world and instead posits the game, the gamers, and the community around them as all nodes within the larger social actor network revealed through ANT. Such a merging of 'in game' and 'out of game' world spaces, as ANT encourages, has profound implications not only in terms of enabling a more holistic sense of the larger network that gaming, and gaming communities, can be a part of, but also in terms of how the 'in game' and 'out of game' worlds

communicate / interface with each other, or rather how parts of each world node are expressed in the other. In order to see how these nodes exactly relate to one another and undergo translations between each other then, researchers must have a particular understanding, I would argue, of the mechanics and non human digital actors operating within and beyond the game world and the 'magic circles' that come with it.

As I have shown above, ANT has, in fact, been used quite extensively, within educational and game studies scholarship, to explore the impact of video game mechanics, and other non human digital actors have, within their respective networks. ANT acknowledges and makes visible the merging of human and non human digital actors as part of the player's identity formation when engaging with game mechanics such as skill trees or character creation. ANT has also been used to hybridize notions of digital and physical space, insisting a merging between 'in game' worlds and 'out of game' worlds, and offers a framework with which to view the ways in which communication, or translation, occurs between the various human and non human actors that compose physical gaming communities and their surroundings. Finally, the acknowledgement of non human digital actors as players, in the form of mods, for example, is another key insight brought to the table by ANT, as, again, such a perspective offers a more holistic perspective, when thinking about who counts as a 'player', on the entirety of the networks that encompass gamers and their communities.

ANT has thus, primarily, been used within educational and game studies literature to unpack the influence of game mechanics and non human digital actors in the context of mostly singular individuals (humans) engaging with a gaming community mainly through digital means, i.e. engaging with a community online and in game. This paper, however, aims to contribute to

this body of work by exploring a relatively novel context with ANT: by analysing the influence of game mechanics and other non human digital actors as they situate themselves within the networks of a physical gaming community space, such as the community found at MDJ, it is my hope that a more detailed account of how such actors operate, and how they influence community formation in particular, can be achieved.

The more explicit features of ANT that will be operationalized in the analysis section below will focus primarily on the *semiotic relationality* that exists between differing nodes within the same network. As we have seen in literature above, most of the game mechanics analyzed ultimately serve to shape the player's behavior, forcing them to take actions they might normally would have (both in the game world and in real life), and in turn the player shapes the game and its world. Emerging from this relationality is something 'new', neither entirely machine or player, but a synthesis of the two where players are actually intertwined with the rules and affordances of machine and game. The analysis presented in this paper focuses on semiotic relationality as a means to uncover how this synthesis of human and non human competencies might contribute to the formation of community cohesion within MDJ's esports team, an objective brought about by the fact that many of the youth at the center seemed to be engaging with technology / game mechanics in this way. Furthermore, another key facet of ANT that this study focuses on lies within the *materiality* of the processes that occur within the network. While the interrelations between player and machine are certainly important, paying attention to the specific instantiation of each piece of machinery or equipment also seemed to be a way to unpack youth's relations to such game mechanics / consoles, both individually and on a community level, in a more nuanced way. Such a focus seemed apt upon our arrival at MDJ on

account of the large diversity of game controllers we saw youth using, and each controller, with its own particular button arrangements, stylized looks, and sizes, seemed to 'mean' something different to each youth. To gain better sight of how the youth at MDJ catalyzed into an esports community through their shared alignment with game mechanics, participant observation was employed to try to learn from youth themselves what these mechanics were and why they mattered so much.

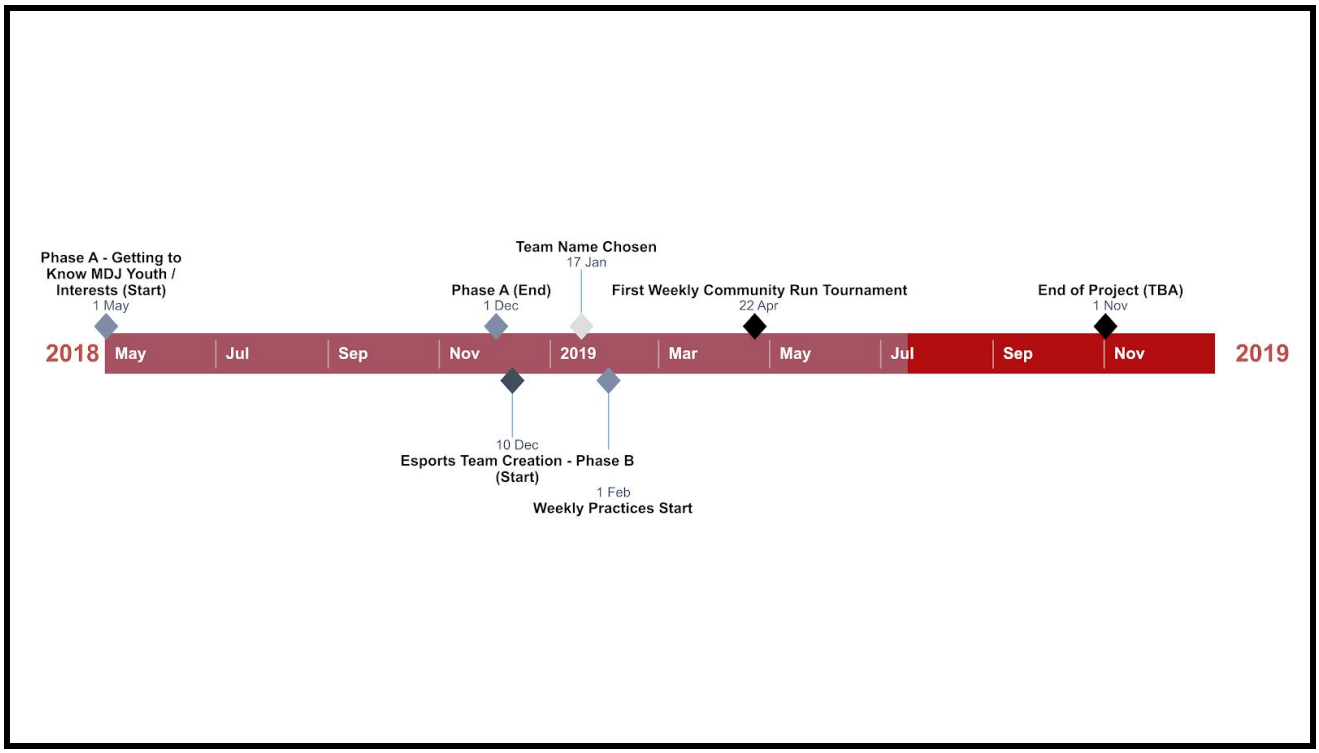
Methodology: Becoming a Participant Observer across Digital-Physical spaces in an Youth-led eSports Community

Through data collection and analysis, my research adopted an anthropological framework centered on "correspondence", wherein researchers are not solely focused on describing or representing observed processes, but participate and learn alongside community members relationally in order to probe gaming community processes in a genuine and revelatory manner that places the community at the heart of the process (Ingold, 2013). Employing participant observation methods was both effective for uncovering community processes and a powerful way to make use of the experience I already have as a gamer to connect with members of the community. Specifically, my having extensive experience in gaming and game culture helped me to examine, understand, and ultimately re-contextualize the processes occurring within the space, as the need to work 'relationally' with participants is somewhat made easier on account of us already speaking the same 'language' (Ingold, 2013).

In this particular context, being a participant observer was not merely limited to the physical realm: participation spanned across the physical interactions at the youth center, the digital interactions across social media platforms, as well as the in game interactions that

happened between our in game avatars. Each realm brought its own modes and ways of being a participant, required a particular kind of attention for navigating moments, and created its own language for dealing with such moments. These realms, as well as our participation in them, also shifted as we moved from Phase A of the project, where we simply hung around with youth at the center for about six months, to Phase B, where we began to formalize, to an extent, a professional esports team alongside youth. Subsequently, each realm of interactions also produced variably different types of data and required different means for capturing analysing said data.

Figure 1. Research Project Timeline. Graph shows key dates relating to The Freeze



On site at MDJ, being a participant observer during Phase A entailed getting to know the community within the youth center and the different youth that would sporadically drop in from its surrounding neighborhood. Following the work put forth by Ingold participation framework

(Ingold 2013), I, as a researcher, came forth into the center open and ready to position the youth as leaders and learn their ways of being, practices, and languages, in the many ways that they might manifest themselves; yet, it soon became clear that myself and the youth at the center interested in gaming already spoke the same or similar 'languages' in a sense, though our dialects or particular articulations of the same concepts might differ. As fate would have it (or perhaps simply undeniable truths concerning Youth between the ages of 11-18) *Naruto*, and the shared joys, pains, and memories that watching such a TV series would entail, proved a vital jumping off point, or common language, for forming bonds within the center. Having this common set of knowledge that existed between myself and the youth, and exposing ourselves to our differing perspectives and opinions towards this common mythos, catalyzed much discussion and facilitated us simply getting to know each other on youth's terms, as their engagement with us was mediated through their interests alone. Such interactions would ultimately lead up to us engaging in video game play centered around the title *Naruto Ultimate Ninja Storm*, an anime fighting game, and provided the necessary foundation for the later formation of our esports team centered around *Smash.*

The moments produced by such conversations and gameplay interactions were captured through extensive field notes, some written some voice recorded, and our implications (unpacked below) for how video game mechanics shape the formation of esports communities and how game mechanics play a vital role in the social fabric of gaming youth's lives were based upon such data. These field notes were collected through a combination of taking notes on paper as interactions with youth proceeded and voice recording a log of our interactions with youth retroactively, and the analysis that follows emerged from our choice of which moments seemed

to illustrate the character of the MDJ network of which our esports team was a part of. Yet, the youth who were avidly gaming with us were not the only persons contributing to such moments and conversations: the other youth and adult counselors, often on the periphery of our couch's 'magic circle', but nonetheless an integral part of the social background that fueled affective intensities. From the first moment we first set up our Nintendo console in the hangout space, it was clear to everyone that gaming is no quiet activity: the various cheers of joy, squeals of victory, and bodily movements, dances, and shakes that follow the ebb and flow of gameplay filled the room everytime we visited the youth centre. But to some on the periphery of the circle of play that gravitated around our couch, the sounds emanating from our play was distinctly within the camp of 'noise' as opposed to the camp of 'expression'. Gamers do not go quietly into the night, and this was visibly beginning to upset some of the staff at times, a phenomenon made visible by their own bodies, eyes, and voices reacting to the noises and motions of gameplay.

Navigating the border of our magic circle, the border between those clearly 'in' on the gaming, those who were clearly 'not', and those who were somewhere in the middle was an integral part of participant observation. To better understand what impulses and tensions were ongoing on the 'outside' of the circle, informal interviews of staff were conducted throughout our visits after, or sometimes during, gaming sessions. Paying attention to how game mechanics (and knowledge pertaining to such mechanics) triggered different social situations across the differing physical spaces, peoples, and places within the youth center, was one of the main ways our team could even begin to 'see' data as it emerged, and guided us towards our goal of making visible the role game mechanics play in shaping youth organization around esports.

Online Participant Observation And Related Ethical Considerations

Another important aspect of being a participant within the context of our research project was participating online with youth on their terms as well. Following the tendencies and traditions already present within the gaming culture at the center, we, alongside the youth, created a MDJ Discord Server in order to better organize gaming activities at the center and provide means for youth who may not be so comfortable participating in physical spaces join in on the gaming community in more digital ways that feel safer. Discord is an integrated text and chat platform that was created specifically to foster gaming communities, and, like the much more academic / business oriented application Slack, it enables users to create multiple channels for differing conversation topics, tier lists to categorize different members and their specific roles, as well as text and voice chat channels for communication (Konstantinou & Epps, 2017). From such a platform, data in the form of chat logs, self created and ever evolving community guidelines, images, gifs, username choices, and a whole host of digital content created by youth were made available.

Participant observation within the virtual space provided by the MDJ Discord space further consisted of ethically engaging within Consolvo's notion of 'the logic of lulz'[3] (Conslavo, 2012), a practice that I, as both researcher and avid gamer, try to engage with almost

[3] Infused through most internet subcultural discourse, gaming related or otherwise, the playful 'logic of lulz', manifested in the act of 'trolling', manifests in much subcultural communication. Humour or style, as it manifests itself through multimodal digital artifacts such as 'memes', text posts, and many other forms of online communication, often employs ironic and critical logic with the intent of stirring up playful conflict between other users of the site or the ideas they espouse (Milner 2013). While this paper is condoning the playful side that can be found within a use of the 'logic of lulz', it is important to note that overstepping the boundaries of respect and decency through an overly aggressive engagement with such logics online is very much possible, a feat known online as 'toxicity', and this paper explicitly does not wish to support such toxic engagements with the 'logic of lulz'.

all the time. When youth began to spontaneously and of their own accord post humorous memes, post gaming and anime related videos, and discuss various fan-related topics related to the media we were collectively consuming in person at the center, learning the internal logics of their own subversive humor and understanding the narrative references to the various fandoms they were referencings (*Naruto*, *Smash* , etc) was something that one needed to do in order to be able to decipher and participate within such spaces. Yet this bridge was mostly crossed already, as I myself lived and breathed these similar logics, fostering genuine connections with the youth involved and facilitating the more formal aspects of the esports team / project yet to emerge.

One important difference, however, between the way I normally participate within these technocultures in my quotidian life and how participation manifested itself here on the MDJ Discord was wrapped up in the concept of moderation. While it was not a common occurrence, occasionally instances of hazing and perhaps inappropriate uses of symbolism were used on the Discord Space, and I use the word perhaps here to signal that, while I as a researcher and somewhat of a mentor figure to these youth did hold some sort of authority of moderation over the space, ultimately what was ‘acceptable’ was decided collectively, a process in which I was merely just one voice in the conversation offering my own thoughts. That is not to say that in some extreme cases of shaming or bullying (which almost never happened), we as researchers didn't step in and outright condemn such toxic actions as we should, but for the most part the moderation aspect of this participation was left to be an ‘in process’ sort of moderation. One incident revolving around the now infamous pepe the frog emote stands as an excellent example to view this in process moderation in practice.

Pepe the Frog was first created by Matt Furie as part of a comic strip in 2005. Pepe the anthropomorphic frog's popularity soon spread across various social media sites, such as Myspace, Tumblr, and 4Chan, gaining much cultural salience through the early 2000's that still persists to this day; however, while Pepe used to be mainly restricted to gaming or online cultures in his earlier days, by 2016 it was clear that Pepe was emerging as a symbol appropriated by the Alt Right Movement in the United States, prompting his creator to publicly reclaim the cartoon from such associations (Anderson & Revers 2018). Despite this unfortunate adoption, Pepes legacy, still lives on vigorously within gaming circles, if not through his visual depiction, then certainly through his affective phrases, such as 'feels good' or 'feels bad'. As a result, a situation within the MDJ Discord space arose wherein one of the youth, Leo, who frequented the virtual space casually began using the emote as a means to express themselves. It was also clear that Pepe was a dear symbol to Leo, as when, due to a glitch in the discord server, Leo was unable to use the emote, he clearly expressed sadness at not being able to do so, feeling an oppressive sense of censorship. While Leo never used an 'Alt Right' manifestation of Pepe, some of the other members of the research team began to get anxious at the emotes usage, and there was serious consideration for outright banning the use of the emote on the Discord server. However, instead of following this gut pedagogic reaction, I as a participant within this space chose instead, in language that followed Consalvo's logic of lulz, to playfully question the use of such an emote, and outrightly call into question its association with alt right movements. What emerged from such moderation was a nuanced discussion on the history of such symbols, how and if we can reclaim them justly, and a general increased awareness for social justice concerns within the Discord space, and it all happened in a way that didn't devalue Leo and other youths'

sense of themselves, what matters to them, and ultimately their autonomy. Participating and moderating in this way, alongside youth, on their terms, was a key way data was gathered but also experienced throughout the virtual spaces we entered with youth.

Video Game Participation / Observation

Finally, another main area of participation, as well as data collection, was found within the video games themselves, where we existed as players navigating and expressing ourselves solely through the mechanics of the games we played. Utilizing the Nintendo Switch's instant video and photo capture technology, a content analysis of our gameplay also served as a dataset to further analyse the role of gameplay mechanics in fostering social esport gaming spaces. As a researcher extremely familiar with most of the mechanics found in all of the games we played, holding back some of my mechanical knowledge was an integral part of participating within the community during the early stages. 'Going easy', in a sense, on the kids while we fought in intense 1v1 battles in game was key to let them explore the game at their own pace and maintain that affective intensity that should accompany these fights; yet, interestingly enough the more we visited the center and the better youth got at their mechanical mastery, the more they could 'feel' me holding back mechanically which only prompted them to ask for the 'real' Luka to fight them. Eventually, the youth would surpass me in mechanical skill, as I have not beaten them once since our early days of gaming at the center, but this aspect of 'getting to know' each other through our mechanical play was vital for forming real world bonds and connections with the community at MDJ.

Using ANT as a framework through which to analyze the role of these mechanics and mechanical interactions between community members, seen in our saved replay videos on the

Nintendo, was a way to make visible the often invisible role that non human actors, such as game mechanics, have upon human actors. Below, I present an ANT-driven analysis of three moments, illustrating the tangible effects of game mechanics at play in knitting the social fabric of the centre. The main focus in unpacking these events that occured at the youth center lies around how video game mechanics, and other non human digital actors, engender the formation of esports communities, and how these non human digital actors facilitate the identity formation and communication practices within esports communities. As we, as educators, look to increase the socio-economic opportunities for youth in the world, the creation and involvement of esports communities at schools and community centers is, I believe, a key factor in this, and knowing how game mechanics, and other non human digital actors, fit into the creation of such communities and the positive community building moments they produce, will hopefully be a step towards the proliferation of eports communities.

An Actor Network Theory Analysis of Game Mechanics as Social Actors in an Youth-Led eSports Team

The following analysis is organized to focus on specific non-human digital actors and the particular roles they played within the formation of a youth led esports team, The Freeze, at MDJ. Specifically, this analysis will explore the ways in which the particular game mechanics of Nintendo's *Smash*, the esport title of choice at MDJ, shaped 1) individual and community identity formation practices, as exhibited through the in-game avatar and out of game hardware choices made by youth, and 2) community communication practices, as manifested through youth's use of gameplay as a form of 'language', in ways that served to catalyze community cohesion and formation. This line of analysis seeks to directly address the aforementioned

research questions 1a) (What role(s) do video game mechanics as non-human digital actors play in fostering individual and community identity for this esports team?) and 1b) (What role(s) do video games mechanics as non-human digital actors play in youths' communication practices in developing and maintaining the team?).

Furthermore, seeking to move beyond an analysis of just video game mechanics, the third section of the following analysis will subsequently focus on the impact of non human digital actors more broadly, highlighting the esports team's use Discord chat bots specifically, in addressing our third research question centered around what role(s) non-human digital actors other than game mechanics play in youths' communication practices in developing and maintaining the team? Each section of the following analysis will first provide some of the general socio-cultural context that surrounds these non human digital actors, as they manifested themselves within MDJ, before diving into the unpacking of a particular moment that occurred during the rise of The Freeze that highlights the impact of the non human digital actor in question.

Identity (Self) Formation via Game Mechanics

ANT is particularly helpful in analyzing the role of non-human actors in identity formation. As Law (2009) outlines, one of the main focuses of ANT, when analyzing any given network regardless of scale, is to prioritize the semiotic relationality between nodes of the network, or the ways in which nodes, by virtue of being intimately connected to each other through a network of relations, come to co-define each other, each one shaping the other in virtue of their networked connection (Law 2009). While the specific ways in which this semiotic relationality manifests itself across differing types of networks, or networks incorporating

different kinds of materials, will certainly vary, ANT is very clear on one thing: it is hard to deny the powerful pull the 'stuff' around us has on our identities, both in terms of shaping an identity for ourselves and within a larger community.

An esports community, such as the one found at MDJ, is no exception to this phenomenon. Esports fans across the world associate themselves closely with a myriad of teams, specific athletes, or even the specific virtual characters that are found within the video games themselves. A person wearing a Cloud 9 Gaming jersey means something vastly different than a person wearing a FaZe Clan jersey; A person who supports Mang0 might carry a different connotation with them than a person who supports Hungrybox[4]; But, perhaps most importantly within esports communities, who one chooses as their 'main', that is their preferred character of choice for in game use, generally plays an extremely large role defining one's identity within esports circles, particularly within esports communities centered around fighting games. Fighting game communities, video game communities centered around one on one combat titles, have historically necessitated to gravitate towards local, in person matches due to the precise input timing a wireless, or internet based, connection simply wouldn't allow, and this need for 'local' connections further strengthen the tendency for strong self actualizations to emerge towards the virtual fighter one chooses. While the particular aesthetics or associated media with said character might also contribute to why a person might strongly identify with their main, an often overlooked component of this self identification process is the mechanical playstyle of said character. It is here where ANT can truly shed some light as to how this non human elements of play can enable the formation of human bonds within esports communities and enable the

[4] Mang0 and Hungrybox are both professional *Smash* players, known also as Jose Marqeuz and Juan DeBiedma respectively.

members within to express themselves and grow closer to the community around them. Below follows an outline, through the lens of ANT, of what I will dub the 'Little Mac Moment' in order to approach an understanding of how video game mechanics enable the formation of strong (esports) communities.

After spending a couple of months at MDJ, it soon became clear that fighting games in particular were a keen interest among the youth present there. A good deal of the youth we met there had already been attending monthly tournaments featuring *Smash* at a local venue aptly dubbed Smashloft. Seeking to emulate the professional tournament practices of Smashloft, wherein matches are conducted with specific rule sets and streamed and live commentated upon online on various platforms such as YouTube, Twitch, and Twitter, we, at the youth's behest, set out to create our own tournament ready venue at MDJ with the eventual goal of opening it up to the world, both virtually through streaming services and physically by providing local Montrealers with another tournament legal *Smash* venue. After a couple more months of talking, testing, and tinkering, we were finally able to set up multiple areas to play *Smash*, replete with computer monitors, controllers, and consoles, along with a media room, wherein tournament organizers could set up the tournament bracket, commentate on matches, and broadcast the event live on social media platforms.

Each zone of the tournament held its own particular practices and infrastructure for supporting such practices. For example, the media room was replete with an iMac computer for streaming the tournament online, a capture card for capturing and digitally storing the in game footage to be streamed from the Nintendo console to the iMac, a condenser microphone to capture audio commentary for each match, and a green screen for creating a professional

background while said commentary was done. The media room was generally enrapt in constant conversations over the technical management of the tournament, ensuring that it ran smoothly and according to the standards of other professional venues and fighting game communities, as well as technical discussions over the matches themselves. Conversely, the actual play space of the tournament was much more sparse: each tournament set up featured a monitor, a Nintendo Switch console, and an extension for headphones so that players could listen to the in game music if they wished. In these areas players mostly competed against others, some more silently, others more boisterous, some with headphones in, others without.

At the most basic level, observing these tournaments purely within the physical realm (i.e. not taking into account what was going on within the video game matches themselves) through ANT already reveals some aspects of youth identity formation through engagement with esports. If we recall how ANT attempts to view the world and its workings not in a singular disconnected way, but in a more relational, connected way, where the relational network that drives events forward is comprised of both human and non human elements or actors that co-define each other, the decision as to where youth decided to place themselves within the network of our weekly *Smash* tournaments, and how they did so, can actually be quite significant. All youth shared the common goal of wanting the tournament to run smoothly and establish MDJ as a professional venue; yet, according to ANT the tournament's success cannot simply be a matter of the youths' volition. The infrastructural network was part and parcel of enabling these tournaments to run, and because we had so many different types of technologies available at the center that were each used for really specific purposes, ranging from game commentary to actual game playing) many youth began to gravitate towards the particular zones

of production that interested them, which in turn led to them being identified within the larger MDJ community in a certain type of way. For example, a youth who frequented the center, Derrik, while initially shy and reluctant to engage in esports related activities, soon became known as 'The Commentator' on account of his constant high quality commentating, a feat that was enabled by his high level knowledge of the mechanics of *Smash* but also, in part, by the introduction of the condenser microphone to the infrastructural network of MDJ. In short, the point that ANT lets us see here, is that Derriks association, or community identity as 'The Commentator', came about not solely because of his detailed knowledge of *Smash* mechanics, but also in part because of the material infrastructures that constantly surrounded him and that he chose to surround himself with, his microphone, headphones, the green screen, etc.

In a similar vein, if we allow ANT to examine some of the virtual processes that actually occur within *Smash*, as enacted by game mechanics, we can also see how game mechanics can allow youth to self actualize sought after identities, perhaps in ways more powerful than physical or material means. Below, I analyze players' character selection processes as a means of identity formation, but first a brief overview of *Smash*'s mechanics will be provided to contextualize youth's behavior within.

Choosing a character / the 'Little Mac' moment. The version of *Smash* we were playing at MDJ featured a roster of seventy-six different playable characters which all stem from the extended Nintendo universe. At its core, *Smash* is a game that pits iconic Nintendo characters, ranging from the cute and cuddly Pikachu to the evil and infamous Bowser, against each other in a one versus one battle; however, unlike most fighting games there are no health bars that deplete to zero. Instead, in order to achieve victory, players must be knocked outside

the battle arena's boundaries or *blastzone*, and the more hits each character receives will send them further and further towards the edge of the arena. Players can attack, block, or grab each other in order to achieve victory, and it is important to note that attacking, blocking, and grabing are linked in a 'rock-paper-scissors' relationship: attacks can always be shielded; shields can always be grabbed; and grabs can always be broken with attacks. *Smash* is also famously known for its wacky items as well, items being special power ups that generally induce random effects that knock players off stage, yet for competitive *Smash* tournaments in the esports world, items and battle arenas with these random effects are turned off. In sum, these characteristics are what define *Smash* as one of the only platform fighters, a genre of fighting games where both combat (dealing damage) and movement (i.e. not falling off of the arena) are equally important.

Yet, it is also important to note that not each fighter is created equally, and that they each differ not simply in aesthetic or size, but in their actual game mechanics as well. It is these mechanical differences that the fighting game community uses to determine if a fighter is competitively viable or not. As a general rule of thumb, 'good' characters in *Smash* are defined by their consistent ability to recover well (returning to the stage when knocked off), edge guard well (force others off of the stage), and space well (safely keep opponents at bay while dealing damage). The way each character's own particular mechanics work ultimately ends up determining if they can recover, edge guard and space well, and be considered a 'top tier' character. Let's take Lucina, a protagonist from *Fire Emblem* who is a playable character in *Smash*, as an example of a 'good' character. If we take a look at *Figure 2*, we can see that her Hitbox, in essence the range of her attack, covers an impressively wide range spanning almost the length of her entire character model. This effectively means that Lucina, as a character, can

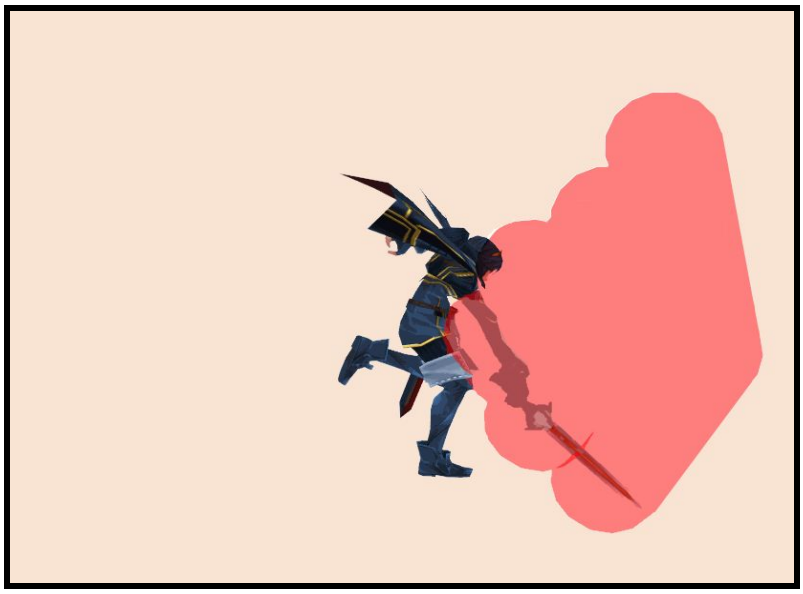


Figure 2. Visualization of Lucina's Hitbox. Shows the range of one of Lucina's attacks. (Lucina Hitbox Visualization. (2016) Retreived from: https://smashboards.com/threads/lucina-hitbox-visualization.432630/)

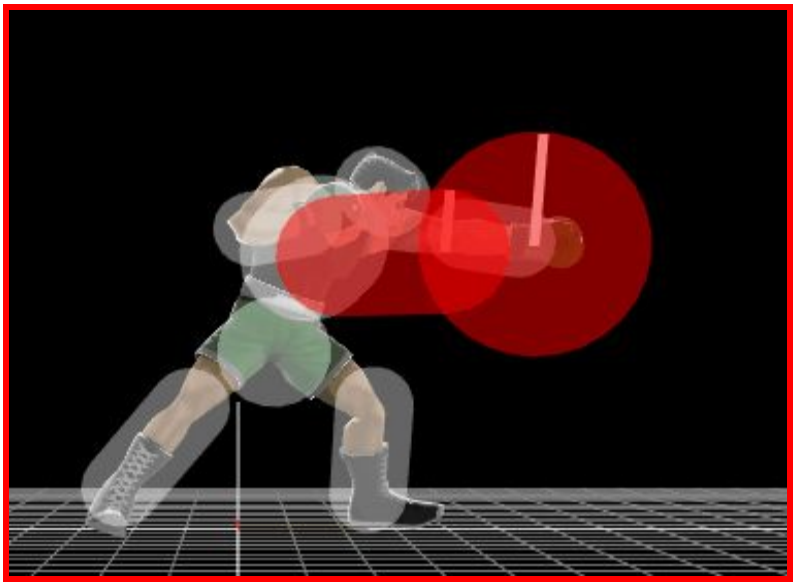


Figure 3. Visualization of Little Mac's Hitbox. Shows the range of one of Little Mac's attacks. (Little Mac Hitbox Visualization. (2016) Retrieved from: https://smashboards.com/threads/little-mac-hitbox-visualization.440120/

space extremely well on account of her ability to damage opponents from a far distance, ensuring that she can put out damage whilst having a high chance of avoiding it. If we compare this to Little Mac's hitbox for example, another character in *Smash*, Lucina's power level becomes clearer: compared to Little Mac (*Figure 3*), arguably one of the 'worst' characters in the game, Lucina effectively has a much larger range with which to deal damage with.

Furthermore, Lucina's Up-B, a jump like move that every character in Smash has to recover to the stage, covers a lot of distance: characters often Up-B to recover once they've fallen off of the stage and are nearing the edge of the blastzone, the border of the playable area that, once passed, causes a character to lose

a life or ‘stock’. Since Lucina’s Up-B carries her a great distance upwards, she can not only recover well, but also edgeguard well on account of her ability to go further off stage than other characters and prevent them from returning to the stage as they attempt to recover themselves. In sum, what is key to remember here is that every character performs differently on a mechanical level, which causes them to be classified by the community as ‘top tier’ or ‘bottom tier’, and, as we will see below, it is precisely this mechanical nuance that can contribute to youth’s self identity formation and community identity formation.

Returning to MDJ now, when the time came around for us to finally host our first weekly tournament, it was not insignificant as to who chose what character to fight with. These weeklies are very public affairs, with the tournament being commented on by the community and streamed online for the world to watch, as is common practice within the *Smash* community at large. So when George, a youth who had been an integral part of the *Smash* community at MDJ, proclaimed to everyone that he was entering this week’s tournament as a ‘Little Mac’ main, hilarious hysteria soon followed. Not only was George choosing to proudly identify with one of the worst characters in the game, choosing Little Mac as his ‘main’, but he also publicly proclaimed that he would only be playing with only one Nintendo Joy Con controller, a perfectly legal way to play from a competitive standpoint, but perhaps not the most viable on account of the very limited button options that using only one, as opposed to the standard two, Joy Con controller provides. Every match George participated in was followed with lively and giddy commentary on how he was the ‘One Con, One Punch Man’ (a reference to an anime popular with youth, *One Punch Man*), and youth around the center thunderously cheered him on in the face of his extreme mechanical disadvantage.

George's playstyle within the game also reflected this playful identity he was clearly embracing: instead of trying to engage in proper spacing and edgeguarding, George repeatedly kept throwing out the same attack over and over again not simply to win, but to hilariously win. Instead of engaging within rock paper scissor mind games central to *Smash*, he intentionally threw all of the communities 'standard' practices and knowledge out the window, and proceeded to only use one mechanic over and over again, Little Mac's forward punch. While on the surface of things, all of the loud noise and commotion engendered by the youth as a result of Georges' gameplay might be interpreted as just that, looking at these events from ANT perspective allows to see a more nuanced perspective on what's really going on underneath the hood, and how these mechanical choices by George are what actually enable him to label himself within the MDJ community and strengthen the bonds found within.

If we view video games and their mechanics existing as a means for humans to instantiate themselves, to some extent, within a larger, complex network of actors, as ANT would, George's behavior is actually much more complex than simply 'playing flashy video games'. George could say that he's a funny guy as much as he wants to and try to position himself in the community as such through various words and actions, and by all means George has certainly done that during our time there; however, ANT allowed us to pick up on these often invisible interactions between youth within esports communities by placing the materiality of these game mechanics into focus. It was not just that George was funny; he made the other youth *mechanically feel* his comedy. From his style of play, which was to only use one mechanic, the attack mechanic, to his choice of 'main', the mechanically worst character in the game, and his own self imposed hardware limitation, using only one Joy Con controller, George exerted a

conscious effort to mechanically and materially project his self desired identity of 'the funny guy'. It is here that the *materiality* of nodes comes into play, as the actual instantiation of George's comedy, through physical artifacts and not just words, was a key part of expressing himself. His choice to use only one Joy Con controller not only signalled to other player's George's lack of 'seriousness' but also physically limited his play insofar as his controller was less competitive when compared to others with more buttons. Through this hybridizing, or *relationality*, of George, the human, and George, as expressed through his mechanical and hardware choices, a 'new', comedic George was able to emerge, and this emergence ultimately impacted the community. George's mechanical behavior in turn brought about much conversation about the balance of the game, why certain youth pick the characters that they do, and ultimately served to bring the community together over good laughs and discussions.

Again, the point here is that, much like the aforementioned blind man's stick, video games and their mechanics can also serve as a 'stick' of sorts, in so far as the choices and actions players make in these games, which are solely enabled through the game's mechanics, actually serve to represent an extension, a manifestation, or a language of the player themselves. Because Georges' interactions with digital non human actors, in the form of his in game mechanical choices, and physical non human actors, in the form of his controller / hardware choices, did not occur in a vacuum, instead being part of the interrelated network of the MDJ esports community, every choice George made in choosing his 'main' character and 'main' controller, stands in context with all of the other mechanical character / controller choices made by youth at MDJ. Given that no other person, in the network that is MDJ, willingly choose to identify themselves with the humorous, mechanical playstyle George chose in playing Little Mac, with the limitation

of using just one Joy Con controller, or exhibited any similar mechanical behaviors, George was ultimately able to successful adorn the mantle of 'community jester' on account of his specific engagement with non human digital actors. George's story here stands to address this paper's first research question (what role(s) do video game mechanics as non-human digital actors play in fostering individual and community identity for this esports team?) by positing that non-human digital actors, within esports communities, can posit themselves as vehicles for self expression within an esports team / community. With the examples of character selection mechanics and the mechanics of controller hardware setups, outlined above, it can be shown, more specifically, that video game mechanics can be powerful tools in enabling youth's self expression to flourish in the first place, with regard to their own self expression of personal identity, as well as their identities within a larger gaming community. Yet more than being just another vehicle for self expression, youth identity expression through game mechanics stands as a particularly powerful mode, due to the fact that youth can express themselves so personally within a framework that they come to on their own terms and value on their own terms.

Game Mechanics as Intra Community Communication

In addition to uncovering a role game mechanics play in youth identity formation, the lens of ANT was also instrumental in making visible some of the ways that youth at MDJ used game mechanics as a tool for communication, almost like a second language of sorts. Communication was a key component in running our weekly *Smash* tournaments: tournament organizers had to place every player within that week's tournament bracket, rank each player from best to worst seed, randomize the player matches, and then let each player know who their opponents were at every step of the way as the tournament progressed. Players, in turn, had to let

tournament organizers know the results of their matches so that the organizers could update the bracket, and start the cycle anew. Throughout this whole process, commentators are collectively responding and reacting to the featured, on stream match live on social media platforms whilst also managing the questions, reactions, and comments of people who may be watching online and commenting via live chat on Twitch or Youtube for example.

Parts of these communicative work flows are somewhat inherent to organizing a *Smash* tournament; yet, the particular infrastructure of MDJ posed also posed unique situations which catalyzed unique forms of communication to emerge. Perhaps the most distinguishing dynamic of the esports community space we set up at MDJ was the split between the media / commentator room and the actual area of play where the tournament matches happened. In order to ensure the best sound quality and clarity in capturing the commentators voices via microphone, the team's youth, in accordance to the standard practices of most professional esports venues, decided it would be best to split the play zone and the media zone so as to avoid the calamity and noise that the ebbs and flows of victory and defeat bring in the world of esports. Yet, while this separation resolved one noise related problem it opened up a communicative problem to solve: namely the issue of youth having to travel repeatedly back and forth between rooms to report match results, issue new tournament standings, and troubleshoot potential issues. Given that the walls of the space were quite thin, and that there was a window looking into the media space, the youth at MDJ constantly came up with spontaneous, and creative, ways to get information across. This ranged from hurriedly writing notes on pieces of paper to be slapped against the window, to making faces and hand gestures through said window in an ever evolving attempt at sign language, to simply shouting through the walls separating the two rooms. But, there was another

'window' of sorts linking the two rooms. The computer monitor inside the media room mirrored, via capture card, the Nintendo console used for live streaming the matches, and this in turn allowed the commentators to actually watch, and commentate upon, the featured match. It is ultimately this 'digital window', the computer monitor, that allowed game mechanics to ultimately emerge as a means of communication between the two rooms.

Game mechanics as language: the 'BM' moment. The stage was set: it was the semifinals of the Freeze's third consecutive weekly tournament. Jace, known to the community by his gamertag "Broken", was preparing to face off Sam ("Shinigami) in a tense best of three match up. The commentary booth / media room was alight with anticipation as four of the youth who were commentating (two in English, two in French) were discussing the match up: after much (friendly) smack talk, Broken's Captain Falcon would be facing off against Shinigami's Inkling. What's important to note here, as the pre game commentary discussants did, is the discrepancy in rank between the two player's character choices on the community established tier list. A tier list (*Figure 4*) is an ever changing list that attempts to rank all of the characters in any given game according to their viability for successful, i.e. victorious, competitive play.

Figure 4. Super Smash Bros. Ultimate Tier Community Tier List. Lists the Smash roster ranked from best (Top Tier) to worst (Low Tier -). Super Smash Bros. Ultimate Wiki Guide (2019) Retrieved from: https://ca.ign.com/wikis/super-smash-bros-ultimate/Tier_Lists#r.2FSmashBros_.28SSBU.29_Reddit_Tier_List

If we take a look at Figure 4, we can see that Ganondorf (Mid Tier) is ranked much lower than Inkling (High Tier +). The commentators thus expected Shinigami to emerge victorious as he piloted Inkling, and they were not mistaken. Shinigami confidently took the first game of the set amid the cries and laughs of the youth commentators, who decried the viability of Ganondorf quite loudly. These cheers and jeers were so loud, that Broken was actually able to hear the commentators bashing his choice of Ganondorf through the wall that separated the media room from the rest of the esports play area, and in response to such comments switched from Ganondorf to Roy, a fighter much higher on the tier list (High Tier). Immediately upon switching

to Roy, the commentary crew began snickering and teasing Broken for ‘giving in to the tier list’ and ‘chickening out’ on account of his switching from a low tier character to a top tier character. Broken, clearly hearing this teasing, was visibly moved, as seen on the camera capturing the competitors faces.

Yet it was what Broken did next that caused the entire media room, my self included, to erupt into laughter. Upon the start of the next match, as soon as both players’ characters appeared on screen, Broken (as Roy), rather than engaging in combat with Shinigami, began repeatedly and rapidly crouching up and down in place until Shinigami (as Inkling) finally began throwing punches at him. One commentator, Dan, asked “Is he BMing us?!”, and as all of the commentators looked around each other they came to the same realization. He was. The room instantly burst into laughter. BMing, short for ‘Bad Manners’, is an extremely common practice within esports communities, a practice that usually consists of one player taunting, teasing, or simply provoking another player; however, unlike more traditional forms of taunting, BMing is usually carried out not through words, text, or speech, but rather through in game actions, or mechanics (Pohjanen, 2008).

So in a team based video game where the goal is capturing a flag, for example, BMing could manifest itself as a player simply holding the flag and, for the sole reason of annoying or BMing both teams, refuses to capture and score said flag, choosing instead to waste everyone's time by not allowing the match to actually progress by running deliberately away from the objective. While this hypothetical capture the flag example stands as a particularly egregious case, BMing doesn’t always have to be so mean spirited and does indeed exist on a spectrum that oscillates from malicious behavior on one end to playful bonding on another. Broken’s act of

crouching (in game) repeatedly in response to the commentators' heckling of his top tier character choice is a prime example of a 'positive' BM moment: both the commentators remarks and Broken's own act of crouching in game were not so malicious or disrupting so as to actually upset anyone and thus the result was a light hearted moment of laughter and bonding. Through this simple act, a simple instantiation of a game mechanic, a whole host of people instantly started laughing. Somehow, something, more precisely the same thing, was instantly communicated to dozens of people in the room merely through a specific repetition of a game mechanic. Some of the staff members at MDJ were utterly confused at what could have caused such a loud uproar when nothing in the material world seemed to happen; yet, an examination through the lens of ANT reveals a whole ecosystem of events that led to said uproar.

If we remember that ANT attempts to view the world and its workings not in a singular, event like way, but in a more relational, connected way, where the relational network that drives events forward is comprised of both human and non human elements or actors, Broken's repeated crouching starts to make a lot more sense. Given that, according to ANT, all of the human and, crucially, non human 'actors' relationally exist as nodes within the larger 'network' of nodes that comprise the network of MDJ's esports team (Law 2009), this act of 'crouching as BMing' cannot purely exist in isolation. Nintendo's role as a game company / designer of *Smash* bros, in this case, emerges as a particularly influential node.

With the release of *Smash,* Nintendo, in the hopes of making online fights more of a safer space, made a design choice in removing taunt mechanics from online play (Kotaku 2019): taunts in *Smash* are essentially special animations, triggered with a button press, that cause a player's character to showboat, or taunt, in a myriad of different ways. Below (*Figure 5*), we can

Figure 5. Incineroar Taunting. A fighter in *Smash* displaying the Taunt animation. (D'Anastasio, 2019)

see Incineroar in the midst of one of it's taunt animations for example. While a player can technically taunt at any given time during a match, it is most commonly done after successfully taking a life, or stock, from the opposing player, signifying on some level to your opponent that you 'got em good'. But simply because Nintendo removed said mechanic from online play, doesn't mean that players' need to taunt was removed. Soon after *Smash*'s launch, players, as the above referenced Kotaku article mentions, quickly found their own ways of taunting, namely by rapidly crouching up and down, in order to still convey that much sought after sensation of 'gotcha!'

If, in keeping with some of the core precepts of ANT as laid out by Law, we are to think about material objects as extensions or representations of human agencies and identities, then the *Smash* communities decision to take an already existing game mechanic, crouching, and recontextualize it is a significant one. The amount of controversy surrounding *Smash* characters rapidly crouching in online matches has generated on online forums such as Reddit and Twitter (D'Anastasio, 2019) is indicative of the powerful affect that such a recontextualized mechanic can induce, and the very personal expressions different players can express / be subjected to through this mechanical act. And thus, for better or for worse, the *Smash* community writ large has, on some level, felt a language conveyed through mechanics. When a player crouches rapidly in Smash they are in effect saying something to the other player, and this notion seems to hold

up as evidenced by the community led discussions on the legality of such behavior in professional settings, the content featuring such mechanical expressions to either get a laugh or shame such practices, and the sheer emotional responses that are generated from such a wordless, mechanical action at tournaments. (As of the time of writing, repeated crouching has actually been banned in professional *Killer Instinct* events.)

Returning to MDJ now, it is almost impossible to understand the full context of Broken's 'BM' moment without taking into account these major nodes of the network, Nintendo and the *Smash* community, to which MDJ, Broken, and The Freeze all relate to. As a result of the esport teams' relationality to these larger nodes, Broken knew what the definition of such a mechanic (crouching) was, and he knew that we, as spectators, would know too, resulting thus in him choosing not to rebut the heckling he received on the part of the commentators with words in English or French, but through the language of game mechanics. The result of such a choice was a bonding moment for the esports community forged by uproarious laughter, and a moment of shared disbelief that Broken would do, or say, something like that towards the commentators, and live on stream at that! Broken communicating to the community in such a way was ultimately crucial for the formation and maintenance of a strong esports community at MDJ. More than simply engendering laughter and a bonding moment, Broken's communicative action further cemented community bonds by publicly proclaiming a 'meme' or behavior we all knew about (crouching up and down) via the internet and allowing the MDJ community to realize that they had more in common then they initially thought. Yet, in a manner similar to George's story above, Broken too achieved a sort of *relational* identity on account of his in game mechanical actions. Broken never spoke a single word to the commentators, yet he still managed to 'BM'

them through his in game avatar; however, it was evidently clear to everyone in the commentary room that this was still Broken taking a playful jab at them, despite the fact that the actual actions were taken by pixels on a screen. For a moment, Broken was his avatar and vice versa.

It is however important to acknowledge that not all BMing is equal, and that sometimes, in a given social context, BMing can be actually quite inappropriate and damaging to players.While this paper is not trying to condonce acts of teasing or taunting that would prove to be malicious or toxic, it *is* trying to argue for the potential bonding benefits that can emerge from a community respectfully engaging in some of these BM practices, and demonstrate how game mechanics ultimately stand as another plane of languages researchers using ANT should be on the lookout for when studying esports communities and how they form and maintain themselves. This second section of analysis, presented above, addresses this papers second research question (What role(s) do video games mechanics as non-human digital actors play in youths' communication practices in developing and maintaining the team?) in positing that game mechanics can act as a language with which youth can grow closer together and nurture playful and informative experiences that are vital to the formation of a healthy esports team / community. This phenomenon wherein differing youths of differing backgrounds can all semiotically relate through these game mechanics as a language was vital in fostering a stronger sense of community connection and belonging, both necessary feats as the MDJ gaming community sought to form it's esports team. Non human digital actors, in the form of Discord chat bots, similarly had an effect of strengthening social community ties, as will be shown in the third section of analysis below.

Non Human Digital Actors as Catalyst for Online Community Content Creation

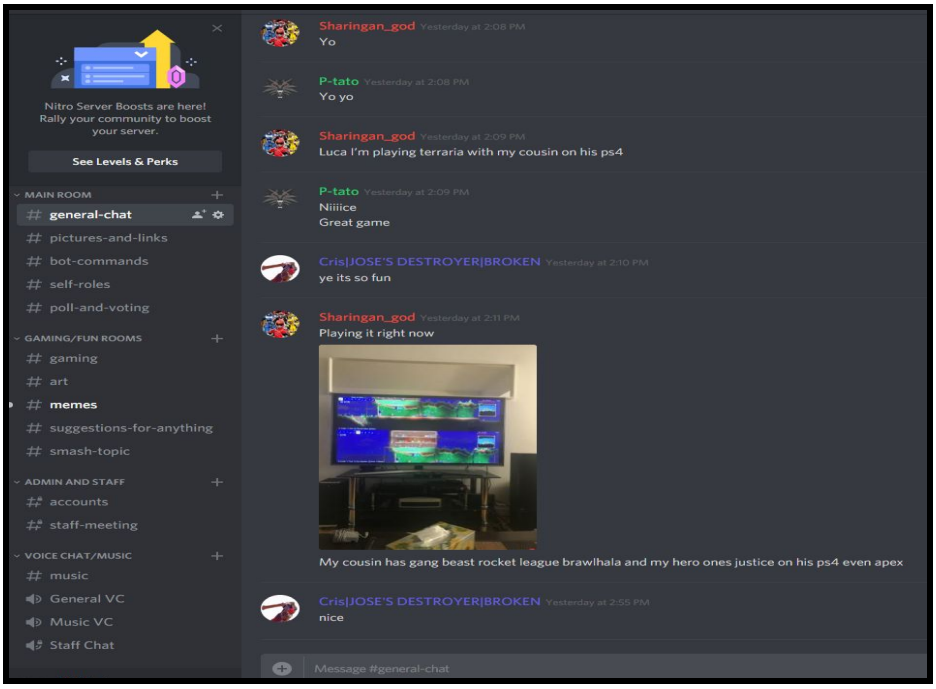


Figure 6. The *MDJ* Discord Server. A series of chatrooms and subgroups that youth used to coordinate esports activities.

Finally, in coming to understand how non human digital actors fostered and facilitated the formation of a healthy and generative esports community at MDJ it is also necessary to take a dive into some of the digital cultures and practices that permeated MDJ as well. Shortly after our arrival at MDJ, upon the youths' insistence, a public MDJ Gaming Discord space was created as a means for MDJ's gaming community to share relevant gaming content, plan gaming events, or simply stay in touch. Discord is an application, much like Slack for example, that allows users to create their own public or private serves, and allows members of created servers to post images, text, and videos within any of these servers according to whatever particular sub-classification or genre of content the server was created for. For example, our Discord space, shown below in *Figure 6*, has a couple servers dedicated towards welcoming users, explaining

the rules and guidelines informing the server, and chat rooms dedicated for general purposes, pictures and links, and polls and voting.

Youth would often repost content from other websites, most notably www.reddit.com/r/smashbros, www.reddit.com/r/gaming , and Youtube, and engage in sometimes humorous, sometimes critical discussions around said content. Interestingly enough, as we, as participant observers, began to frequent the Discord space, the content began to shift over time: perhaps second only to funny videos, educational videos focusing on *Smash* related topics began to frequently surface on the Discord. These videos ranged from discussions by professional *Smash* players dissecting particular characters move sets, to fans theorizing what new characters or mechanics might be added to the game, or even just highlights of professional *Smash* tournaments. With the ever increasing amount of such mechanically focused content, the idea to form an esports team then emerged, as the debates and discussions between youth got to such a sophisticated level that they themselves realized the potential for forming a team was already there. Yet, when The Freeze would finally take form, it was ultimately the creation of their own content based around game mechanics that really started to strengthen community ties.

With the official formation of The Freeze, in compliance with standard industry practices, the youth quickly created an official instagram page to promote events, post content, and place themselves on the *Smash* map as a legitimate team and venue for hosting competitive tournaments. Most of the non promotional content they created however, was centered around game mechanics and their humorous reactions to said mechanics. Pictured below is one of such posts (*Figure 7*). In it we can see a *Smash* character, Little Mac (again), pictured as crying as a result of him still being regarded as the worst character in the game despite the game developers

granting him a 'buff', or an improvement in the latest update to the game. With over one hundred and fifty likes, the youth were extremely ecstatic with the success of their post and proud of the hard work and discussion that had gone into crafting the exact wording and imagery of the post, all of which was done through communication on Discord.

Thus, as a result of such an extensive and specific attunement to Smash's mechanics, both on a fundamental level and how said mechanics change over time through patches and updates, the MDJ esports team was ultimately able to rally together around these posting rituals and grow closer through the fun and learning the creation of these postings generated. However, perhaps more importantly than the discussion of *Smash*'s game mechanics, another crucial dimension to such team bonding via game mechanic content creation was the particular mechanics of the actual communication that occured through Discord to form such content. If we take a look at the youth's use of chat commands and the created Bots they implemented within Discord through the lens of ANT , it quickly becomes clear that mechanics, or non human digital actors, though in this case those of discord, played a key role in building cohesion within the esports team.

Figure 7. The *MDJ* Little Mac Meme. A meme created by youth at *MDJ* based around their knowledge of *Smash* mechanics.

The 'invisible' team members: discord chat bots and ANT. Of all of the various tools and mechanics Discord offers its users, the one that our esports team's youth utilized the most

was definitely that of the chat bot, or bot for short. In essence, a bot within Discord is a custom script that users can add to their servers to, when given the proper text command in chat, fulfill whatever function the user(s) set it up to accomplish: a bot can, for example, play music from Youtube so as to make everyone in a channel hear the same song in sync, pull random memes from the internet to post in a public chat space, or simply announce the arrival of a new member who has joined the Discord server. Within The Freeze's Discord server, the bot that came up most frequently was perhaps the MEE6 bot, which, upon being added to the group by youth, assigns every member of the Discord a rank, or power level. Furthermore, every time a member would type something in a server, post a link to some content, or generally interact with the server in any way that fostered communication, MEE6 would assign that member experience points that would serve to 'level' their rank within the server up. In sum, because MEE6 had mechanics that incentivized community participation: by publicly exclaiming in the Discord chat whenever a member leveled up and allowing members to publicly display their rank at any time by typing the command '!rank' in chat, for example, members of the MDJ Discord ultimately ended up exchanging ideas, plans, and content in pursuit of such ranks and growing closer as a community as a result of such prolific interactions.

While it would be unfair to say that the fruitful community building and communication that occured on the team's discord was solely due to the mechanics of Discord, these bots and their mechanics, from an ANT perspective, nonetheless can't help but have an impact and catalyze the bonding of team members online. According to ANT, the competencies between the esports team at MDJ as a whole and their collective use of hardware and software includes, to harken back to Latour, a "distribution of competences between humans and nonhumans" (Latour

2005), a distribution of which these bots are an integral part of. The youth who added these custom made bots to The Freeze's Discord server are, in effect, intentionally 'modding', or changing the original game or product produced by the development team / company into a new form (Postigo, 2007), for the exact reason of adding more social competences within their network, a network that comprises the esports team on and offline, human and nonhuman. The involvement and community engagement done by the team members who managed the server is certainly one part of this network, but, as ANT reminds us, the mod too exists as an actor itself, and its mechanical incentives and effects on the social structures of the esports team cannot be ignored if researchers seriously want to get at the heart of what allows esports communities to form and proliferate.

In addressing this paper's third research question (what role(s) do non-human digital actors other than game mechanics play in youths' communication practices in developing and maintaining the team?), the analysis of The Freeze's use of Discord chat bots highlights a point similar to that raised by Taylor (Taylor 2006), and other above mentioned game studies scholars: namely that non human digital actors can be considered as team members in their own right, within the context of developing and maintaining an esports team. The fact that the chatbots are framed within Discord such that they are nearly indistinguishable from regular, human users (they have usernames, active statuses, etc.) and the fact that the youth who frequented the page had numerous affective relationships with these bots that spurred much discussion on and offline, they ultimately served as an almost 'human face' for some of the digital interactions that occurred on MDJ's Discord space and consequently strengthened team unity and cohesion as MDJ's esports community was forming. Again, the blurring between human and machine that is

a feat made visible, and importantly highlighted, through ANT's insistence on viewing the *relationality* between nodes within a network. As a result of the youth creating and adding these bots to the Discord space, they added new nodes to the network (the chat bots) but, at the same time, affected the relations of everyone on the Discord space: given that 'real', human users would change their chat usernames all the time and that bots were being added left and right, it soon became hard to tell who was a 'bot' or not. This blurring of lines ultimately served as a catalyst for community cohesion, as various humorous moments resulted from such a blurring and the bot's own functions as tools aided youth to excel at whatever task they were trying to accomplish. Again, as will be further unpacked in the following Discussion section of the paper, if community organizers or educators wish to reproduce some of the powerful forms of community bonding that can emerge through the formation of esports team / community, then taking the various roles of non human digital actors, as has been demonstrated above, into account needs to be a core part of the process so as to best ensure powerful and genuine youth led community growth.

Discussion and Implications

In following the demands of ANT to pay attention to the interrelation amongst human and non human elements within the social network of MDJ's esports team, this study sought to add an often overlooked node within game studies literature focusing on community organization and development centered around video games. This focus on game mechanics, or non human digital actors more broadly, and how they permeated the social and infrastructural fabric of the esports team, directly addresses this paper's first research question: forming a successful esports team, both in terms of quality of performance and strength of social / community ties,

necessitated a fundamental understanding of video game mechanics (in this case *Smash* mechanics) and the community at MDJ ultimately relied on such mechanical knowledge to add nuance to the identities they sought to manifest at the youth center and used such mechanical knowledge to strengthen and create new bonds at the center by expressing themselves, or communicating, through said mechanics as well.

Rather than being engaged in an act that instills violent behavior or anti social tendencies, as some the aforementioned scholarship would suggest, youth's engagement in the esports team centered around *Smash*, a fighting game, actually seemed to lay a foundation from which social bonds could be deepened, and (game) mechanical competencies, as we have seen above, lay at the heart of what enabled such flourishing. Much like how Broken 'spoke' to the community through his in game act of repeated crouching, the youth who were a part of MDJ's esports team were in essence navigating through a new language, a language where game mechanics took the place of words and each match could be seen as a conversation spoken not with lips but with button presses. The joys, fears, and surprises enrapt in each player's journey in discovering such a language, and the communal growing process in learning said language through the sharing of content in person and on Discord would, every step of the way, produce new connections and new shared experiences amongst the youth at MDJ, leading to a stronger overall sense of community.

Not only did game mechanics appear to catalyze youths relations amongst the community, but, as we have seen above with the case of George and his humorous Little Mac Moment, but it also enabled youth to solidify, or explore, new relations within themselves that they had perhaps not thought possible or never received a chance to explore, in turn leading to a

stronger community overall. Given the particular mechanical breadth that *Smash* provided, featuring such a large roster of fighters that each have their own unique animations, aesthetic, and fighting style, the game encouraged youth who participated to, on some level, establish an identity based on their choice of 'main' and the mechanical playstyle said main exhibits. Acquainting themselves on such a mechanical level was also conducive for starting conversations about youth's personalities beyond the esports team, and acted as a gateway for many youth at the centre to simply get to know each other regardless of their role within the esports team.

Furthermore, something that this study did not anticipate to find as another catalyst for identity formation, hardware choices, as seen in George's case above, can also serve as a node for youth to form personalities and relations around. ANT, with its insistence on the interrelations between non-human elements, was critical for noticing such a phenomenon. Given that *Smash* can be played with a variety of differing control options, ranging from one Gamecube controller, to two Joy con controllers, to one Joy Con controller, and even the Nintendo Switch Pro Controller (*Figure 8*), it soon became clear, as George's moment highlights, controller / hardware choice, on account of the varying degrees of competitive viability each controller offered, also served as a means with which youth could forge self identities within the esports team.

While the Gamecube controller was perceived by the esports team at MDJ to be the most 'competitive' or 'serious' controller on account of its comfortable grip, myriad of button options, and wired connection, the single Joy Con, on the other hand, was clearly marked as the 'silly' controller option, on account of its small size, limited button count, and wireless

Figure 8. Different Types of Nintendo Switch Controllers. Pictured from left to right are the Pro Controller, the one Joy Con setup, the Gamecube Controller, and the dual Joy Con setup

connectivity, and George's Little Mac Moment captures how such hardware limitations or deviations can catalyze an identity within the esports team. These hardware choices, in turn, also served to deepen the community bonds within the esports team, and such bonding is perhaps best exemplified through what occurred shortly after George's Little Mac Moment, wherein a sub group within the team's Discord server, aptly dubbed the 'Joycon Boyz' was formed. Some users quickly began dressing up their Discord profiles with icons referring to the group , and it became a central genre of content on the server, generating even more community connections. While scholars using ANT in the context of game studies have been keen on focusing on these sorts of hardware relations, it is nonetheless important to keep these identity aspects in mind when examining physical esports communities as well.

Another area of findings that emerged unexpectedly throughout the research process was that of the social influence of mechanics of other non game software, i.e. Discord, on the formation of the MDJ esports team, and how the particular workings of such non human digital actors would incentivize community bonding and interaction, as was the case with the Discord

bots. Harkening back to Taylor's work in World of Warcraft, wherein he argues for the mods players implement there as a vital part of the community of players and goes so far as to dub said mods 'extra' team members, the youth-implemented Discord bots on the esports team Discord server, in a similar way to how *Smash*'s mechanics created tendencies for identity formation and social interaction, had their own particular mechanics to encourage team cohesion from a design perspective. The sharing of game mechanic related content was a huge part of the team building that occurred online; yet, it is crucial to note that the mechanics of how such game mechanic content was shared was equally important. The fact that most of the Discord bots created conditions for Freeze team members of have more communal experiences online, by playing live music that would be at the same time stamp for all users and creating ranking systems that encouraged and rewarded active engagement with community issues in a purely opt in basis, ensured that team growth and bonding were occurring even when being physically present at MDJ was not an option. While a lot of the team growth that happened online as a result of the mods youth made was ultimately reliant on knowledge of game mechanics due to the nature of the content shared online, as researchers, paying attention to the mechanics of non human digital actors other than game mechanics that surround esports communities, in addition to the mechanics of the game themselves, emerges as an equally important task for future research exploring esport community formation.

Conclusion

Ultimately, this paper, through a comprehensive analysis guided by ANT, argues for the strong influence game mechanics, and non human digital actors more generally, had in forging the strong community ties at MDJ necessary to form a cohesive esports team, a feat achieved due

to potent potentials for identity formation, communicative practices, and bot assisted content creation that youth's understanding of and familiarity with the game mechanics of *Super Smash Bros Ultimate* enabled. This paper is also proposing contributions within the body of scholarship surrounding ANT in so far as game mechanics, within the study of physical, esports community formations, have largely been left untouched academically by both educational and game studies scholarship alike.

For future education and game studies researchers seeking to use ANT to examine esports communities in person, the findings brought forth by this paper will hopefully enable scholars to paint clearer pictures of the larger network, comprised of all of the relevant human and non human actors, within which their observations or subjects of study take place. If scholars wish to truly discern the push and pull between nodes as they interrelate within any given network of which video games and esports are a part of, then much deeper and greater focus on the particularities of game mechanics themselves and how they manifest themselves in both physical and digital community building, as this paper has attempted to do, is needed in order to grasp the fuller picture scholars using ANT are trying to get at. While prior ANT scholarship on video game mechanics and their roles as actors in a network , as mentioned in the literature review above, has indeed explored game mechanics in depth, there has yet to be a real concerted focus on how those mechanics impact community building, particularly physical esports community building, choosing instead to focus on the often singular relations between human and game mechanic. This paper was made in the hopes of catalyzing future research that aims to use ANT has a helpful tool to contextualize game mechanics within broader communities, cultures, and social formations.

For future educators or community organizers, the powerful community bonding and growth, as facilitated by game mechanics, highlighted in this paper stand to posit looking at game mechanics as potential frameworks or tools with which future educators can better conduct classes, workshops, or community events centered around video games or esports. If educators, and scholars for that matter, truly care about 'reading' video games as texts more broadly, regardless if it's for the purpose of forming an esports team or teaching a literature class with games as the literary medium, then using ANT as a guiding framework with which to understand the social and affective impact game mechanics can have within individuals and communities emerges as an invaluable tool in the quest to unpack what experiences these video games, or other digital softwares, are crafting or encouraging players to craft. Video games are a unique artistic medium in that, in addition to making audiences feel certain themes or emotions through imagery and narrative like cinema and literature can, they are particularly attuned to making players mechanically, to an extent, go through the same actions, plights, joys, and surprises as the virtual characters that inhabit game worlds. An exploration of game mechanics thus, whether through ANT or otherwise, should rarely be neglected when looking to explore the ways in which games influence people and the communities around them.

Finally, at the broadest level, it is my hope that the findings that emerged from the analysis undertaken by this paper will, at the very least, help in the fight to dispel some of the stigma, bigotry, and general 'unease' that exists within the broader public towards video games, particularly towards esports titles that often feature conflict. *Super Smash Bros. Ultimate* on a surface level, indeed, might be a game about cartoonish characters whacking each other with flashy colors in the background; but, to dismiss it as an 'unproductive' or detrimental activity for

youth to be engaged in would be to deny youth across the world the opportunity to connect with the community around them, grow their identities as individuals, and the myriad of other benefits that can come from being part of an esports community, or gaming more generally. By supporting youth's involvement in after school esports practices, in addition to the positive socialites engendered through community growth mentioned above, educators, policy makers, and parents ultimately stand in a position to nurture potentially powerful and life transforming career and social paths for youth growing up. Sometimes, contrary to what many would think when thinking of esports, play can be serious work; if bettering youth's life prospects is something schools really care about, then all it takes is for society to recognize gameplay as such.

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