

# SEEING THROUGH THE EYES OF AN/OTHER: DEVELOPING GAMES FOR SOCIAL CHANGE

By

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# Abstract

Video games are an emerging form of media that has quickly become a multi-billion dollar industry. Their defining feature of interactivity allows audiences to become players by allowing them to participate within digital spaces and virtual worlds. While all forms of media are capable of exploring new spaces, stories, and sensations, video games invoke such experiences through physical inputs and direct interactions with the media. This responsive quality can make video games feel like a more intimate and personal cultural product that transcends audiences beyond the role of observers. The ability of video games to take players and put them in a variety of unique situations and perspectives can open the minds of an audience and teach them valuable lessons or skills through experience. As such, digital video games are important cultural new media products that can influence and inspire social change amongst its audience.

To demonstrate the power of video games as a catalyst for social change, a game was developed using various forms of interdisciplinary research called *An/Other*. *An/Other* demonstrates the ability of digital game experiences to address common issues in society, such as race and prejudice, in a uniquely interactive fashion. It is my hope that *An/Other* will be able to affect change in common opinions and attitudes about race in our culture by promoting critical thought and discussion of these issues. I also aim to inform and inspire game designers and academics to develop and study future games for social change and their potential effect on society as cultural media products.

*An/Other* can currently be played online as publicly intended at the following link.

<http://sparkcomic.com/AnOther/WebVer.html>

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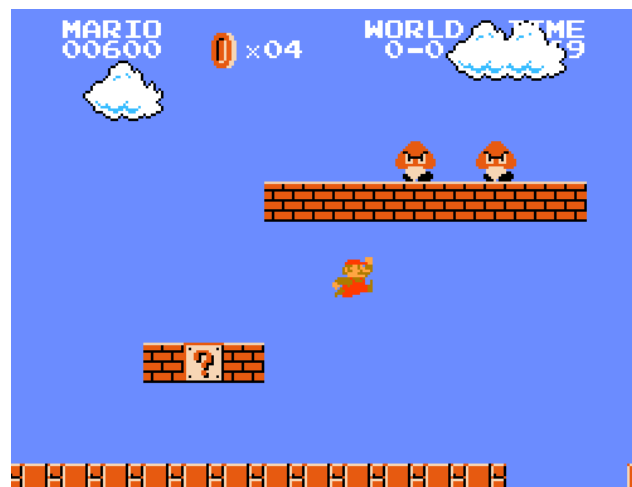


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# Introduction

The realm of interactive digital games has been slowly growing since the early 1960s; by 2013 it has risen to become a massive entertainment platform worth over \$21.5 billion (Entertainment Software Association). As such, the video game industry has become one of the fastest growing new media fields in the world. Video games genuinely belong in the sphere of mass media, alongside the likes of television, film, and others, not only due to their unique interactive nature, but their international appeal and impact on popular culture. Digital game experiences offer interactive virtual worlds, perspectives, and tales that can only be given justice within its own medium. Through the power of interactivity in combination with countless different disciplinary fields, unique interactive experiences can be born that turn passive watchers into personally involved players. This changes not only the nature of the media, but also its relationship with the audience and how messages are decoded and encoded through player participation to transcend common avenues of communication. This makes video games remarkable as an expressive cultural medium.



*Figure 1: Super Mario Bros. by Nintendo, a very popular classic game in popular culture.*

This brings us to the major research question posed within this project: Can interactive game experiences become catalysts for social change? This paper seeks to prove that video games, as an interactive medium, can indeed achieve this. I seek to persuade those who doubt the power and significance of digital games that they are a unique art form and can become important agents of social change in our culture. This paper will use classical theory as well as newer methods to show the unique qualities of games as well as demonstrate how game culture and content affects audiences much like other forms of media. Going a step further, a game called *An/Other* has been developed as a major research project that seeks to put the proposed research to practice by exploring a social issue, namely racism and discrimination, in a way that can only be properly experienced within this interactive medium. In addition to making *An/Other* available online, I will address future implications and potential of games for social change.

## **Why Video Games?**

Digital video games can be used as a catalyst to inspire social change within the surrounding culture, much like other forms of media. However to fully understand how, we must understand what video games are, why they're relevant, and what makes them so special in the realm of media.

Defining what video games precisely are is no easy task. Video games are a digital medium that facilitates interactive experiences that that respond to inputs and enable artificial telepresence in a virtual environment through play. However, there are many different definitions used to describe video games (Schell 26). Precise definitions aside, all games share common elements such as willful participation, interactivity, challenge, and conflict (Schell 34). Video games have been called games due to their early beginnings as

simple entertainment (Kelman 17). However, they have been an extraordinary invention due to one thing: **interactivity**. Early games such as Space War and Tennis for Two in the early 1960s demonstrated the appeal of the medium's early beginnings (Kelman 16). The fact that video games could respond to the inputs and presence of another person through telepresence in a virtual space, which would've otherwise required a willing human participant, demonstrated their innovative power as a piece of new media (Kelman 16). Video games are able to turn audiences from normally passive observers to interacting players who embody protagonists with agency and power over in-game situations. This has a powerful effect on user experiences within games as it allows players to take ownership of their in-game actions and say "I" did a task, instead of describing the actions of characters in media separate from themselves (Kelman 37). Because games try to immerse players into their simulated worlds, they often feel like an extension of the senses, due to our control involvement in these virtual worlds, that assimilate our audio-visual and other predominant senses to immerse us into the dimensions of these fictional avatars during digital experiences (Swink 24, 25). These elements, while not entirely exclusive to games, are unique within the video game medium as it takes full advantage of interactive conventions in ways other media cannot.

With video games being an interactive medium, one must examine the nature of interactivity, what it truly means in the context of immersion, and why it can be effective to use interactivity as a means to an end. Researchers Yupeng Liu and L. J Shrum defined interactivity as, "the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized" (Liu and Shrum 54). Additionally, we must also consider the

many possibilities through which interactivity can be achieved and its perception by users (Weber, Behr and DeMartino 82). While we will further explore the implications of interactivity on encoding and decoding of messages in the communication process in another section, it is important to note how this definition focuses on the connection between two or more parties in a synchronous fashion. The required parties established, however, do not need to be human, and can in fact be made of other conduits. In an interactive context, the nature of communication often takes the form of user-user interaction, which concerns interaction between users or features very user-like responses, user-machine interaction, which covers interactions with machines responsive to human input, and user-message interaction, which deals with the affordances that allow users to control the use and production of messages (Liu and Shrum 54). In addition to the pathways of communication between parties, factors of interactive aspects include voluntary active control that influences an experience (Liu and Shrum 54) and synchronicity, a quality that defines the extent of control as well as the immediacy through which user input will be communicated or invoke a response (Liu and Shrum 55). Synchronicity in particular is an extremely important quality of interactivity as it can define the real-time flow of an experience, the boundaries of our interaction, and the responsiveness of user control. In the context of games, one can see various instances of how the previously stated definition of interactivity is invoked in games with the way they manage and facilitate user interaction. Video games can allow for active control of all three types of user interaction within the context of their environment, narrative, and inputs to synchronously control user messages and meanings, support human computer interaction

through their hardware and interface, and provide immersion with human-like interactions.

As it allows for user involvement, interactivity seeks to aid the process of immersion, which can aid in the successful emotional impact of an experience. To understand this we must also examine what immersion is, how it is typically enacted, and the role of interactivity in the immersive process. The concept of immersion often involves the sensation of becoming one with an aesthetic experience, decreasing the psychological distance between the medium and reality (Carù and Cova 5). Furthermore, there are typically three steps to the immersion process: nesting, which concerns the user's familiarity or comfort zone within the experience as a starting point, investigating, where users explore the content as they mentally and/or physically explore the experience, and finally, stamping, where consumers form unique personal meanings to the experience affected by their likes or dislikes (Carù and Cova 6). These three "operations of appropriation" (Carù and Cova 6) are important aspects to keep in mind when crafting any form of media content to facilitate successful immersive factors as it can impact the overall effectiveness and enjoyable aspects of an experience. These gradual steps in the immersion process apply to media products such as video games, but can also be achieved with other, less interactive mediums. Even the observance of television can be interactive socially through the process of watching and consuming content with others (Chorianopoulos and Lekakos 114). Interactivity, in this sense, often comes from social factors, be it mentally competing synchronously or asynchronously against the airing program or fellow consumers while watching a quiz show (Chorianopoulos and Lekakos 116) or a social discussion or interaction of shared interest with others over media content

(Chorianopoulos and Lekakos 114). With interactivity being at least somewhat present in the least-interactive forms of media, it becomes obvious how video games can transcend such limits of control to due to their especially interactive nature and extended methods of control through responsive hardware interfaces.

Game mechanics allow for games to exercise selective synchronous control over environments by defining the player's capabilities within and relationship to the virtual world. Mechanics that define the nature of how the player can respond in accordance to their own thoughts, desires, and intent can create a better instance of immersive embodiment. Video games can allow media practitioners to boldly evolve the concept of media interactivity within an experience and experiment with techniques to increase the audience's immersion within media content.

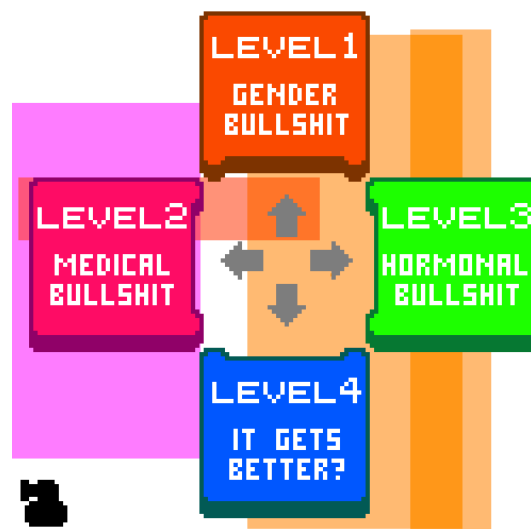
Because of their ability to create experiences that unite and appeal to several different senses using multiple art forms, video games can be seen as achieving a concept also known as synaesthetics (McCloud, *Understanding Comics: The Invisible Art* 123), as games combine visuals, sound, narrative, language, and even tactile sensation, among others as well as countless different disciplines. Media researcher Henry Jenkins makes the claim that, "Video and computer games, as we currently understand them, constitute art" (Kelman 8). He emphasizes this due to their rapid evolution over time and the wide variety of interdisciplinary skill sets employed that would be commonly considered to be artistic mediums or respectable disciplines if used in their own individual contexts (Kelman 8). Video game projects commonly bring together artists, designers, engineers, musicians, writers, and many more. All of these drastically different disciplines that can be seen as artisans of their own medium apart, but can create new things, like interactive game

experiences, together. Video games are remarkable not only because of how they react to human input, giving the simulated experience of interacting with others, but in how it inspires a unique combination of multiple disciplines. This positions video games uniquely as an art form that combines several different sets of knowledge and senses within fusion of interdisciplinary research practices.

It is worth noting, however, that the game is not the experience itself, but merely the medium through which the experience is realized (Schell 10). Experiences can have various factors regarding perception and sensation, especially in the context of interactive mediums such as video games. Our satisfaction with games often depends on how they feel to us. Researcher Steve Swink defines the 'game feel' of an experience as "Real-time control of virtual objects in a simulated space, with interactions emphasized by polish" (Swink 6) to describe the sensation given by a game experience. With the introduction of narrative to games alongside other technological advances (Kelman 31), games could tell deeper, more complex stories that would captivate audiences and enrich the human experience. Games are also able to explore educational topics and social issues, through an interactive context to engage audiences (Entertainment Software Association). An essential part of the human experience, as evidenced by countless cultures of the past and present, is the desire to be engaged through storytelling and mythology (Kelman 37,41). The affordances of games allow anyone to become part of a narrative mythos of any story and can connect very deeply to the human condition to engage users with different storytelling techniques. By working with Swink's definition of 'game feel', one can see digital games can encapsulate countless narratives and mythologies as an interactive storytelling art form. When describing comics, Scott McCloud stated that, " [An] artform -- The Medium -- ... Is a vessel



which can hold any number of ideas and images. The ‘Content’ of those images and ideas is, of course, up to the creators...” (McCloud, *Understanding Comics: The Invisible Art* 6). Much like comics, the freedom that an art form such as games provides allow for the development of an infinite variety of content, expression, and ideas to express distinct and innovative forms of storytelling in media.



*Figure 3: Dys4ia, an independent game by Anna Anthopy portraying transgender struggles*

With this understanding of video games and the potential it has as an expressive storytelling medium, it's hard to deny the potential of these interactive experiences or their status as an art form that is highly relevant to culture. Digital game experiences allow for innovative works of art with the audience in the driver's seat, immersed in the interactive experience of roaming through the narratives that they participate in. This will set the foundation of our understanding of games, their potential in exploring the human condition, and their ability to affect the discourse of public thought.

# Games and Culture

The sphere of mass communication has become very diverse in the number of mediums it entails and the variety of messages that can convey. Much has been written and researched by academics addressing theories and implications concerning traditional mass media, such as television, newspapers, and radio, in relation to culture. However, there has not nearly as much research exploring how new media products, such as games, relate to culture in an equivalent manner.

To understand how digital games and media in general can affect culture, we must first delve into the essence of the cultural sphere and amass a working, understandable definition of the subject. Cultural theorist Raymond Williams defined culture as, "... the signifying system through which necessarily (though among other means) a social order is communicated, reproduced, experienced, and explored" (Williams 13). Indeed, when one examines culture, be it our own or others, we can see established practices and social structures through their conduct. In short, culture defines "a whole way of life" (Williams 13). Ted Magder further expands on this to recognize that through culture and cultural works, people from all walks of life may gain an understanding not only of themselves, but how they relate to others, both in and outside their native communities (Magder 278, 279). However, culture is made up of many types of media, be it the religious texts of the past or the mass media of the present. Thus media can often define or direct the development of a culture as well as the fundamental values with which individuals relate to others in and out of communities.

If popular among audiences, media can create its own subculture; a rich culture within a culture based on pieces of media in question. Games have similarly developed

their own subculture, with their denizens often identifying as 'gamers' (Shaw 28).

Communities within gamer culture can be based on and affected by the surrounding culture. Because these communities are based on interest, it can bring together people of all stripes, ages, and cultures under a common interest, much like any other community, creating social and knowledgeable discourse. This can be seen in many examples within the gaming sphere, such as the growth of large communities based on the comprehensive, science-like learning and discovery surrounding the popular Pokémon series of games (Neiburger 9). Among many other examples, player communities surrounding the Pokémon franchise not only promote social interaction via trading and competing against other players with their virtual creatures, but also learning in children and young adults with regards to literacy and research concepts (Neiburger 2), the development of knowledge spaces (Neiburger 3), and the sharing of 'social knowledge' (Neiburger 6) through the practice of play. With the advent of the Internet, the sharing of knowledge and ideas with respect to many games, such as Pokémon, have become revolutionary in growth of productive game cultures. Virtual communities allow people around the world to share knowledge and discourse often based on their own experience within different forms of media (Lindlof and Shatzer 174). This applies even more so in regards to massively multiplayer online games (MMOs). These MMOs, such as World of Warcraft, rely heavily on online social interactions between millions of players around the globe and thrives on community development and knowledge building (Martin, Chu and Johnson 259).

Additionally, even common interests in creating products can promote collaborative learning and the development of a subculture or community, such is the case with passionate student communities that study and promote the creation of games (Dhopade

6). Thus games in gamer culture allow people to relate to others and their interests similar to communities around other forms of media. This not only allows games to become a deep and expressive medium, but also a creative social experience and a tool that can promote and affect social attitudes, skill building, and knowledgeable discourse, adding to the depth of culture in the media sphere.



*Figure 4: An example of gaming subculture. Taken from footage of the Pokémon World Championships*

With the various examples stated, it becomes increasingly hard to deny that games are influential forms of media and generators of culture. They not only influence the cultural sphere in public discourse, but they also influence the development of social skills and intelligence within various communities and subcultures. By examining games through the lens of the cultures they create and inhabit, as well as their affect on those who actively participate in it, both in and outside the paradigm of play, it becomes very clear of the effects video games have within mass media culture and as a culture in and of themselves.

## **Encoding and Decoding Games**

Much like Madger discussed, there is a political economy in the realm of communications regarding media, its content, power and ownership, and how it affects

audiences (Magder 279). Like all media, the political economies who controls it and how events, characters, and worlds are portrayed often have distinct and powerful messages that are encoded and then decoded into the minds of players. To apply this theory to games, we must treat it like any other medium, taking into account the unique variable of interactivity and how that changes the nature of communication.

The communication cycle typically involves a loop of the encoding of messages from the source, where or whom is sharing information, through a signal that is communicated to the destination, which is most commonly the audience (Schramm 4, 8, 9). Through their content, much like television, games are sending encoded messages. When a source encodes messages and sends them through comprehensible signals (e.g. Speech, radio, television, etc.) to be decoded at its destination, they can direct how one will experience and react to such stimuli, but it cannot directly control how the message will be decoded and perceived the masses (Schramm 4). These messages and communication principles are common in all forms of media, from books, to music, to theatre and drive the nature of an experience (Schell 11). In games, however, due to the nature of these interactive experiences, players often break the common code of translation that is applied to traditionally linear mediums such as television and literature. Players are able to use given methods of control to interact with virtual worlds in increasingly unpredictable ways. Game creators has even less control over how their encoded message is decoded within its destination in the context of human-computer interaction (Schell 12). However, while the communication process in most traditional media describes it as a cycle between the source encoding messages sent by signals to be decoded by the audience destination, video games can subvert that model of communication. According to Swink, the major

communication model for video game experiences involves various processes between the human player and the computer to detail the communication cycle within the perceptual field of an interactive space (Swink 62). The player uses his or her various input senses to cognitively assess events with their senses based on the display output of the screen and hardware with which the game software is being visualized and expressed (Swink 36). They then make decisions and respond through output responses directed at an input interface that facilitates the player's presence in the experience (Swink 36). Controller inputs are then processed by the computer and respond synchronously through the display output, which the player continually responds to with their senses, beginning the cycle again (Swink 36). Much like traditional media communication processes, this process can be processed, looped, and reacted with the human brain in mere fractions of a second (Swink 37). With synchronous real-time control this allows for responsive inputs and outputs that allow for smooth and comprehensive examples of how a player's actions can continually affect a virtual world through the exercised game mechanics. Because of the involvement of the player within the events being depicted, it can prove to become an even more powerful method of encoding and decoding messages.

When examining games for social change, it's important to examine similar spaces that inform opinions through the encoding and decoding of messages in innovative new ways. For instance, the rise of interactive experiences focusing on personal experiences and documentary-like narratives have become growing progressive forces in the game industry. Documentary Games are unique as they're said to, "...offer the opportunity to explore other avenues of non-fiction representation — and in turn, to reveal how our expectations of recording and documentation can be skewed by the myth of cinematic

transparency” (Bogost and Poremba 4). Documentary games gear content towards our non-fictional real world in ways that we can interact with. However, what does the term documentary mean and how does it fit into the context of games experiences? The term ‘documentary’, as described by John Grierson, is said to be a genre that focuses on the “creative treatment of actuality” (C. Poremba 3) as its primary principle. The concept of creativity amongst portrayals of reality means to define that as long as the facts of the matter are the focus, creative liberties can be taken to add drama, comedy, or other interesting genres to enhance such a narrative (Bogost and Poremba 5) while approaching reality from an expressively artistic perspective (C. Poremba 5). Unlike a traditional film approach, players can become participants in both the medium and the message documentaries and allow them to dynamically establish how they relate to both game and subject matter (C. Poremba 10). Indeed, the power of the interactive medium allows players to explore real events or circumstances with narrative techniques that can both involve and immerse the player. However, the encoding and decoding of messages become far different from a traditional linear documentary film experience in that the player must process the facts and lore of the narrative as well as stamp their own personal meaning through their own actions and experiences within the virtual world rather than as a relatively idle participant in the process. Such circumstances forces the developer, as the encoders, to craft their narratives with an even sharper scalpel to direct their message as the encoders with as much specificity as they possibly can to account for the often unpredictable dimension of interactivity.

Like all forms of media, games can encode and decode messages that aim to convince an audience to feel certain emotions through the ways its content and messages

are expressed or portrayed. One area of interest explored in this project is empathy. Empathy can be defined as an emotional disposition that inspires one to feel similarly or responsively to the feelings of others (Bachen, Hernández-Ramos and Raphael 2). There are many ways empathetic experiences can be conjured through media. Understanding how this is functions within the context of games requires us to look at different kinds of empathy and how humans process emotion, especially within the context of this project. Cognitive empathy involves empathy born out of seeing from another person's perspective to gain an understanding (Belman and Flanagan 6), in effect putting oneself in someone else's shoes. Video games often encapsulate that concept quite well as they put players in the control of a protagonist role to immerse them in a given narrative and/or visual perspective (Kelman 26). Emotional empathy can be put into two subtypes; parallel empathy, which concerns having empathetic reactions vicariously through others by understanding their emotional state, and reactive empathy, sympathy unlike the emotion of someone else, such as feelings of pity (Belman and Flanagan 6). There is also ethnocultural empathy, an empathetic reaction towards those of different ethnic and cultural backgrounds (Bachen, Hernández-Ramos and Raphael 3). Ethnocultural empathy is also concerned with the nature of ethnographic methodologies, which is concerned with the study of cultures, communities, and identities (Lindlof and Shatzer 174). Games allow players to project their empathetic processes and concerns onto characters through their embodiment of them (Schell 124). This can be complimented through ethnocultural empathy, which can be used to empathetically allow for understandings of other peoples and cultures (Bachen, Hernández-Ramos and Raphael 3). Because of this, experiences that promote empathy has been shown to have positive effects on an audience's perspective



and lessen the stigma around given topics, such as social attitudes towards those infected with HIV and AIDS (Belman and Flanagan 7). Interactive experiences, however, seem to facilitate an even greater capacity to learn and develop empathetic feelings towards subjects through player involvement (Bachen, Hernández-Ramos and Raphael 4). Such experiences that aim to invoke forms of empathy within an experience can be very effective in changing opinions. To enable the use of empathy as a reflective tool to change social attitudes, one must design an experience accordingly to create an emotional connection with its users. Major elements of emotional design for human consumption tend to have three level processes within the human brain between instances of sensory inputs and responsive outputs (Norman 22). The visceral level deals with what was felt, learned, and surmised based on what we see and sense as well as our responses to such stimulus (Norman 23). The behavioural level concerns unconscious matters of our learned behaviours (Norman 22). Most interestingly, the reflective level of emotional design concerns personal reflection in response to messages, meaning, and how the remembrance of experiences and knowledge upon reflection can change and influence how one reacts and behaves within the other emotional levels at the next opportunity (Norman 22). These tenets of emotional design can aid in the creation of experiences that aim to promote changes in attitudes or opinions. This allows games for social change to thrive when addressing the emotional state of an audience by having players learn through visceral observation of their environment, enacting enabled behaviours, and reflecting on outcomes to teach them the rules of their simulated spaces. The level of reflection has major implications on forcing players to consider how their actions affected themselves and their environment and how to conduct future attempts. As further discussed later in this paper,

*An/Other* was designed in an attempt to increase empathy and awareness of racial struggles, especially using cognitive and ethnocultural empathy, to affect emotions and alter common attitudes considering how people think about, relate to, and treat people of colour. It's important to understand how games can make us feel. By aiming to invoke empathy and reflection using encoded communication methods within the interactive narratives, video game experiences can motivate players to re-examine their opinions with the hopes of promoting discussion and new forms of understanding through the act of play.

## **Race in Culture**

Race is the subject for social change that this project aims to address. As cultural products, Video games are often based on or have roots in the public consciousness of its era's culture. This also often means it can inherit the flaws in attitudes or customs reflective in society or even embody social issues, such as systems of racism and prejudice in its various blatant and subtle forms. Racism stems from the belief and implication of racial superiority and inferiority to establish a racially based social order as the proper cultural structure (Cisneros and Nakayama 110). Racism in culture can extend to past and current laws and policies (Cisneros and Nakayama 110) as well as social attitudes regarding race. However, new, subtle forms of racism have become much more commonplace in modern culture that often deny and condemn the use of race in discussion through the concept of 'colour-blindness' while cementing the conditions of white privilege in society (Cisneros and Nakayama 111). As such, conversations and discourse concerning race is discouraged, as are discussions about the historically rigged systematic structures that ethnically dominant white cultures often makes efforts to ignore (Cisneros and Nakayama 111). This often takes on several forces of self-denial regarding racial bias that is nonetheless used to

simultaneously deny charges of racism, yet reinforce racist practices and ideologies (Nelson 90). It denies the realities, experiences, and implications of race in culture while failing to address the inequalities that result from systems and mentalities that disadvantage certain denominations of people (Cisneros and Nakayama 111). This becomes evident in the portrayal of people of colour within the media sphere. Many negative or stereotypical portrayals of cultural or racial minorities and people of colour in media are often centered on the concept of 'the other' (Hancock, Jolls and Jolls 336). When characterizing the other, the use of de-humanizing images, beliefs, or ideas about strangers, foreigners, or people of difference often lead to stereotypes, misunderstandings, mistreatment, and, eventually, violence (Hancock, Jolls and Jolls 336). News outlets in particular, often with staff of homogenously white backgrounds, often report stories regarding race in very biased and negative narrative. As one anonymous reporter stated, "We thought we were reporting on 'them' ... those people, and organizations, and institutions that were still disenfranchising racial minorities. As it turned out, racism was about 'us' in the media, our news production, our editorial decisions and our own lack of diversity" (Drew 353). Such lack of diversity often reflects the attitudes of white employees towards co-workers of colour and casting social restrictions on their individuality, catching minorities in a "racial double-bind" (Edwards 244) that forces them to regulate the expression of their identities and refrain from making claims of racist practices against them (Nelson 91). This cultural paradox often limits and restricts what minorities can express socially. This often implicit, sometimes unconscious bias often bleeds through the media portrayals of people of colour that are steeped in the cultural and environmental traditions of privilege and separation of themselves from the conceptual other. In some

cases, individuals who are coddled by environments of privilege can't understand why or how certain attitudes or thoughts can be considered to be part of the problem of racial stigma and further establish the implications white privilege, including the insistence of colour-blindness (Cisneros and Nakayama 111). In fact, the selective and sometimes hypocritical use of race in media subjects can often encourage and reinforce racist attitudes and the political economy of who controls such media often reflects these prejudiced beliefs (Drew 354). Such beliefs are usually portrayed in subtle fashions and not often displayed as blatantly in today's culture, which seems to discourage such actions. However, this is not entirely in the online realm, especially regarding social media. Through social media outlets, such as twitter, classically blatant racist dialogues, beliefs, and practices can be expressed and even encouraged against marginalized groups for various reasons without synchronous consequences, such as when a woman of south-Asian descent won the Miss America pageant (Cisneros and Nakayama 113). The dissemination of such beliefs into the public space of mass media despite cultural discouragement is often thought to be a result of the perceptions of public and private spaces being blurred online as well as possibility to seem anonymous (Cisneros and Nakayama 117). While such attitudes expressed may not be prevalent of everyone's opinion on a certain matter, it can allow one to receive a relatively unfiltered view on the state of common and popular attitudes regarding a subject.

All pieces of media contain a large variety messages about culture that are decoded into audiences. As such, many games, especially those in the military first-person shooter (FPS) genre, have been accused of having content that does, to some degree invoke prejudices towards people of colour, especially over the past decade in light of cultural

touchstones and tragedies. This has become increasingly apparent due to research findings that suggest that not only are a player's beliefs and values affected by how they play and perceive the content of game worlds (Hancock, Jolls and Jolls 333), but they can also affect and/or reinforce certain stereotypes and beliefs (Behm-Morawitz and Ta 2). There are many examples of negative stereotypes being encoded and decoded to an audience much like narratives in other media. The concept of the other has been researched extensively within nearly all facets of the media sphere. However, it is worth demonstrating how exactly these tropes of media culture are put into practice within digital game experiences, especially as it is relevant to the subject of the major project to which this paper addresses.

Due to western culture's obsession with the 'War on Terror' after the September 11<sup>th</sup> attacks in the United States, many political policies, including the USA PATRIOT Act, were enacted in the name of national security (Kashan 86). However, it has ended up creating a culture of fear and prejudice against minorities and immigrants, which has further extended into social and societal structures (Kashan 87). As works of media, games are not immune to this. Many modern first-person games, especially centered on military events and settings, create enemy characters of middle-eastern descent, often labeled as terrorists (Schulzke 207). This is often done to create a generically evil force of characters that players have fewer reservations about killing (Schulzke 208). It does not seek to and often times intentionally avoids characterizing or showing these terrorists in any sort of sympathetic, human, or understandable light, turning them into nothing more than the evil other incarnate. Such experiences often portray these 'terrorists' as faceless, evil enemies, devoid of human motivations or reasoning for their actions (Schulzke 209). This dehumanizing behavior within games that negatively establishes and reinforces beliefs

demonizing the other can later extend to the real world as players cultural beliefs are present both in and out of game spaces (Hancock, Jolls and Jolls 333). Media that supports or reflects such discriminatory narratives set in place through cultural or political events, such as the USA Patriot act, can affect the freedom, liberties, and social status of otherwise peaceful citizens of a stigmatized demographic (Kleiner 103, 104, 105).

People of colour are often portrayed in stereotypical and negative ways within the media sphere. Video games, in addition to many other forms of media, are often stereotyped to feature a white male hero as its protagonist in many narratives with the other regulated to lesser, typecast roles (Behm-Morawitz and Ta 11). The diversity of characters in video games proves to be quite skewed. A study that analyzed 150 video games recorded the range of portrayed game characters as, “80% White, 11% Black, 5% Asian, 3% Latino, and 1% biracial characters” (Behm-Morawitz and Ta 4). This lack of diversity also makes the impact of these minority character roles very powerful as they are often stereotyped to fit a certain and often similar media narrative that reinforces within a player’s mind how these groups of people act both fictionally and in non-fictionally. This can lead to a very narrow, often condescending view surrounding the lifestyle, beliefs, and capabilities of certain demographics. In particular, African-Americans in video games are often portrayed and thought of as poor, unintelligent, violent criminals, and/or athletes and Asian Americans are often shown as untrustworthy, criminal, and/or martial arts practitioners (Behm-Morawitz and Ta 4). These virtual portrayals serve not only to typecast ethnic roles inside games and media, but also transition into the material world the more they are reinforced ideologically through representation, portrayal, and language (Hancock, Jolls and Jolls 336). Research concerning how dominant, white demographics of

college students think of visible minority groups and how they relate or fit into their own culture show that these portrayals in games often legitimize and justify their thoughts, bias, and/or discriminatory practices as these kinds of characters are specifically typecast in these types of roles (Behm-Morawitz and Ta 11).

Furthermore, we can see the extents of these racial ideals within various societal structures in blatant extremism or discriminatory practices. Various reflections of this prejudice often appear in a variety of social situations and interactions (Cole), but are particularly infamous regarding incidents where citizens interact with law enforcement. Because of the long history between police and minorities, people of colour in western societies tend to have less trust in law enforcement officers, who often see them as protecting the dominant ethnic group, whom are believed to perceive minorities as a threat (Wu, Smith and Sun 73). Furthermore, incidents involving brutality, death, and harassment by police against minorities further decreases public trust in police and potentially segregates communities (Wu, Smith and Sun 74). These criticisms are not unfounded as it is documented that minorities are far more likely to be disproportionately harassed or killed by law enforcement due to racial bias and stereotyping in western culture. In the United States, minorities consist of around 37.4% of the population. However, minorities make up at least 46.6% of citizens killed by police and approximately 62.7% of unarmed citizens who are killed by police, making them at least twice as likely, statistically, of having fatal encounters with law enforcement when compared to dominant white citizens (Swaine, Laughland and Lartey). Furthermore, incidents where police have harassed citizens of colour have been well documented. In Toronto, Ontario, Canada, the controversial practice of 'carding', where police stop and document the name and

information of citizens, has shown to also affect people of colour disproportionately. Despite only making up around 8.3% of the population (approx. 217,000+) African-Canadians were shown to have been identified the most with at least 23.4% of the approximately 1.25 million contact cards filled out by police between 2008 and 2011 (approx. 292,500), with citizens with dark skin or of south Asian descent being the next likely to be carded (Rankin). The practice of carding is controversial not only because of its disproportionate application towards minorities, but also because it is usually performed without probable cause (Cole). Similarly, in the United States, New York's 'Stop and Frisk' policy has led to parallels regarding its targeting of minorities. From 2003 to the most recent reports in 2015, it's been shown that of all New York citizens subject to stop and frisk interrogations each year, around 54 – 56% of them were African-American and 29-34% were Latin-American while only 9 – 12% of White-Americans were subjected (New York Civil Liberties Union). Furthermore, of all citizens subjected to the stop and frisk program, approximately 9 out of 10 were innocent (New York Civil Liberties Union). Indeed, these statistics highlight the consistently disproportionate rates at which minorities are subject to unwarranted incidents with law enforcement. As such they present a very different reality for those affected, directly or indirectly from such systematic treatment from authorities that may be completely alien to those with the privilege whom are shown to not be targets of such policies.

With race evidentially being an ever-present factor in the treatment and perception of minorities, it can't be denied that this is a very crucial social issue that should be addressed. With media participating in the reinforcement of negative stereotypes that are supported by and spill into real world practices, it becomes even more important to



develop media that questions these beliefs and attempts to change social attitudes. Any form of art and media, from film, to painting, to photography and countless others, can have an effect on culture through their depiction and the expression of their ideas. Video games, as an interactive medium, are no exception to this rule and can provide a unique impact with their experience that encourages and supports intimate personal participation through voluntary physical inputs. The potential for games to become agents of social change through their interactivity is groundbreaking and has been widely tapped in the development of countless pop culture icons. It is the opinion of this paper that should a game be made that attempts to portray, depict or discuss race, it could open up new paradigms of thought within its audience who must decipher and decode their own meaning of the message through their interactions.

To demonstrate the concept of games for social change directly as well as challenge perceptions and assumptions about race, a game was made specifically for this paper as an avenue to experiment with the nature of media experience and the cultural potential of games. This game was made with the intent of changing social attitudes regarding race and social thought in the public consciousness regarding racism, prejudice, and bias through interactivity and making others aware of negative behaviours both within society and themselves that support the discrimination of people of colour and the other. This game is called *An/Other* and it is a unique experience that will attempt to simulate common tribulations and struggles present within the life experience of millions of minorities and people of difference in the western world.

# Games for Social Change

The term 'games for social change' has been used several times within this paper. The subject of games for social change has relatively little research surrounding it. However, using what has been established in previous chapters, I will establish a working definition. Games for social change are games that aim to inform, enlighten, and/or affect the thoughts, opinions, and beliefs of certain social and cultural issues that plague a society. At the heart of a game for social change lies a social issue that the creator(s) is passionate about and wants to ignite change in popular opinion or attitudes. The game experience becomes a contribution to the counter-culture that opposes the status quo or offers a new perspective on the subject. Using game experiences as a model, it allows one to approach and learn about the world from a new perspective or ideology with little to no personal risk (Stokes, Seggerman and Rajeski 6). It is my opinion that the creation of games inspiring positive social change can open new modes of thought for its players that will potentially promote discussion, tolerance, and acceptance in society. While inspiring social change is surely not an intent limited to video games, games made for such purpose aim to make use of the medium's interactive nature to present unique points of view, narratives, and empathetic experiences in ways that could hardly be achieved as potently in other media.

Games for social change can touch a variety of controversial topics including civic and political engagement (Kahne, Middaugh and Evans 7), genocide (Entertainment Software Association 1), and more. Many games on the website GamesForChange.org possess the qualities designed to promote changes in attitude regarding several different societal issues. Despite this, there is a lack of research on games for social change. It is my hope that the research within this paper and project helps to inspire further growth in this

genre of games to advance the medium of gaming as a whole and its capabilities in the media sphere. Additionally, I plan to contribute to the field of games for social change myself by using *An/Other*, the game made for the purposes of this project in an attempt to change attitudes regarding race in the public consciousness. Let us explore what it is like to see through the eyes of *An/Other*.

## **An/Other**

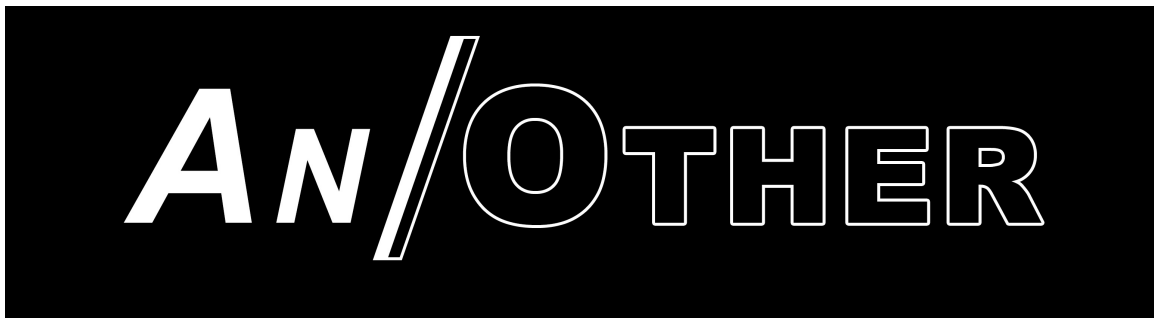


Figure 5: The logo for *An/Other* by Jordan Sparks

To play and experience *An/Other* for yourself, please go to <http://sparkcomic.com/AnOther/WebVer.html>

*An/Other* is a first-person interactive narrative game about the lives of people of colour and the struggles they face. Players unknowingly take control of a person of colour in a first-person perspective and go through various types of discrimination encountered in a typical day. At the end of the experience, the game will then reveal the player's identity as a person of colour to imply the reason for their mistreatment.

The unique element of *An/Other* is the lack of given context. Players cannot see their avatar's body during game play and are never directly informed of their identity as a person of colour until the very end. They must draw this conclusion during the game based on the implications of their presence and interactions with other characters. By using the affordances given by interactive games, players are able to play through a narrative based on reality by embodying the character and viewing a unique perspective on such social

issues from the inside looking out, rather than the outside looking in, to create an immersive experience where they struggle with unjust hardship. The goal of this experience is to re-humanize the cultural portrait of the other, as imagined by those harboring prejudiced attitudes and biases towards people of colour, especially towards black males. *An/Other* forces those who distance themselves from the race discussion or participate in reinforcing racial biases and privilege, intentionally or otherwise, to acknowledge their behaviour and reconsider their inner beliefs about people of colour.

As a Black-Canadian, I had a lot of personal motivation to create this type of experience. While I did not grow up believing race to be a defining part of my identity, I have noticed throughout my life that many people I've encountered defined themselves and others through their racial backgrounds. While I saw and still do see race and culture as different, yet equally beautiful elements of the human condition, people have made an effort to define myself, others, and themselves based on preconceived notions, stereotypes, and other assumptions tied to cultural perceptions related to many racial portrayals and stereotypes. As previously discussed, conversations about race and the issues these perceptions entail are often discouraged and treated negatively. Predetermined notions about race are often based on how media portrays people of colour and individual perspectives that are influenced by unequal social orders of privilege. These perceptions often prompt offensive and/or misinformed opinions and beliefs regarding race or negating discussion of race altogether through the claim of colour-blindness. This fuels the main reason why *An/Other* is presented without specific given racial context. I wanted to research enough about racial struggles, which are a subject of popular debate or, arguably, non-debate in today's current cultural climate and aim to somewhat represent at least

some of them in an interactive context. By not explicitly revealing the racial nature of the experience and attempting to have players empathize from their own perspective, players can attempt to challenge their opinions and assumptions regarding race and the ingrained concept of the other. While dominant groups with privilege are insistent at ignoring or denying the problem, it's my personal belief that the many cultural issues surrounding racism will not improve until people are willing to actually accept and discuss it as legitimate issue. It is the hope that once they aware of the racial struggles of people of colour through *An/Other*, they can empathize with these issues and generate legitimate discussion to increase acceptance and decrease social and systematic racism in society.

*An/Other* uses interactivity to explore the dimensions of racial struggles in the social settings of a typical day by having players embody and participate in virtual reenactments of such situations and circumstances that may not commonly apply to them. As discussed, it allows players to experience and consider a new perspective with little personal risk. Within the narrative, players will be forced into confrontations between other characters and law enforcement. Their sheer presence may prompt certain negative behaviours. The situations that spark these conflicts are designed to be events in an average day, making them relatable and accessible while provoking new paradigms shifts in thought when they don't unfold as one might expect. Given synchronous active control over the protagonist, players can navigate through environments, interact with certain objects, complete given simple tasks and challenges, and choose responses in interactive conversations with other non-playable characters (NPCs). The conversational aspect of the game is a potent way to interact with the narrative and lay bare subtle and blatant prejudices of certain characters. Each character has a disposition regarding the player's identity that they express through

their words or actions. While the player can influence discussions in certain ways, they may find that there often isn't a way to escape most conversations unscathed from negative opinions. Much like was discussed regarding race in culture, navigating the cultural paradox of social situations and regulating the expression of identity in the midst of those with certain cultural privileges and behavioural expectations is a prevalent issue for people of colour that *An/Other* attempts to highlight. The player is surrounded by those of privilege with innate personal biases are supported by our culture. Similar to reality, these biases can be displayed in especially subtle ways, such as the use of certain phrases and the reactions to the player's presence. Additionally, this game takes away the cultural construct of privilege from the player and prompts them to traverse through the narrative without it as a shield. As such, the game is designed for the purposes of providing an uncomfortable, yet thought-provoking experience for target privileged audiences who are unfamiliar with this type of treatment.

These conflicts within this project are inspired by comprehensive research concerning the real-life mistreatment of minorities around the world, statistics, and infamous incidents in the past and modern age, as well as my own personal experiences and observations as a person of colour. Research also extended to include academic theories on race, power, and privilege in society, as well as the state of popular and unpopular opinions about race in culture. Using immersive interactivity to give shape to the experiences of minority groups and designing the narrative to encourage positive empathy by creating an experience with negative results in socially relevant situations, *An/Other* aims to strip players of any conscious or unconscious sets of privilege they might possess and defy expectations of racial identity and meaning by hiding the identity of the player throughout the game and

forcing them to confront the cultural implications of their avatar's identity in situational contexts.

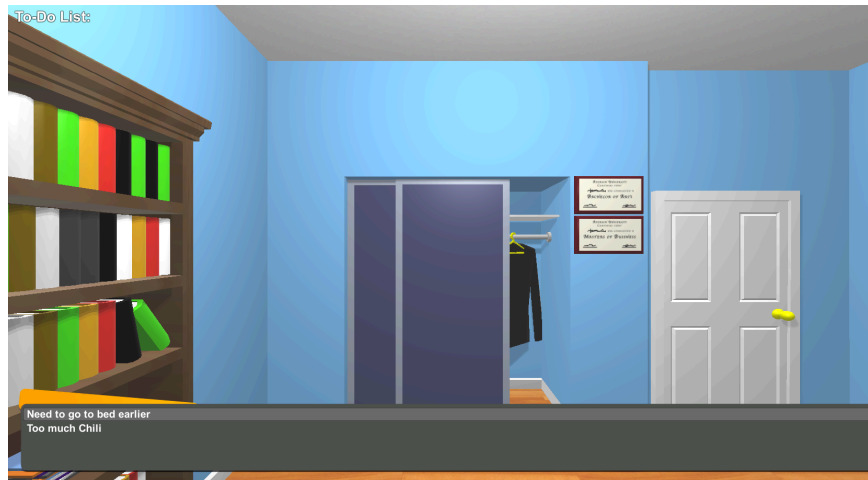


Figure 6: A screenshot from the opening level of *An/Other*

Within the experience, interactive narrative design techniques are used in various circumstances to create dimensions of immersion within the work. We will use previously established conventions to examine the major logic and meanings behind the design and narrative structure of *An/Other*. It is recommended that readers play and analyze *An/Other* for themselves first, if possible, to better understand the following examinations.

As players begin the experience of *An/Other*, they awaken in their bedroom. This scene establishes the game's dialogue and movement mechanics as well as allows the player to become familiar with their embodiment of the avatar character. This begins the nesting stage of the game's immersion process. Objects within the player's room provide slight indications of character, hinting at their occupation as an intelligent, average, white-collar businessman. Additionally, as the game prompts players to retrieve their clothes, look around the room, and leave the room they are eased into the navigation mechanics, the use of dialogue responses, the role of the visible "To-Do List", and their visceral relationship with the world. The next level of the experience involves a new, city

environment with a fixed area of interaction and a conversation with a police officer that attempts to 'card' the player. It is here, with their newfound relative freedom that they immerse themselves in investigating the rest of the game. The inevitable encounter with the officer begins to establish the various directions that conversations can develop through their use of player's chosen dialogue responses and their relationship with another character in this virtual world. Players should notice details about what the officer is asking. They constantly request identification for no given reason. Any attempts to resist aggravate his speech and body language. Complying with his requests imply condescension and assumptions. This establishes a hint about how other discussions will function. Once this conversation has finished in whichever outcome, the player will eventually encounter another NPC character on their way to work. This female character stares at the player, shaking and grabbing her purse when she is near them. This was done to introduce the notion of character's observing and reacting to the player, which is also performed by the police officer and further reinforced here. These are meant to mimic cultural behaviours of fear and suspicion present in real-life interactions towards people of colour in society. These first two stages introduce the mechanics and affordances of the experience and begin the process of nesting and investigation of the immersive process. This prepares the player for major types of behaviours and interactions that will be persist throughout the game.

Once the player arrives at work, they are greeted to a relatively linear conversation with their co-worker Jeff, who briefly introduces very subtle racist attitudes for the player to consider. Using the phrase, "You're a credit to your... y'know..." as a stand in for a somewhat common phrase, "You're a credit to your race", not only preserves the mystery of the player's identity, but also prompts the player to wonder what exactly was meant by



the notions of that incomplete phrase. If one is not consciously familiar with the absence of privilege and the acknowledgement of racial pecking orders, one might be confused to the meaning of those words or how the sentence is commonly completed. Furthermore, such behaviour implies that Jeff possesses low opinions of similar backgrounds to the player character. Because of the setting, players are not given any ability or agency to address the behaviours inspiring such statements in the workplace.



*Figure 7: The player's interaction with Connie that addresses media portrayal and racist assumptions*

As the player establishes the white-collar nature of their occupation, they go through the quick process of accomplishing work tasks before their lunch break. As the player begins their lunch break, they become involved in a scene that addresses both media portrayals of the other and social reactions to media reporting. A news broadcast event occurs concerning riots resulting from the police killing of an unarmed African-American teenager Nathan Blake. This scene contains subtle cues towards the bias language and narratives encoded within modern news portrayals. Major instances of this is shown in the language implying that Blake was a criminal, despite an admitted lack of evidence, and his description as a man rather than a teenager in an attempt to create an older, and less sympathetic visual within the public imagination. Focusing on the riots and describing

police as “hunting” rioting protesters further dehumanizes the community and their cause. Furthermore, the attempts to use unrelated claims towards the victim’s father who was guilty of drunk driving prior to his son’s birth is used to further demonize Nathan Blake as the other upon his death and reinforce the media narrative that he was not an innocent casualty, a common practice used in journalistic reporting on minority victims. For those willing to carefully read the subtext of this fictional report, which is very much based on actual reporting, and/or reflect on it after what happens next, this can serve to expose directed bias in media narratives and encourage people to deconstruct them. After the main part of the report, the player’s co-worker, Connie will then specifically ask the player about their thoughts on the matter. While it has been established that culture demands the subject of race and its cultural disadvantages be kept silent, *An/Other* forces players to choose responses in this situation that oppose Connie’s rhetoric and inspire her to exhibit various hostile behaviours. Whereas the encounter with Jeff was used to show regulation and suppression between how the player can express their identity, the conversation with Connie is the complete opposite as it displays the social consequences when such behaviours and opinions regarding racial identity are expressed. Simultaneously, this conversation puts the player in a culturally condemned position of expressing displeasure upon recognizing negative racial attitudes and forces them to respond in manners they may not initially considered or desired. Players must reflect on what this conversation means to them as they are forced to explore this possibly unconsidered point of view that isn’t shared by privilege. Connie embodies privileged behaviour as well as the narratives consumed and believed within the common public consciousness, while the player is forced to respond devoid of such constructs. No matter the outcome, Connie will be angry with the

player for expressing such contrasting opinions and leave them alone in the lunchroom.

While the player is prompted to go back to work this does provide a buffer to allow for the player to emotionally reflect on this relatively conflicting scene before they decide they are ready to progress and leave the room. As it is the only scene that deals with race directly, while still concealing the player's identity, it does direct the narrative to the topic of race should it not already be in the player's thoughts. Additionally, the meeting with the boss after the conversation does imply strained relationships with their workplace. Not with their quality of work but with their efficiency in relation to others. This scene is meant to illustrate the barriers that racial social orders establish that can prevent people of colour from succeeding socially and economically. Mr. Jenkins' insistence that the players not overshadow their co-workers and know their place highlights the social order of the workplace. If the player realizes or suspects their identity at this point in the experience, they may also notice that they are the only person of color in the workplace.

As the player leaves work and goes to a store, a character moves ahead of them and enters the store, triggering a security anti-theft alarm without incident. However, when the player triggers this alarm, they are pulled aside by the security guard. The security guard demands that players empty their pockets and walk through the alarm again. However players are also given the conversation option to leave the store without buying their groceries if they feel harassed. Players who choose the dialogue option to leave the store prematurely carry on to the next level. Players who do comply with the demands and rude behaviour of the security guard go through the alarm again without their belongings, which prompts it to no longer trigger, before being tasked with finding their desired items. The security guard, however, is actively watching the player, as is the cashier, and the two

employee clerks on both ends of the store whom follow the player. This is meant to simulate common practices in store settings that monitor people of colour under the assumption that they are thieves. Innocent attempts to simply gather and buy items are closely monitored by the staff. Once the player gathers and attempts to buy the items, the cashier attempts to imply that the player might have stolen something. The player is given options to either state that they haven't or briefly identify the behaviours of the staff, which he will then deny. However, upon exit, they are then pulled aside by the security guard again for triggering the alarm. To avoid repetition of the same event, it is simply summarized with the player stating, "second verse, same as the first". This scene was design to address very common behaviours in simple store settings invoked by the presence of people of colour. Likewise, the player is forced to experience such events and reflect on these instances.

After exiting the store, players will walk down a dark street. However, once the player passes a certain point, a police car will appear behind them and follow them from a distance. Once the player is almost to their apartment home destination, the police officer will pull up beside them and question the player for their identification in a similar manner to the first officer encounter. However, this scene is meant to show the extremes of such situations. Players will be more aggressively prompted for their identification again with the implication that they do not belong in the area. Furthermore, the midpoint of the conversation involves the officer reaching for or pulling out his gun, which prompts the loud disruption of a gunshot upon the player's display flashing to black. Up to this point, players are meant to feel aggravated with the piling of difficult circumstances and a repetition in police encounters. Because players are now able to reflect on all prior

experiences within the game, especially regarding the first police encounter, it can inspire them to approach this second incident in a different mindset. Furthermore, the use of the motion or action concerning the gun and the following gunshot creates a sudden realization of what was at stake. At this point in the project's narrative, players should be immersed in their character through their various endeavors, which makes this event of player death so impactful. Because it occurs suddenly and without provocation no matter the response it can surprise and shock the player with the escalation of the narrative and their powerlessness to stop it. However, this is but a ruse. After a brief pause, the dialogue interface is revealed once more. Progressing through the remaining conversation reveals that the gunshot was from a shooting crime close by, not from the officer, despite his implied body language. This prompts the officer to reluctantly let the player go and leave the area. Again, by using the experience to increase the stakes to include the possibility of death as a consequence, players can feel like they just died within the narrative, only to be relieved once it is revealed that they are still alive. The pause given between this reveal is given not only to make the reveal less expected, but also to give players time to reflect on how they suddenly felt when faced with the possibility of death. The rest of the walk allows them to get to their destination while they think about that moment.



*Figure 8: The player avatar's identity is finally revealed!*

Finally, players return to their bedroom. Players are prompted to go where they began the game, at the side of the bed. The game then finally comes full circle as it reveals the body of the avatar for the first time and identifies him as a black male who has been stressed by the many ordeals of his typical day. This is meant to be the most powerful moment of the game as it not only confirms the player's carefully hidden identity, but also forces the player to come the realization that they were playing as a person of colour. Incidents inflicted upon them without context may have occurred because of their identity. They themselves embodied the other that they may have otherwise considered separate from them and, during the experience of the game, had to tackle problems not as racial issues, but their own personal issues. By allowing them to see themselves in the context or lack of context of these difficult situations motivated by practices and attitudes about race players can walk away with reflections and thoughts regarding their own beliefs and feelings and what the experience within *An/Other* meant to them. The more immersed they were into the game, the more powerful the reflection and stamping actions regarding the player's experience can be. Should any players quit playing prematurely out of refusal to discuss topics of race, these situations are meant to be memorable enough to linger in

player's minds and promote active thought. All players of *An/Other* should be thinking about these racial subjects after they complete the game and analyzing their experience. It is the goal that players, especially those coming from privileged backgrounds, are able to not only able to empathetically reflect and reconsider their own beliefs after their play through of *An/Other*, but to also consider widespread cultural attitudes towards minorities and the other.

Analyzing audience reactions through user testing and data gathering throughout the project's development allowed for research that informed the core experience for *An/Other* and gauged the effectiveness of the game's overall immersion and design. Furthermore, it was found that testers did, in fact, want to discuss topics of race after experiencing such incidents through play. For further details on audience analysis and the rest of the interdisciplinary research method used throughout the project, please refer to Appendix A.

To ensure *An/Other* was accessible to as many players as possible, easily sharable, and easy to alter if needed, web browsers were decided as the major platform. To aid in the presentation and understanding of the game's interface, a web page was customized to house the online build of the game. I treated the web browser as part of the interface and showed simple interface instructions alongside the game. This instantly makes *An/Other* more accessible with constant reminders on how to control it built into the web page. I also included social media sharing buttons, a link to a survey to record major problems if they occur, an image link to my personal portfolio website. *An/Other* is now finally completed and ready for public consumption.



Figure 9: The public webpage for An/Other at <http://sparkcomic.com/AnOther/WebVer.html>  
To provide players with an immersive interactive perspective that inspires them to

reflect on stamped experiences and consider the consequences and implications of issues and events within culture long after the game experience is finished is the true goal of all games for social change.

## Games For Future Change

With the advent of other games in the industry that focus on themes such as interactive documentary (C. K. Poremba 15) and empathy (Belman and Flanagan 8), as well as the existence of websites such as GamesForChange.org, it is clear that games for social change are emerging as their own genre within gaming spectrum. It is my hope that the development of games for social change will eventually become more prominent in the gaming sphere. However, there is still much work to be done regarding this topic that needs to be explored.

There are relatively few studies regarding the effect of games as media products capable of non-violent social change. Much like any other form of media and art, digital game experiences are capable of inspiring far more feelings and sensations within players besides aggression. The development of games like *An/Other* is proof of this. More research



needs to be done concerning other forms of experiences digital games can provide and expand upon how they relate and otherwise affect the human condition.

The development of more games for social change that focus on reflective levels of design, immersion, and experience design is also needed. Research into the effect of games on culture and social prerogatives can best be done with the increased development of such games. These projects, like *An/Other*, may be small experiments in and of themselves. However, their importance to future development of research regarding the interactive gaming sphere cannot be understated. It is the hope that game designers and developers who read this will contribute to this knowledge space and develop games in this genre to progressively advance social and cultural initiatives. If more games for social change become accessible to audiences that challenge cultural status quos and explore different perspectives, game developers and designers will not only benefit the gaming sphere, but media culture as a whole and expand on what is possible within the realm of media production.

Game development is not a part easy practice or field of research, but it is an evidently powerful medium with a growing audience. As demonstrated in this project, it can be possible to make games that affect the social discourse and discussion within our culture. One doesn't need to be an expert practitioner of the craft, only an ambitious creator with an idea and researched resources to rely on in their learning and development. The more game creators both in the independent and professional sphere creating digital experiences that address social and societal ills the more can be said and researched regarding the capabilities and potential of video games both in academia and the public consciousness.

## Conclusion

As proven, through research and experimentation, video games can tackle a variety of subjects that forces us to examine its role more closely in the realm of media. We can see that games are capable of transforming its audience into uniquely active participants through the added dimension of interactivity. Games are capable of meaningful expression as artistic products of new media and can be used to inspire social change and modes of thought much like other forms of mass media. Through their content and the interactive nature of its mechanics, this interdisciplinary new media art form can tackle a variety of social issues and abstract concepts beyond the purposes of escapism and entertainment. They can be used to inspire understanding, empathy, and other passionate sensations. Interactive games inspire the use and fusion of countless different disciplines to create a complete whole experience. With extensive research, video games can attempt to question the status quo and create counter-culture with the potential to affect the social behaviours, emotions, and opinions of its players through their embodied interactive relationship to the experience.

*An/Other* was made for the sole purpose of testing the theory of games for social change and demonstrates how the principles of interactive narratives and mechanics can be applied with research to address common thoughts, biases, and attitudes regarding racial struggles and people of colour in the public consciousness. Research has certainly shown that issues relating to race and culture persist in society despite customs to ignore such problems socially and culturally. These are the topics which *An/Other* aims to explore. Through experience, players could become the subject of different hardships based on the visible characteristics of their avatar's racial background and are offered to rethink their

relationships to race and culture. However this is just the tip of the iceberg. Many more topics and social settings can be tackled through the lens of an interactive game. Thus, the development and success of *An/Other* does prove the ability of games to enact social change within culture and society.

With more study into this topic, the understanding of game experiences and their connection with the human condition can be further developed for the benefit of all researchers and media practitioners. It is my opinion that if more games are developed that seek to positively affect the discourse of public opinion and culture, a trend of insightful perspectives will be presented to players unlike any in other media and inspire the widespread acceptance of interactive video game experiences as a sophisticated art form and a genuine medium for social change within the public consciousness.

## ***Appendix A***

This section is meant to directly describe and reveal various research processes behind the development of this major research project. *An/Other* was designed to promote positive changes in social attitudes regarding race and culture and invoke empathy through the use of an interactive perspective. As evidenced in the main sections of the paper, vast amounts of research went into the development of this project framed in the form of an interdisciplinary research methodology. I hope this research process can be a useful inspiration to those who wish to advance the gaming sphere with future projects and studies to further affect cultural discourse with this medium.

### **Interdisciplinary Research Methodology**

The National Academy of Sciences defines interdisciplinary research as, "... a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or field of research practice" (The National Academy of Sciences 26). Interdisciplinary research is most suited, "where the contributions of the various disciplines are integrated to provide holistic or systemic outcomes" (Tait and Lyall 1). This emphasizes the need of solving problems for the goal of advancing multiple different disciplines to achieve new paradigms of knowledge (Miller 3). The topics and nature of an interdisciplinary research methodology can be very broad and diverse to the needs of a research project and how different disciplines interact with one another (Tait and Lyall 2). Digital games, by the nature of their very existence, are

interdisciplinary products. To create a digital video game product and craft an interactive experience, one must possess skills from multiple different disciplines, such as computer science, visual arts, psychology, anthropology, engineering, physics, music, writing, and countless others (Schell 2,3,4) or work in teams that possess such skill sets. Additionally, multiple art forms and disciplines must be combined to ignite the senses synaesthetically. Interdisciplinary research allows one to take knowledge from multiple separate, sometimes normally unrelated, subjects towards the creation of a complete whole. As such, this makes the interdisciplinary research methodology perfect for the research and development of video games as it is of a similar nature. This methodology can adapt to the needs of project, different disciplines, and sets of knowledge that need to be combined to develop a more complete comprehension of knowledge and new paradigms of thought.

The Interdisciplinary Research Method has allowed for the polymerization of many different disciplines to aid in the research and development of *An/Other*. As such, knowledge from many different fields, such as design, computer programming, sociology, and others were combined to address the research question surrounding games for social change. This resulted a very rich and diverse pool of research to draw upon when creating *An/Other*. For the purposes of this project, gathered research was split into three main subcategories to organize various sets of knowledge and integrate them harmoniously within the various phases of production. The three major subcategories of interdisciplinary research in the development of *An/Other* are Topical Research, Design Science, and Audience Analysis.

Topical Research concerns itself with the various themes and narrative purposes of the project. This allows for research to be done in the pre-production phase, as well as

additionally throughout the project, to inform and inspire the production of the content. In the case of *An/Other*, topical research covered a wide range of themes including racism, power, privilege, discrimination, bias, history, statistics, demographics, ethnography, media representation, and more. This phase of research serves to inform project's plot, portrayals, and narrative focus for the production phase.

Design Science includes some pre-production design, but mostly consists of major production aspects and the iterative development of solutions. This involves artistic conceptualization, technological research, interaction design, and experience design. In particular, the topic of technological research has to do with the programs, hardware, and overall technology used support the project as well as the various design principles applied through the technology in the crafting of an experience. The design science tier was the main centrepiece of research concerning production and allowed for topical research to be applied into a tangible project.

Finally, Audience Analysis involves user testing and examining how players feel and perceive the experience. This is perhaps the most important stage of research as it will identify what resonates with audiences as well as allow for a collection of data to be gathered regarding the actual game experience. In order effectively communicate the message of the experience it must be expressed in a way that connects with audiences. To conduct audience analysis and discover what resonates with players, multiple prototypes were developed and sent out to user testers who would give feedback on the experience. This allows not only for data and critiques to be gathered on narrative techniques and experiences, but also the identification of various unforeseen technological and design flaws that can later be addressed.

In certain respects, these streams of research cross over and inform each other through their various processes and topics, which can also support each other at every stage of the game development process. These three main categories developed for the purposes of this project allowed for research to be properly organized and applied in the appropriate manner during the production of the project. By organizing them in such categories, research data can be analyzed and connected to other forms of information to create new forms of understanding. It is through these combined methods that the interdisciplinary research methodology proceeds to take shape.

During the development of *An/Other*, the interdisciplinary research method was applied to study and apply various subjects in an attempt to answer the proposed research question: Can interactive game experiences become catalysts for social change? This project provides an experience in an attempt to answer such a question. Ultimately, this will be an example of how comprehensive academic research can inform and revolutionize the production of games and interactive experiences that aim to inspire forms of social change.

## **Topical Research**

Topical research is the term used for the purposes of this project to refer to a variety of subjects related to the topics and themes relevant to the development of the project at hand. Much of the topical research for *An/Other* is focused on the themes and subjects that would drive the narrative and plot of the experience. This can be very specific to the project, especially in the case of designing games for social change. In the case of *An/Other*, the major topics embedded in the topical research included interactive game design, design

theory, production concepts, and numerous subjects on race within society. Topics concerning game design and design theory often overlapped with topics in the design science stream. As such, they were thus given relatively less focus within this stream of research. Topics concerning different forms of racism, prejudice, and the like became the main focus of *An/Other's* topical research as these subjects provided the main narrative inspiration and direction of the project. Research on such issues was approached through several lenses such as personal stories, reports, statistics, and academic findings, cultural media representation, and other related topics. As this would be the driving force behind the narrative, the topic of racial prejudice in the social fabric of society became the major theme that dominated the topical research of this project.

As previously established in the previous section, surrounding race in culture, there are a variety of problems regarding racism, the treatment of people of colour, and the mentality behind those issues in society. In addition to research regarding racism as previously discussed, special attention was paid within the topical research stream concerning the perspective in which these issues were perceived or portrayed. The original premise of *An/Other* included focus on presenting such issues a first person visual perspective within a virtual game environment. As such, understanding narrative techniques that could be applied with this intent was crucial and approaches to narrative design were examined in relation to research regarding racialized situations.

### **Narrative Design**

The design of narrative perspective is central to the concept of *An/Other*. As discussed, *An/Other* is designed to portray the common social hardships of people of colour by seeing it constantly through their eyes, unknowingly taking on that identity. At its core,



it aims to empathize players to these struggles and the experience of constantly going through them. While this was the base idea, plenty of research was involved in influencing the narrative flow or design of this topic.

Once topical research was gathered regarding race in media and culture, decisions had to be made regarding how to adapt and represent these findings in a digestible interactive form of ethnographic media. *An/Other* would present and simulate common situations where discrimination would occur; taking place in a first person perspective that allows the user to unknowingly become a person of colour. The first-person perspective was chosen because it is analogous to how human beings observe the world through their own eyes, which would extend into gameplay. A key idea to the idea of the game, however, would be the use of subtle discrimination reflected through characters interacting not only with the player, but also with their presence. Research into how games expressed messages and narrative and user-message interaction became crucial to the understanding of interactive narratives. The game was then imagined with interactive conversations that would allow players to not only interact with other characters, but respond in a manner that they see fit, allowing for an element of choice.

However, these concepts led to several inherent narrative problems. To increase immersion and encourage players to think of the player character as themselves, their names could not be spoken in dialogue. While players are known to subconsciously embody their avatar, often regardless of their character's identity, it was important for the purposes of the project that they identify with the protagonist as much as possible. To assign a name for player character to be addressed by may lessen that aspect of player immersion. Furthermore, their identity as a person of colour must be concealed, even

through the dialogue, and not directly or blatantly addressed. Therefore, the narrative and game play must be designed to compliment the mystery and provide hints to the player. Designing a narrative that says something without saying it directly demands the utmost care. To counter these challenges, efforts were put into the researching and developing a convincing script within the narrative that navigated around these narrative pitfalls to present these issues in an impactful and believable fashion.

To further conceal the player's identity, users are unable to see their physical bodies within the game. The player becoming a faceless protagonist and/or hiding their corporeal form is a common convention in game design. By giving game protagonists a lack of a pre-defined physical face or form, players are more enticed to impose their own identity onto their character (Kelman 46). Within the context of *An/Other*, this was particularly important. The default protagonist, not just in games, but also in most forms of media, is often imagined in the public consciousness to fit the description of a relatable white male hero (Kelman 46). Media products are full of protagonists, heroes, and characters that fit that mold and thus reinforce that assumption. Even without a given identity, most players may imagine a character in a first person perspective to be white male by default due to the multitude of media examples. Designing the narrative around this concept can help players imagine events within the game from their perspective and prevent predefined ideals regarding race from interfering with immersion process. By casting the player as a person of colour without adequately revealing as such until the end, we can then play with the concept and common assumptions surrounding identity during gameplay. This narrative was designed to uncomfortably invoke reflective thought as well as empathy, specifically cognitive empathy, which describes empathy resulting from intentionally taking on the

persona or perspective of others (Belman and Flanagan 10) and emotional parallel empathy, which is inspired through comprehending experiences vicariously through others (Belman and Flanagan 6). By attempting to inspire the audiences to develop empathetic beliefs upon reflection, an experience can be created that motivate audiences to think about the subject matter long after they walk away from the experience.

Many of these narrative design subjects also tie into the design science and audience analysis streams of the research method as they concern the effectiveness of the narrative as a whole. Narrative design is based of a vast array of topical research that is crucial to the development of *An/Other*. As such it is important, particularly in the area of games for social change, to research various subjects to inform the design of narrative, content, and overall presentation of the project. By designing interactive narratives to prompt thought and reflection, game designers can create powerfully introspective experiences through their content.

## **Design Science**

With topical research dominating much of the pre-production research to guide the conceptual development of the project, the realm of design science steps in to nurture the topical research by applying it to the production aspect of the project. Design science is often defined as the methods and experimentation related to research conducted to solve research questions and how the solutions are iteratively designed, displayed, evaluated and communicated (Ostrowski, Helfert and Hossain 346). Indeed, this methodology fits very well into an interdisciplinary research method as it can research and address questions during the development and design of interactive media and compliments the experimental

nature of video games. This become especially relevant when one considers the iterative principles behind design science, which are common in the video game development process. Research regarding how games are designed, the technologies used, the affordances around them, and what is used to portray content dominate the research in this phase and are put into practice concurrently during production. In this section, the research and reasoning behind design and production aspects will be explained concerning the game's development.

### **Art Design**

There were several factors that led to decisions concerning the visual style present in *An/Other*. Early in the research of the project, considerations into how 3D visuals would be arranged and presented, especially in regards to character design, were considered in relation to time, efficiency, skill, and perception when paired with the content. Sketches experimenting with various characters in different visual styles were developed. However, while researching concepts of visual aesthetic, I found an unlikely ally in the form of pcomics.

Comics and graphic novels have been fighting for the same recognition as a respectable art form for decades. Not only are comic's struggles relatable to video games, but its principles can also help inform the unique potential within this emerging art form. Famous cartoonist Scott McCloud once stated, "...When you look at a photo or realistic drawing of a face, you see it as the face of another. But when you enter the world of the cartoon, you see yourself" (McCloud, *Understanding Comics: The Invisible Art* 36). While describing this, he used pictures of a detailed portrait drawing compared to a simple cartoon face, claiming that, "the cartoon is a vacuum into which our identity and awareness

are pulled... We don't just observe the cartoon, we become it" (McCloud, Understanding Comics: The Invisible Art 36). This further draws similarities to a fundamental concept of games, becoming the protagonist of a story or mythology and putting oneself into another world. Furthermore, he identified a spectrum of artistic styles arranged in a triangle of "pictorial vocabulary" (McCloud, Understanding Comics: The Invisible Art 51) arranged in a conceptual trifecta of reality, language/meaning, and the picture plane (McCloud, Understanding Comics: The Invisible Art 52, 53). Using this as an inspiration, a minimalist art style was decided upon to allow for designs in which users may possibly see themselves within some of these characters as well as the player character. As such, *An/Other's* art style aligns towards the simplified meaning end of the pictorial vocabulary spectrum, while being grounded enough in reality to contain human visual characteristics, such as body shape, eyes, and nose on the picture plane. Additionally, McCloud describes that iconic and symbolic imagery demands our participation and understanding to make them work as an equal partner in communication (McCloud, Understanding Comics: The Invisible Art 59). Video games similarly allow our full physical participation via our inputs in addition to common media participation in deciphering imagery and narratives while decoding and encoding messages.

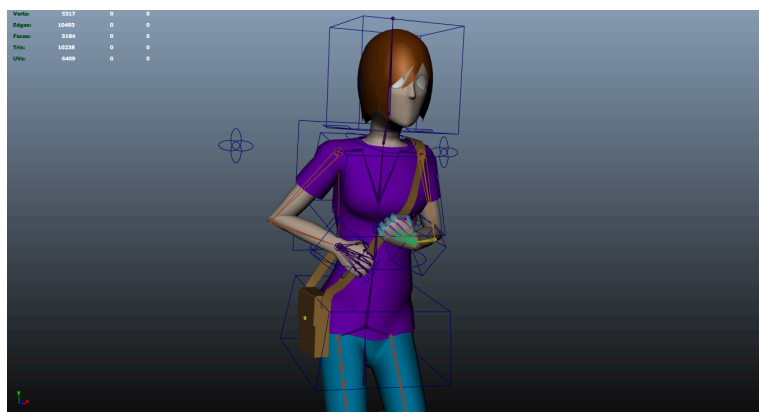


Figure A1: An example of expressive body language being animated in Autodesk Maya for use in *An/Other*.

As a result of this being a mostly one-man project and with consideration to the pictorial vocabulary spectrum, characters in *An/Other* were designed with simple bodies and human qualities. Heads of characters only reveal skin colour, nose, hair, and wide, white eyes. To simplify the design process and better manage development time, facial expressions were omitted from character designs. Replacing them, however, is body language, which can be just as effective in conveying emotion and messages as language and facial expression, if not more so, through responsive and dynamic movement (McCloud, *Making Comics: Storytelling Secrets of Comics, Manga and Graphic Novels* 102). As such, many characters animate in specific ways in response to conversations or the player's mere presence, which allows them to convey and express their thoughts, behaviours, and intent through their actions and movements, regardless of words. This allows for the 3D modeled characters to replicate human behaviour in game to further immerse players within the experience.

Environments were developed with similar minimalist aesthetics to stand out in virtual space but compliment the characters design. The only exceptions to this rule are the outdoor city levels, which feature pre-made asset models of building made by Quantum Theory. These were purchased through Unity's asset store to accelerate the creation of virtual urban environments.

Artistic design goes further than the character design, but also to the other sights and sounds of the experience. While sound design unfortunately became a casualty of time constraints with regards to music, attention was paid to the use of sound effects. In my personal artistic practice, I've come to believe that visuals shape the appearance of the world, while sounds define reality. In much the same way that music can set the mood of a

scene, sound effects created within any reality can completely change our assumptions of a subject's properties, especially in the audio-visual context of simulated virtual environments. With this approach, many resources went into the research and acquisition of sound effects for *An/Other*. Sound effects are used to various degrees to define and communicate the nature and context of environments and interactions. Most environments in *An/Other* contain sounds that define the qualities of their settings, such as the office. Sound effects during certain interactions can give cues that completely change the perception of situations. The most drastic example of this being the gunshot scene, which defined a notion of injury or death implied in combination the black screen as well as the reveal afterwards with a separate gunshot sound placed farther away. Using the fidelity of sound can define the reality of many narrative contexts.

### **Technological research**

The gaming sphere has grown significantly over the past decade. As such, there are now more tools than ever with which to make video games. Because of the interdisciplinary range of skills required, countless combinations of different technologies can be used in development. However, besides a working computer, there are 3 major technological factors that need to be considered in digital game development: the game engine, the graphical software, and programming languages.

The game engine is perhaps the most important aspect of the game as it is the software package that digital games are developed and finalized in. The possibilities and limits of what a game can achieve, at least without extreme tinkering, is set by the capabilities of a game engine. As game development tools have become more democratized over the past decade, a plethora of options await those attempting to make games, such as

Adobe Flash, Scratch, Stencyl, HTML5, and many others. However, for independent game developers, as well as those learning game development, two of the most popular free 3D game engines are currently Unity by Unity Technologies and, more recently, the Unreal Engine by Epic Games. For the development of *An/Other*, time was taken to consider both programs. Various testing methods and research were conducted on both ends to learn the capabilities of each engine and consider which would be better for the task at hand. While the graphical rendering capabilities of Unreal Engine 4 were superior, Unity 5 was eventually chosen for several reasons. Ignoring my familiarity with the Unity engine, it was proven to be much more accessible to develop video games with than the Unreal Engine. Unity has amassed much more public support and resources to rely on during development, including an asset store where certain tools and development materials could be affordably purchased to ease certain content creation issues. Such resources purchased for this project included the Dialogue System by Pixel Crushers, which is a system that allows for easy creation of interactive narratives, the Urban Construction Pack by Quantum Theory, and several libraries of sound effects, among others. These resources proved essential to *An/Other's* development as they streamlined much development process. This was especially true of the Dialogue System due to the my personal weakness for programming and the remarkable responsiveness of Pixel Crusher developer Tony Li regarding any questions or issues with the system itself.





*Figure A2: A look into the development of An/Other within the Unity 5 Game Engine*

When considering options with software, such as a game engine, support structures and communities surrounding these programs have proven crucial to consider. Interactive experiences, by their very nature as interdisciplinary creations, are fundamentally experimental and are guaranteed to face many issues during production. When problems grow outside one's realm of experience, it pays to have an avid community of likeminded practitioners or experts to lend their insight and experience to the problem and game development is no exception. Research into finding those with expertise became very useful to solving development issues. When problems arose Pixel Crushers was instrumental to the understanding and execution of their dialogue system through their expertise. Likewise, the Unity game engine has garnered a large community of enthusiasts that have proven eager to help and share knowledge. Unity Technologies enables support structures by implementing forums and a 'Unity Answers' section, which allows online users to ask and answer any question, with the reasonable expectation of receiving a response. There are also examples of local support communities that aid with such issues.

Local organizations concerned with the development of video games, such as the Ryerson Game Maker's Union who have also widely adopted the use of Unity, allow for collaboration and support in overcoming development obstacles in-person. The support of experts and community structures not only aids in the development of games, but also facilitates educational learning experiences for game developers and the collaborative development of knowledge spaces. Community support structures are thus integral to decisions regarding the use of tools and programs in interactive media development. It is for these many reasons that Unity was chosen over the Unreal Engine as the primary game engine of choice for *An/Other*.

When considering graphical software, one must consider two important details: The dimension of the desired graphical choices and their personal affinity with the software required for said graphics. These questions, while also relevant to other factors, are most applicable when considering the tools with which to create visual designs and aesthetics as such creative skills are harder to learn quickly. When exploring the dimension of graphical software, one must often consider if their game is meant to be two-dimensional or three-dimensional. As for the developer's affinity with such software, that depends on skill and preference, but it also ties into the desired graphical choice since it can limit what can be achieved. If one wants to make a 3D game without experience in three-dimensional development, they will be limited by lack of experience and skill in that regard, unless they work with other individuals skilled in that field. *An/Other* was envisioned as a 3D first-person narrative. As such, it was decided that the game would be graphically displayed in three-dimensions. Because of my affinity for graphical programs as an artist, Autodesk Maya was chosen as the primary graphical package to craft 3D characters and objects. In

addition, because 2D graphical skills are necessary to create detailed 3D objects, Adobe Photoshop was chosen as the 2D texture program of choice, which I am also familiar with. By researching and choosing more familiar programs to maximize efficiency, designers can make the creation process more comfortable, while allowing for the further development and growth of new skills and techniques.

Programming Languages are also an important consideration in the development of games as computer code enables the robust interactivity that surrounds the nature of games. The Unity engine commonly accepts three different programming languages: JavaScript, C#, and Boo. I am not proficient in programming, however due to my familiarity with its structure, C# became the programming language of choice. To overcome programming challenges, online communities and the local Ryerson Game Maker's Union student group were once again used to guide the development of certain programming aspects and solve ongoing problems. As discussed earlier, considering these communities as resources is key to developing interdisciplinary work, especially to compensate for potential weaknesses or gaps in knowledge.

With these three major considerations of technological research, *An/Other* was developed upon a foundation of knowledge and software that helped guide the direction of development. By making these decisions and gathering knowledge regarding the technology used for development, it allows for the genesis of production to smoothly begin. Researching communities, methods, and programs beforehand helps prepare for potential problems as well as provide avenues to solve future issues. This form of research also allows for decisions to be made regarding the affordances of development, technological concerns, and how separate aspects of the project will come together. These considerations

have proven incredibly important to the development of *An/Other* and are likely applicable any development environment.

## **Experience Design**

As discussed earlier in the paper, the video games are a medium with which to channel an experience. As such, game designers must not only design the world within the game, but account for its encoded expressions and decoded impressions on audiences in the physical realm. Crafting the design of any experience can be defined to the field of user experience design, often abbreviated as UX design. The field of UX design, “aims at gaining a more comprehensive understanding of users interactive experiences with products or systems around new concepts like pleasure, fun, aesthetics and hedonic qualities” (Adikari, McDonald and Campbell 25). This brings it very much in line with psychology and anthropology in understanding the thoughts and feelings of the human condition to the stimuli of an experience, interactive or otherwise. There must be a responsive cause and effect to events within interactive experiences to maintain a synchronous flow of the communication with the player. UX Design has become very crucial to the foundation of research for interactive experiences due to the effects of agency afforded to players. Interactive experiences, such as games, provide the opportunity to not only give the player a stake in a proposed experience, but also allow them to traverse and participate in variety of brave new worlds. When discussing film and literature, Marshall McLuhan once stated that in those media fields, it is the jobs of the content creators to, “transfer the reader or viewer from one world, his own, to another, the world created by typography and film. That is so obvious, and happens so completely, that those undergoing the experience accept it subliminally and without critical awareness” (McLuhan 285). Similarly, it is the job of the

game designers to design virtual worlds and narratives for the player to immerse themselves in through their avatars, interfaces, affordances, and senses to become the beating heart of a virtual existence. Experience design further crosses over into the next stage of this project's interdisciplinary research template through audience analysis, which allows for direct feedback to better guide the design and function of an experience and its mechanics. By studying the nature of experience and how it combines with the human condition.

## **Mechanics**

When designing an interactive experience, such as video games, mechanics are key. Game mechanics often define rules, processes, and abilities afforded to the player. More specifically, game mechanics can be defined as, "...The core of what a game truly is. They are the interactions and relationships that remain when all of the aesthetics, technology, and story are stripped away" (Schell 130). It is through the raw, primal function of game mechanics that one can determine how interact with the virtual world. These video game mechanics can, for example, be as simple as the ability to jump in the classic *Super Mario Bros.* game or more advanced such as combo systems present in the *Street Fighter* series and any given fighting game. Additionally, mechanics can determine the player's relationship to the narrative. The mechanic of completing a task to unlock a scripted cut scene event that advances the story is quite different than progressing the story through mentally challenging dialogue choice mechanics in games such as *Mass Effect*. Game mechanics define the player's functional relationship to the world.



Figure A3: A sample of interactive narrative conversations from the popular Mass Effect series by Bioware

When researching mechanics for the development of *An/Other*, the focus was not on discovering how to make the most complex and innovative mechanic. Instead it was researching how games use their interactivity to innovatively present and portray different types of narrative through mechanics and narrative techniques. Many different games were examined for the ways they portrayed narrative and storytelling within their content from a variety of different sources and genres. While a full list of video games used as influences would be long and daunting to explain, games played for research included indie or small studio games (e.g. *The Path*, *Gone Home*, *Sunset*, *Journey*, *Papers Please*, *Device6*, *The Room*, and others), games from large famous studios (e.g. *Mass Effect*, *Spec Ops: The Line*, *Persona 3*, *Rez*, *The Walking Dead*, and more), and other online games about race or other social issues (e.g. *ICED – I Can End Deportation*, *Rust*, & *maybethewontkillyou*, *dys4ia*, *Unmanned*, *Elude*, and other games from GamesForChange.com). All of these games were played and examined for how they convey narrative and meaning through an interactive lens. Even the most advanced game played for the purposes of research often used relatively simple mechanics with narrative techniques to deliver engaging and elaborate stories. Games such as *Journey*, *Device6*, and *Sunset* used relatively simple movements and interaction

mechanics that define the player's relationship with their virtual surroundings to deliver an evolving and compelling interactive narrative experience. Games such as *The Walking Dead*, *Maybe They Won't Kill You*, and *Mass Effect* feature interactive conversation mechanics to define the player's relationship and position within a compelling space opera where players can make critical decisions. Video games such as *Spec Ops: The Line* can take the stereotypical cultural glory and bravado of military narratives and subvert it to reveal the consequences and horrors of war through its mechanics and narrative. It is clear through such titles that games are a constantly evolving new medium that experiments in different ways to deliver narratives, messages, and experiences in the most pragmatic and abstract of senses.

For the development *An/Other*, research regarding interactive theories on mechanics and the previously described games were taken into consideration. The game mechanics were designed to be simple and accessible to ensure a relatively optimal user experience for anyone to use, regardless of game proficiency. An online browser was chosen as *An/Other's* main platform to ensure that the experience could be easily accessible and shared by audiences online. Because of this the methods of control via a hardware keyboard interface designed in mind for how the player would ergonomically control the game through a hardware interface as well as taking into account the common control conventions popular in first-person games. Furthermore, because a web page would be the major platform for *An/Other's* presentation, I also treated it as part of the game's interface. The web page hosting the game was designed to house small messages and symbolic cues to inform the player on how they can interface with the game through their keyboard. From left-to-right, up-to-down, the order they appear corresponds with the order that they are

encountered from the moment game loads to accessibly establish methods of controlling the game's mechanics and provide a constant reminder. This use of the platform environment to establish input methods for the player establishes the context of the user's relationship to the game's mechanics, which thereby establishes their relationship to the interactive nature of the experience itself.

The most present mechanic is a first person control that allows for simple viewing and navigation, allowing the player to easily look and move through the world. In terms of narrative, this is perhaps the most important mechanic in the game as it defines first person perspective. The nature of the first person camera controller disguises the player's identity of as a person of colour to the player themselves, allowing the major narrative content and themes to be delivered without context in the desired fashion and enabling players to map their personas onto their avatar.

The second major interaction mechanic was the usage of Dialogue Systems. The Dialogue System by Pixel Crushers allows for the creation of interactive conversations between players and non-player characters (NPCs), implementations of goals, tasks, and challenges for players to achieve, and the ability to direct and plan cut scenes through its relatively simple scripting interface during development. The Dialogue System mechanics have proven important in framing and directing the narrative and plot of the game as well as affording the player the option of dialogue choices to interact with other characters. The mechanics afforded by the Dialogue System allow for players to advance through in-game conversations and interactively choose their responses from a choice of options. Combined, all of these major mechanics are simple, accessible, and allow for the delivery of interesting



a compelling story through their interactive lens. This is one of the most robust methods through which *An/Other* conveys narrative.

With the nature of game mechanics, technological research, experience design and design science theory, games can be developed to provide compelling experiences based off the nature of its content. Furthermore the study and practice of these skills, resources, and research fields should be important considerations for the study and practice of game design educationally and innovatively going forward. By understanding this, it is possible to further advance the medium to design more compelling experiences.

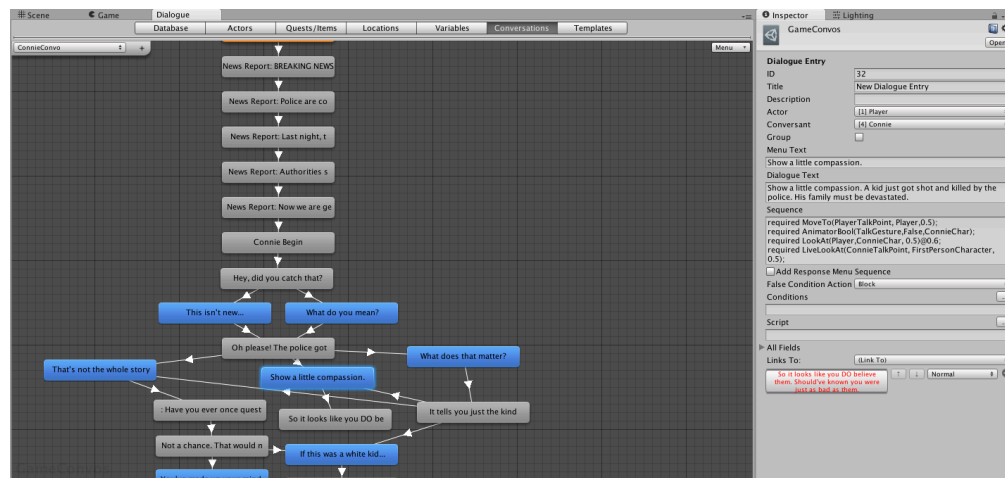
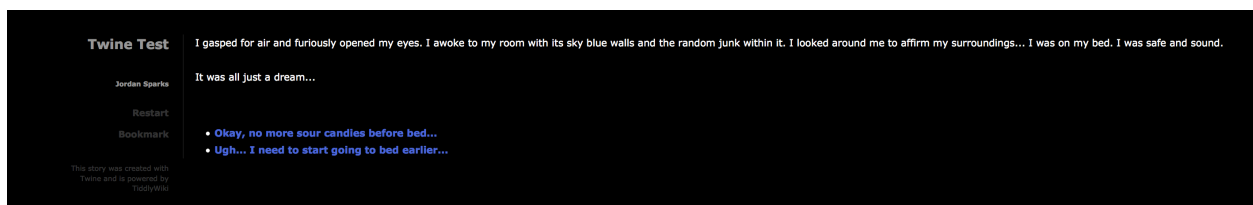


Figure A4: A glimpse into how Pixel Crusher's Dialogue System allows for the creation of interactive narratives

## Audience Analysis

The last stream of this interdisciplinary research method, Audience Analysis, can be the simplest yet most challenging task. Audience Analysis ties into all stages of experience design and interdisciplinary research. While designing a media experience one has to take into account many factors when predicting how an audience will handle and perceive a media experience. However, as that has already been discussed, this part of the research methodology mainly focuses on user tests conducted to ensure *An/Other*'s quality. As games are evolving and experimental forms of new media, there tends to be problems that

occur during development. Narrative design choices could be ineffective in practice. Technical issues may disrupt or impede user experiences. Unpredictable quantities of problems have the potential of occurring. Despite any amount of research, there are no successfully effective universal guidelines to ensure the best experiences when put into practice. This makes user testing essential as it helps to identify problems and unpredictable behaviours. It's important that playtesting is conducted from the perspective of a new user in the freedom of an interactive environment. User testers close to the project's development whom assumes what is 'supposed' to happen and may only conduct predictable behaviours. The phase of Audience Analysis primarily focuses on determining what works and what doesn't with an audience of interacting players. To naturally fit this feedback into the project pipeline, it's wise to develop various incomplete prototypes during development to put the game into practice and test audience reactions. This process often cycles into the other phases of this research method as it informs and collects data on the average user experience and what can be fixed or improved. By gathering data on how a work of art and media is experienced and perceived, one can make conscious and informed decisions on how to change, optimize, and improve a project.



*Figure A5: The Twine Prototype used to test the narrative design.*

To perform audience analysis during the development of *An/Other*, multiple prototypes were developed in various forms and adjusted after the careful examination of feedback data. Because of the time-consuming nature of game development and the project's reliance on narrative techniques and processes, a text adventure game was

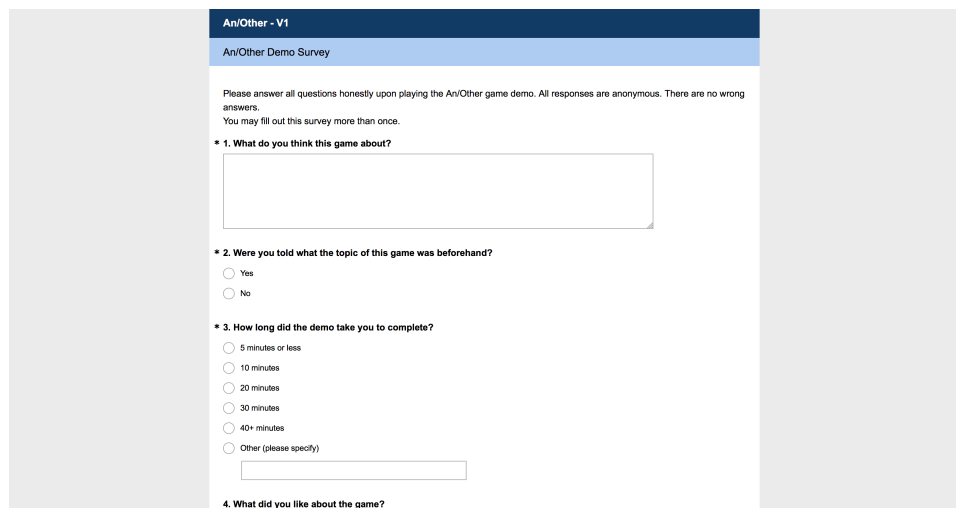
written in the text game development program Twine to test the impact of a simple narrative mechanics in *An/Other*. This Twine prototype was meant to act as both a very rough first draft of the game's narrative as well as a playable project that tested the narrative as an interactive experience purely through text and minimal interactivity. It was sent out to willing participants who would test the game and report feedback on their experience. For the most part, most user testers reported that the themes were impactful and "intense", however most criticisms targeted the poor quality of writing. As the actual game was still being developed in the Unity engine at the time, it served to outline which parts of the narrative had the most affect on the experience proper. This first instance of audience analysis informed me which scenarios in the narrative were more powerful, which events could be cut, aspects of the dialogue that needed to change, and the how game mechanics could support narrative elements in Unity. Seeing the dialogue as a major issue that I could not confidently address myself, I sought the help of my classmate, Becky Fong, to improve the script. Through Becky's assistance, we were able to improve the writing quality for the development of future prototypes and the final product.

The second prototype was the first full 3D playable prototype created with Unity in late July. This prototype was incomplete and was missing many character models but was designed to deliver the core spirit of the intended experience through several scenes and scenarios that were designed and included based on feedback from the Twine prototype. The purpose of this Unity prototype was to give users a more tangible preview of the end product while testing how it fared with audiences who both had and had not tested the text version. To get a wider range of feedback on this prototype, the end of the game would allow players to access a custom survey developed on SurveyMonkey.com where players

would answer post-play surveys regarding the themes, gameplay, and problems of the experience as well as their own opinions on the work and the use of games as an artistic medium. Responses were collected from twenty participants who completed the *An/Other* demo. Approximately 90% of respondents correctly caught on to the racial context of the game, playing as a person of colour, despite the game's lack of blatant context on the matter. This is further intriguing considering only 30% of these users indicated knew about the subject of the game beforehand, which suggests good margin of success in communicating through narrative techniques despite the lack of given direct context throughout the content. The success of communicating the intended message of the game is also noteworthy with this prototype as it did not feature the end reveal of the player avatar's identity abruptly ended at the end of the store scene. Other metrics and qualitative data including user's completion times, remarkable moments, reports on glitches, and other personal thoughts and feelings have helped the development of the game and imparted knowledge from the average player to aid in the understanding of the interactive audience.

At points where user test subjects were available to play the game in person, special attention was taken into examining the ways that players reacted using vocal and facial expressions and body language and comparing these reactions with the desired outcomes of the game's design. While this feedback is potentially unintentional on the part of the users and could not be recorded by previously established means, I still judge it as an invaluable form of feedback. *An/Other* was made for the intended purpose of provoking strong feelings and reflective thought from the player regarding race and racism in society. By monitoring how players react physically to the stimulus of a narrative, either verbally or

at a visible, subconscious behavioural level through body and facial language, one can observe the active effects that an experience has on a user. These visceral reactions to media are important indicators to how an audience consumes the experience and decodes its messages. This invaluable feedback often cycles back into the design science research, and sometimes even into the topical research to reinvigorate the creative process and improve the project.

The image shows a screenshot of a web-based survey titled "An/Other - V1" and "An/Other Demo Survey". The survey instructions state: "Please answer all questions honestly upon playing the An/Other game demo. All responses are anonymous. There are no wrong answers. You may fill out this survey more than once." The survey consists of four questions: 1. "What do you think this game about?" with a large text input field. 2. "Were you told what the topic of this game was beforehand?" with radio buttons for "Yes" and "No". 3. "How long did the demo take you to complete?" with radio buttons for "5 minutes or less", "10 minutes", "20 minutes", "30 minutes", "40+ minutes", and "Other (please specify)" followed by a text input field. 4. "What did you like about the game?" which is partially visible at the bottom.

*Figure A6: The 10-question survey used for the second prototype.*

A short third round of audience analysis was conducted with a prototype at near-completion. While few subjects chose to complete the anonymous survey, several of them tested the *An/Other* in person and special attention was paid to their physical reactions in addition to optional survey responses. While they were mostly able to complete the experience, subjects did expose several flaws and technical issues that were noted and addressed. This final round of user playtesting allowed for further polishing of the end product.

In all instances of audience analysis, most test subjects did attempt to reflect and actively discuss or ask questions about race after completion. User testers often

thoughtfully asked for clarification on why certain events would happen, details they did not understand, or general questions regarding racial subjects. Most subjects did not think that addressing such subject matter was possible in the context of a video game and were surprised when they realized the issues being addressed. After playing, many asked if my own personal experiences were similar to those presented in *An/Other*. While some of the project is based on personal experience, the scenarios are mostly grounded in research regarding the collective experiences of people of colour and institutional racism. Most interesting of all, however, is that most of these subjects often did not actively consider or partake in the discussion of race and privilege in their daily lives before playing through *An/Other*. These post-play behaviours and reactions were highly consistent throughout all instances of audience analysis. Given that the goal of *An/Other* is to promote empathy, critical thought, and discussion about race and prejudice within audiences and humanize the plights of the other, this successfully demonstrates the potential effectiveness of games promoting social change and the success of *An/Other's* design.

It is through audience analysis that researchers and designers can understand how the core of experience is understood from a more human perspective. Because audience analysis is so specific to the experience at hand, it becomes extremely important indicator of feedback that suggests the strengths and weaknesses of a project. By using audience analysis in an interdisciplinary research method to gauge feedback and compile data in any form of media, content creators can create informed decisions on the direction to take their projects and maximize their potential for the sake of audiences.

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