Retro Resonance

The hauntological power of post-retro aesthetics in video games

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Abstract

Modern mainstream video games, or AAA games, are perpetually pushing toward hyperrealist graphics and complex gameplay, requiring higher budgets and ever-growing development teams while controlling risk as much as possible. The result is a homogenized product that appeals to the sensibilities of a limited demographic of young, white or Japanese, straight, non-disabled, and neurotypical men and end up excluding or alienating others. This state of the industry has historically been seen as not only unproblematic, but as normal. This is partly due to our current state of "capitalist realism" (Fisher, 2009), where society not only sees oppressive capitalist practices as natural but cannot even imagine an alternative. Santiago Zabala (2017) claims that to break out of naturalizing ideologies like capitalist realism we need an aesthetic force: something to shock us out of our distribution of the sensible (Rancière, 2011), our stable and secure sense of how the world is and interrupt the flow of this stagnant progressivism. I argue that one aesthetic force in video games are pixel graphics and simplified gameplay, or post-retro gaming (Fulton & Fulton, 2010) from recent games, that use hauntology to glean elements of the past to create new experiences and stories. Hauntology is a progressive artistic practice that imagines a better future by salvaging parts of the past (Fisher, 2012, 2014), more nuanced than regressive nostalgia, though it can be entangled with it. To explore the connection between hauntology and post-retro games, this project outlines the problems with AAA games industry, examines the misconceptions of indie games today, and lays out in detail the relation of hauntology to theories on affect, aesthetics, and video games. This is followed with a critical analysis of games such as *Dys4ia* (2012), *Undertale* (2015), and *Celeste* (2018) for how exactly they use hauntology to create powerful, affective experiences that subvert narratives and gameplay of the problematic video game mainstream and point to a better future in games. I conclude by problematizing commercial indie games and pointing ultimately to anti-capitalist, DIY gamemaking platforms, in particular the accessible, 1bit engine Bitsy, as the future of hauntology in games culture.

Dedication

I would like to dedicate this dissertation to my partner S. We met in the first year of my Ph.D. and she has been a powerful force of love and encouragement throughout these several years. She's been here with me for the highest highs and the lowest lows, and through the unimaginable stress of the worst of the COVID-19 pandemic. I am eternally grateful for her companionship.

I would also like to dedicate this project to my parents and siblings who have always been there to support and encourage me through my life paths, especially this great undertaking.

Finally, my friends G, L, and M have been a tireless audience for my academic info dumps and irritated venting throughout this engaging and challenging journey.

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Introduction – The Emergency in Video Games

Return of the Obra Dinn (3909 LLC.), developed by Lucas Pope, offers a strange gaming experience for something released in 2018. Its visual design makes it seem like a retro game, but in obvious ways it clearly is not. Instead of an action-packed or epic opening, the game begins with documents: the first is a broadsheet, dated 1803, announcing that the good ship *Obra Dinn* (an East India Company merchant ship) has been lost at sea, followed by a memo on East India Company letterhead to the Chief Inspector of Insurance and Claims in their London office informing them that the *Obra Dinn* has returned and ordering them to undertake a full assessment. The game cuts to black, and, after an intertitle reading "Falmouth, England / 1807," we hear—and see written on screen—dialogue between a ferryman and the player character (the Chief Inspector) as they approach the *Obra Dinn* in a rowboat. The game then cuts to a 3D scene, viewed from a first-person perspective, of the Inspector sitting in the rowboat facing the ferryman, and the boat drawn up along the side of the *Obra Dinn*. The visuals throughout are rendered in dull grey-green, monochromatic, crudely dithered detail, with stark lines against black outlining the scene. Yes, dear player, you are about to embark on an insurance claims assessment in a nineteenth century setting rendered as if you were playing on a 1980s computer (Figure 1).

After climbing up on the ship's top deck and looking around, the player is called back to the rowboat to retrieve two tools from a box. The first is a book for cataloguing how the crew and passengers of the *Obra Dinn* died. It has maps of the ship, a group picture of the crew and passengers, a manifest with all their names and roles, and is divided into chapters that mark points on the ship's journey. Your second tool is a pocket watch with a skull in the centre of the dial. The pocket watch is identified as "Memento Mortem," Latin for "Remember Death." With these tools, the player (as the Inspector) embarks on their task: to identify the cause and agent of death for each person listed in the

manifest. This mission, it turns out, is not in the name of truth and justice, but solely to determine the financial liabilities of the East India Company: how much money does the Company owe to the estates of the people who were on the ship when it disappeared? This is why the conclusion of the game features in detail the Inspector's assessment of individual liabilities. After determining the outstanding fates of a few remaining crew members, all the Inspector does with the book that tells the story (rather than counts up the costs) of what happened on the *Obra Dinn* is put on their bookshelf with their other books. The astonishing investigation the player undertook ends up being an insurance claims report and a book that is put away and not shared with the world.

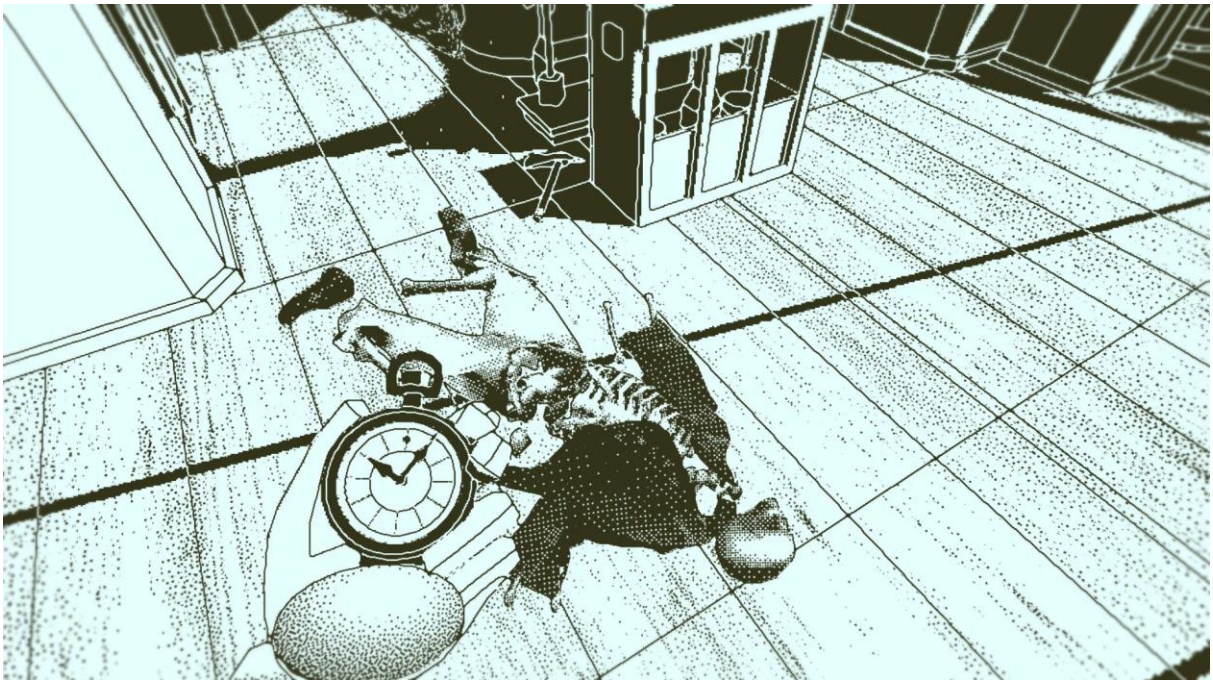

Figure 1: Still of the first body the player can find in Return of Obra Dinn (source: pcworld.com)

Ultimately, through the dramatic depictions of death the player witnesses and the game's intense symphonic score, the conclusion of *Return of the Obra Dinn* amounts to a subtle critique of capitalism. The lives of the crew and passengers mean little to the East India Company, they are merely entries on a balance sheet. This critique of a capitalist view of people and of the world is foregrounded through the game's stripped-down mechanics, in which the player moves in a visually pared-down

space, uses a single action button, and enters data into a book. The game portrays thrilling scenes with monsters and murder, but the Inspector remains a passive observer whose exploration becomes routine and repetitive, even bordering on boring, in the fixed process of hearing/reading dialogue, searching for clues in the still tableau, and waiting an allotted amount of time (while a musical theme plays out) to enter in new data. It can feel formulaic, tedious, and a little frustrating.

The use of the magical pocket watch furthers the capitalist critique. Game journalist Justin Reeve links *Obra Dinn* to Adam Smith's 1776 treatise *Wealth of Nations* primarily through the use of the watch. As he relates:

> Hiding behind the phrase "time is money," the pocket watch has been a symbol of productivity for centuries. Pointing out that productivity can only be increased through efficiency, Smith argued that instruments of measurement were needed in the workplace. The pocket watch in particular became the technology which enabled the quantification of productivity in the form of statistics like "parcels delivered per hour" and "parts manufactured per minute." The result was a kind of race against time where workers had to constantly "beat the clock." People paid the price. (Para. 5)

In *Obra Dinn* we see people ruled by the watch in a different way. Most of them workers, these dead of the *Obra Dinn* were victims of the clock in life and now must rely on it to communicate with another worker ruled by it.

Like the pocket watch, the low-fi graphics aid the player in their work, while also commenting on the soullessness of the work itself. As Katherine Cross (2018) writes in *Gamasutra*, the simplified graphics "draw into sharp relief those all-important clues that might otherwise be lost in a morass of bloom and particle effects" (para. 5). It allows the player to focus on the stark details needed to identify the bodies, yet it also works to obscure their humanity. While the scenery is depicted in lines, the

characters are detailed with dithering. As Reeve states, this process is "[d]isplayed in the form of dots, [where] sharp edges look like unbroken lines, but curved surfaces come out somewhat fuzzy and pixelated" (para. 6). Dithering turns people in the game into "shadowy shapes," and thus "the same sense of coolness and impersonality which prevails in the bureaucratic world of bean counting" (ibid.) is conveyed in the visual register.

The dull green tint of *Obra Dinn* may also be a comment on work. The game's monochromatic, moss-coloured palette is made to resemble the screen of early microcomputers (now referred to as personal computers or PCs), in this case, the Apple IIe, and you can change the colour scheme to resemble other computer displays of the early 1980s, such as the Zenith ZVM 1240 and the Commodore 1084. Its use of this retro aesthetic is no doubt to tie it to popular adventure games of the 1980s, like *Ultima* (Richard Garriott/Origin Systems, 1981), *Castle Wolfenstein* (Muse Software, 1981), and *Wizardry: Proving Grounds of the Mad Overlord* (Sir-Tech, 1981). Yet its use of Apple IIe and other microcomputer visuals also ties it to the mass adoptions of PCs in the workplace and home. The Apple IIe was released in 1983, and, as Laine Nooney, author of *The Apple 2 Age* (2003), states: "[b]y the end of 1983, the Apple II and IIe family had the largest library of programs of any microcomputer on the market" (p. 14). With the widespread adoption of computers in the workplace also came the expansion of work productivity measurement, further reducing the workforce to shadowy figures behind the important figures: numbers and metrics. It seems likely that Pope chose the Apple IIe visual aesthetic due to that computer's pervasiveness: as Nooney argues, "the Apple II was widely considered one of the few microcomputers that straddled the home and workplace computing markets: robust enough for the office, exciting enough for games in the home, expandable enough to be a tinker toy in the garage" (p. 13). This is all to say that the aesthetic choices of *Obra Dinn* as not accidental, but an intentional amalgam of gameplay and visual design intended to critique capitalism and work, both historically and today.

Lucas Pope and his development studio, 3909 LLC., have managed to carve out a successful niche in the computer game market, in the space between AAA game companies and hobbyist game makers. After working for developer Ratloop, Pope began creating commercial games under his own company. His first was *Papers, Please* (2014), where you play a border control officer of a fictional Eastern Bloc country during the Cold War. Similar to *Obra Dinn*, the game simulates bureaucratic work--here, the procedures of determining whether people are allowed or denied entry to your country—using rudimentary and drab aesthetics to reinforce the stresses and emotional toll that comes with the work. *Papers, Please* was released along with a series of small titles for Ludum Dare, a renowned game jam competition. These included *The Republia Times* (2012), *6 Degrees of Sabotage* (2012), *The Sea Has No Claim* (2014), and *Unsolicited* (2015). All these titles, like *Papers* and *Obra Dinn*, use 'outdated' or simplistic graphics to create games that comment on societal issues. Most recently, Pope has released *Mars after Midnight* (2024), where you play a club bouncer on Mars and decide who to let in. Despite being set in the future and on Mars, it follows his established aesthetic and uses the 1-bit visuals of the niche *Playdate* neo-retro handheld gaming system (Figure 2).

Figure 2: Mars after Midnight being played on a Playdate (source: retroware.com)

Playing *The Return of Obra Dinn*, or any of Pope's games, is a unique experience. They look old, they reproduce the monotony of work, and they comment on major societal issues. *Obra Dinn* was released at the same time as monstrously budgeted games like *God of War* (Santa Monica Studio), *Spiderman* (Insomniac Games), and *Red Dead Redemption 2* (Rockstar Games), and yet it landed on 'top games of the year' lists for large games journalism outlets like *Polygon* (Polygon Staff, 2018) and *Eurogamer* (Eurogamer Staff, 2018). It won Best PC Game of 2018 from IGN (I. G. N. Staff, 2018). It also won two BAFTAs, a Game Developers Choice Award, and the Grand Prize at the Independent Games Festival. *Obra Dinn* was not the only independent game with retro graphics that offered a critique of society; it was joined by many others, including *Celeste* (Maddy Makes Games) and *Dead Cells* (Motion Twin), titles that will be discussed later in this dissertation. What makes *Obra Dinn* stand out is that unlike the big-budget AAA game companies, with their large development teams and market share, the game was largely the work of a single designer and his small company. Unlike the AAA studios, which are fixated on maximizing profits (often at the expense of a game's quality and the well-being of their workers), Pope has stated that he was not worried about how well *Return of the Obra Dinn* would perform financially, as he was still earning appreciable revenue from *Papers, Please*. He considered *Obra Dinn* a passion project and did not worry about deadlines or marketing (Wood, 2017). Yet the game was a commercial and critical success. Not only does Pope's work disrupt a trend of graphical and technical complexity in game design, but it does so in a way that points a finger at the labor and disregard for life that underpin the capitalist systems that sustain the AAA game industry. By presenting an alternative to the mainstream gaming industry, *Return of the Obra DInn* exposes a problem and presents an alternative. This problem is that every growth of budgets, labor, and profits in AAA gaming is driven by the mindless compulsion for ever more realistic graphics and ever more complicated gameplay without a corresponding improvement in the quality of the game as an art form and means of social commentary and change. Lucas Pope and his games show that massive development budgets, huge

development teams, and 'cutting-edge' technology and visual/gameplay design are not required to make a game that is original, meaningful, and successful. They show that gaming culture can have a future beyond the status quo.

'This is Fine'

In *Why Only Art Can Save Us: Aesthetics and the Absence of Emergency* (2017), Santiago Zabala argues that the biggest crisis facing modern society is an overwhelming consensus in the global west that 'everything is fine.' This consensus is dependent on the dominance of a perception of the world as generally stable and secure that sidelines dissenting voices who speak out against our current neoliberal status quo as malcontents and agitators. What Zabala calls the "absence of emergency" is an intentional ignorance of and inaction toward global issues such as the uneven distribution of wealth, the proliferation of war, and the inequities and injustices of capitalism, which are largely ignored by the western world. According to Zabala, the world picture in the west is "framed within our globalized system" (p. 3). This frame contains the hegemonic, colonial, and capitalist world picture that governs us. "World picture" is used intentionally here to align with Heidegger's notion of a kind of pervading view on the world that is both immediately perceptible and governed by certain a priori understandings of how the world 'really is.' Zabala's western world picture consensus is aligned with what Mark Fisher (2009) calls Capitalist Realism, where capitalism is so ingrained in our society and minds that we cannot imagine a life outside of it. Mainstream discourse supports and reproduces this realism, normalizing a world picture that lacks a sense of emergency. Insulated within this emergency that is the absence of emergency, there is not only no reaching outside of established paradigms but no acknowledgment that alternative non-capitalist paradigms exist. Despite constant coverage of global events and emergencies, Zabala contends that "the dominant impression of citizens in industrialized countries […] is that nothing new happens: reality is fixed, stable, and secured" (p. 4-5). In a way, they are not wrong, as under

Capitalist Realism this impression is reinforced by the lack of anything new produced in art and culture. What Mark Fisher (2012) calls "the failure of the future" sees mainstream media corporations over-relying on the past in the form of legacy intellectual properties, sequels, remakes, and adaptations to sell "new" products over innovation or risk. While Zabala focuses on macro socio-political issues such as war, pollution, and genocide, as Fisher points out, our current emergency penetrates many aspects of the industrialized world. In particular, one can see many aspects of the hegemonic and capitalist ideology that perpetuates the 'everything is fine' emergency mirrored in popular media, where it takes the form of 'more of the same.'

We see this grand homogenizing and stultifying force in movies and television. Disney is a prime example of a media empire buying up studios and intellectual properties (IPs) for a market monopoly. In addition to its ownership of its own popular animated products, the company is currently in control of two of the biggest media franchises in history: *Marvel* and *Star Wars* (Smith, 2024; Westberg, 2023). With these highly lucrative brands, Disney is saturating the market with new media based on old IP. Banking on nostalgia and recognition of *Star Wars*, *Marvel*, and Disney classics, they are flooding theatres and their own streaming service, Disney+, with an endless stream of movies and TV shows based their owned brands, sparking debate about oversaturation and consumer fatigue (Mangan, 2021; Mellon, 2023; Radulovic, 2023). How they contribute to the emergency, along with other contemporary media empires like Universal, Sony, Paramount, and Warner Brothers, is in their constant repetitive output of *Star Wars* shows, *Marvel* adaptations and sequels, and live-action remakes of classic Disney animated films, leaving less space in the market for, less well known, and more innovative, media properties and creators.

As a major and increasingly central sector of the globalized culture industry, video games stand as an even more powerful contributor to the emergency. Video games have grown into an over $300 billion dollar per annum earning sector with a dedicated and demanding consumer base. The popular,

AAA industry and culture of video games are dominated by corporations perpetuating exploitative labour practices, working to de-politicize problematic narratives and gameplay, and locked in endless technological progression. The emergency culminates in modern mainstream video games in their continual push for higher resolution graphics, hyper-detail, verisimilitude, and intricate gameplay (usually involving some variety of combat) that perpetuates a hegemonic artistic and capitalist ideology. This is fed by a 'bigger and better' logic designed to maximize profits, akin to car manufacturers selling massive pickup trucks and SUVs to men to confirm their manliness. In service of 'the bigger and better,' high-fidelity realist aesthetic in games, large game production corporations are exploiting workers and producing homogeneous titles that lack diversity in representation and that are marketed primarily to heterosexual, cis-gendered, and neurotypical white men that perpetuate aggressive capitalist fantasies (See Anthropy, 2012; Clark and Wang, 2020; Consalvo, 2008; Keogh, 2015; Nicoll and Keogh, 2019; Süngü, 2020).

According to Zabala, an "aesthetic force" is needed to thrust us into an awareness of today's emergency (p. 5). Zabala argues for a theory of aesthetics that moves beyond seeing works of art as mere cultural objects of representation to be contemplated and enjoyed: he calls for an emergency aesthetics where art shocks us out of our perception that 'everything is fine' and that current neoliberal capitalist society is the best society we can have. "The truth of art no longer rests in representations of reality," Zabala writes, "but rather in an existential project of transformation" (p. 5), As Martin Woessner (2017) observes, Zabala "is concerned primarily with what we might call activist art, art that unsettles 'our logical, ethical, and aesthetic assessments of reality' so as to open up new avenues of action. It is art that, through 'alterations' and 'disruptions,' demands 'interpretation, response, and intervention instead of contemplation'" (para. 7). We see an example of such alterations and disruptions to the AAA gaming status quo in the deliberately simple lines and dithered detail of *Return of the Obra Dinn* that turns its back on high-resolution graphics and finds original uses for retro visual design; this

game, and other video games with pixel graphics and simplified gameplay, are examples of *post-retro games* (Fulton & Fulton 2010). In embracing supposedly superseded graphics and control schemes, these games circumvent the emergency of aesthetic inertia hauntologically, using an aesthetic practice that salvages elements of a forward-looking past to propose a better future for games. Pixel graphics are not the only technique of visual representation in games that are countering the hyperrealism of AAA or that are hauntological. For example, the relatively new trend of low polygon, PS1 style games being made are just as hauntological as pixel graphics. However, due to the rich history of pixel graphics from the 1980s to today, the popular associations of this aesthetic with retro games and nostalgia, and the wealth of texts on the topic, I am focusing on them for this project as a representative retro style that stands in for a range of similar visual techniques. This leads to the major argument of this project: post-retro games leverage their aesthetics for activist ends: to produce shock (Vattimo 2010) and cause dissensus (Rancière 2015) for a more equitable games culture that is more broadly accessible and that addresses a broader range of existential situations and themes than is currently found in mainstream video games.

The Problems with AAA

While I understood the term's use and meaning, I never questioned what the three "A's" of "AAA" stood for. According to Demaria and Wilson, they refer to output that requires "A lot of time, A lot of resources, and A lot of money" (Young, 2018, p. 1). The output of AAA companies makes up most of the highest budget games and defines the 'games industry' in the popular imagination, as Brendan Keogh (2015) points out: "The contemporary videogame industry is popularly imagined as a homogenous site where large, international studios pour millions of publishers' dollars into technologically advanced blockbuster experiences" (p. 152). AAA is the video game counterpart to film and television giants like Netflix, Disney+, and Amazon Prime Video.

The AAA industry is controlled by a small set of large publishers and an even smaller set of large hardware and software distributors, platform holders, and console manufacturers (Clark and Wang, 2020; Vanderhoef, 2016). This industry category typically has publishers overseeing and investing in a larger number of games development studios to market and distribute their output. These studios are made up of second-party companies that produce publisher-owned games (often franchises), and third-party companies who make their own games, but which are distributed through the large publishers (Young, 2018). The studios that create these games are large and employ hundreds of employees, and continue to grow (Friedhoff, 2013; Clark and Wang, 2020). Some production teams even run in the triple digits (Consalvo, 2008).

To retain customers and maximize profit, games produced by AAA studios are continually advancing in complexity and technology, with budgets growing exponentially. As Clark and Wang (2020) reveal, "typical production budgets now hover between $20 and $50 million" (Loc. 105), with production cycles lasting between 18 and 24 months (Consalvo, 2008). This output unceasingly pushes for realist graphical and mechanical fidelity in the representation of their game worlds and the ways in which players interact with them. As Keogh (2015) observes, this constant advancement requires ever-growing teams, worked on by different studios under a large publishers' purview (p. 153-154). With so much capital at stake, AAA game producers need to control risk as much as possible. Since it is the publishers' money on the line, pressure is placed on developers in scheduling, deadlines, and even the creative process (Whitson, 2012).

AAA needs to make a profit, resulting in output designed for risk aversion and maximal ROI. Creators end up relying on "reiteration and sequelization," (Clarke and Wang, 2020, location 115), making games based on movies, TV, and books with existing mass audiences, and "narrowing of products in line with established game genres and gameplay mechanics" (ibid.), resulting in experimentation and innovation being stifled. Nicoll and Keogh (2019) point out that this production

practice results in a homogenized product. Or, as Anna Anthropy (2012) succinctly puts it: “Most games are copies of existing successful games” (p. 10). According to statista.com, the top five selling games in the US in 2023 were *Hogwarts Legacy* (Avalanche Software), *Call of Duty: Modern Warfare 3* (Sledgehammer games), *Madden NFL 24* (EA Tiburon), *Marvel’s Spider-Man 2* (Insomniac Games), and *The Legend of Zelda: Tears of the Kingdom* (Nintendo). All five are entries in long running game series or adaptations of multimedia franchises, and all fit into established genres (i.e. open-world adventure, first person shooter, and sports simulator) to which countless other games conform. These titles also push for top-of-the-line, cinematic graphics and an aggressive, command and conquer gameplay. *The Legend of Zelda* is the only stand out in terms of graphical design, as it does not strive for hyperrealism; however, this is not a revolutionary difference, as it exhibits the polished anime-style visual aesthetic that the company is famous for, and still utilizes and requires the full processing power of the Nintendo Switch, the console on which it was released.

Gameplay for these games makes full use of either mouse and keyboard or modern controllers that feature at least ten face buttons, two analog sticks, one digital direction pad, and at times gyroscopic movement controls. As targeted gamers have grown up with technically advanced AAA games, “games and the controllers with which players interact with them have become more and more complex” (Anthropy, p. 18). Harvey and Fisher (2013) use Fron et al.’s concept of the ‘hegemony of play’ to describe the way AAA games have “systematically developed a rhetoric of play” (p. 363) in which gameplay is predicated on the habitualization of years of playing a certain way with certain peripherals that ends up excluding and alienating those that do not fall into the demographic of young white and Japanese men with abundant leisure time (‘hardcore gamers’) that games have historically been marketed to.

The design of these games is primarily informed by a particular controller-based literacy and practice. Concerning both production and play, Nicoll and Keogh (2019) reference Christopher A. Paul

when stating that "[v]ideogame culture is […] largely built on a 'meritocratic' social order wherein raw talent and hard work are believed to hold sway when it comes to determining one's position in the social hierarchy." Consequently, "[s]ystemic power imbalances, institutional biases, and discriminatory practices are deemed irrelevant to one's ability to attain just reward for their hard work and effort" (p. 103). More recently, the design of these games has been driven by efforts to find new avenues for maximizing company profits through the exploitation of gamers' desire to "win": to do so, many games have introduced pay-to-win and loot box mechanics. Pay-to-win is common in Free-to-play mobile games and Massive Multiplayer Online Role-Playing Games (or MMORPGs). In many of these games, there is no monetary cost upfront to play, yet the game pushes players into many microtransactions for better equipment or quicker leveling up of characters. Loot boxes are common in many multiplayer competitive games, such as sports simulators (ex. The *FIFA* football/soccer series [EA, 1993-2022]) or first-person shooters (e.g. the *Overwatch* games [Blizzard Entertainment, 2016/2022]), where players can buy or earn randomized digital boxes with items from the game, such as better guns or team members with high stats. As these are randomized, players are just as likely—or more likely—to get rewards that are not very good, but the chance of scoring big keeps them coming back. Studies have found that the more a user plays pay-to-win games, the more they tend to invest in the game monetarily, and the more likely this contributes to problem behaviour (Lelonek-Kuleta et al., 2021). Loot boxes introduce gambling-like mechanics into games and can encourage gambling behaviours in young players (Lemmens, 2022). Loot boxes have become such a problem that Electronic Arts (or EA), publisher of many sports games, have been taken to court over the matter (Johnson & Ivany, 2021) and many countries have introduced regulations against them (Straub, 2020). Microtransactions and loot boxes have also been called out for preying on those with gambling or shopping addiction, those with ADHD and autism, or simply parents who are unaware their children's game will have such mechanics in them (Sterling, 2022).

In addition to predatory monetization in AAA games we also see numerous specifications implemented in AAA titles that limit player autonomy and agency. Many big games today require users to be constantly connected to the internet to play their games, even single-player games, purportedly to cut down on piracy (Alexander, 2023), as a form of DRM (or Digital Rights Management). This limits users who have no internet access or access that is unreliable or who want to play in places where there is no internet access. Alternate DRM systems, such as Denuvo, an anti-tamper and anti-piracy software service, is often used on PC games. While this program does a fair job at reducing piracy, it also negatively impacts on the performance of the game (Edmonds, 2017; Machkovech, 2021), leading to a suboptimal experience of the top-of-the-line graphics and gameplay AAA companies boast as selling points. Many games also implement an in-game marketplace to buy cosmetics or items that boost experience points or in-game currency, much like pay-to-win games. In the case of many games, such as those made by Ubisoft, for example the *Assassin's Creed* series (2007-2023), these titles are full price, not free-to-play. In spite of these exploitative monetization tactics, beginning around 2020, AAA game prices started to rise. A long-standing standard price for an AAA game, $79.99 CAN ($60 US), was replaced by a new standard price of $89.99 (or $70 US) (Gilbert, 2020; Kharif & Mochizuki, 2020). AAA companies are squeezing out every dollar from their players while at the same time engaging in anti-consumerist tactics, and with no regard for their wellbeing, a disregard that extends to their workforce as well.

Labour practices are dire in the AAA industry as a result of publishers' and studios' methods regarding division of labour, work hierarchies, timetables, and deadlines. Both Consalvo (2008) and Martin and Deuze (2009) highlight the division of labour in the industry, which sees production broken into many disparate sections, and a production cycle where crunch is the norm rather than exception. Crunch or crunch time refers to a common practice in the AAA industry where companies enforce long working hours and strict and abusive working conditions leading up to a deadline. For example, Consalvo

describes one workplace that implemented “minimum 12-hour days, 14 hours preferred. Permission was required to leave the building” (p. 183). Crunch time thrives in the industry by manipulating passion for making games, as companies perpetuate the narrative that employees are ‘lucky’ to be doing a ‘job they love.’ As Anthropy points out, the industry has “convinced its employees that these jobs are the only gateway to videogame creation” (p. 23). Along the same lines, companies perpetuate what Liss-Marino (2014) refers to as the rhetoric of pleasure: the “equation between creative work and pleasure is so ubiquitous as to seem natural” (p. 13). By constructing work in the video games industry as pleasure through artistic expression that employees are lucky to have, companies create a “unifying ideology from which [they] can draw in order to justify various practices that might be considered exploitative in other industries” (Consalvo, p. 185). What is seen in the industry, then, is a practice of recruiting passionate people looking to get into the industry, exploiting and over-working them, causing them to burn out and leave the industry, and then moving on to the slew of others waiting to get in the door. Consalvo also reports that the need to spend long hours at a job is uniquely harder on women who are socialized and expected to take on emotional and household labour like childcare and housework. This results in a workforce that is just as homogenized as the target audience for its product: the 2023 International Game Developers Association (IGDA) developer satisfaction survey report shows [t]he typical employee in this sample was 37 years old, identified as White or as multiracial with White (84%) and identified as a man (61%)” (IDGA, 2024, p. 31). The report also identified 73% of its sample identified as straight in sexual orientation (ibid.). Freelancers (p. 37) and self-employed developers (p. 44) ranked a bit lower in percentage of White (76% and 79%, respectively). While freelancers were a touch lower in the male percentage at 55%, self-employed developers were 75% male. Sexual orientation was relatively on par with only one or two percent less than employees. As the numbers show, the industry is male dominated, and this this boy’s club set-up has also led to numerous instances of sexual abuse against women.

Evidence of the occurrence of sexual abuse in the video game industry is overwhelming. Perhaps the two biggest names to get caught up in reports of sexual abuse in the past few years are Bobby Kotick, CEO of Activision Blizzard, and Yves Guillemot, Chief Executive of Ubisoft. As the heads of enormous gaming empires, Kotick and Guillemot had to answer for the conduct of their companies' management when a culture of sexual abuse and assault was uncovered at both Activision Blizzard and Ubisoft. While Guillemot gave public statements condemning his employees' behavior and fired three executives (France-Presse, 2020), Kotick resigned from his company (Carpenter, 2023) after it was revealed that he had been aware of the abuse and assault for years and was involved in covering it up (Gilbert, 2021). While Ubisoft and Activision Blizzard are the most high-profile cases, abuse in the industry is common, long-standing, and largely unpunished, thanks to the toxic work culture normalized in the gaming industry (Contreras, 2020; Farokhmanesh, 2020; Gushie, 2021; Hall & Polo, 2020; Taylor, 2020).

Along with harassment, abuse, and exploitation, jobs in the gaming industry have been increasingly precarious. The past few years have seen a massive number of layoffs of employees, with around 8,500 people in 2022 and 10,500 in 2023 (Carpenter, 2024). As of the end of February 2024, the number of employees that have been or will be laid off is nearly 8,200 (Zwiezen & Shepard, 2024), almost reaching 2022's total only two months into the year. These layoffs are allegedly due to a drop in revenue after a significant bump during the pandemic. According to a video game investor and author, Matthew Ball, video game industry revenue has dropped 4% in the US and 1.5% worldwide since 2021, and it has seen significantly less investments (Carpenter, 2024). Yet, other sources seem to suggest a rise in both actual and projected revenue in the industry (Dove, 2024). According to Statista, the worldwide video game market revenue did drop in 2022 to $361.76 billion dollars from $369.97 in 2021, yet it grew in 2023 to $406.2 billion, and is estimated to keep trending upward (Clement, 2024b). Therefore, while there was a post-lockdown drop, the excuse of declining revenues seems dubious as a justification for

the high number of layoffs. Laine Nooney, an assistant professor of media and information industries at New York University, suggests another reason for these layoffs: what they call "the Roblox-ification of the game industry: trying to cut costs by making content production the responsibility of your users, and reward those users who drive the most engagement" (Carpenter, para. 10). *Roblox* (Roblox Corporation, 2006) is a free-to-play, MMO game and game development engine, where users, often youth aged, create an avatar to play user-created games, create games themselves, and interact with other users. While there is no cost to play the game, users can buy 'Robux,' the in-game currency, "to purchase upgrades for your avatar or buy special abilities in experiences" (*Buy Robux*, n.d.). There is also a subscription called Roblox Premium that gives users a monthly allotment of Robux and access to exclusive content (such as level and customization items). Roblox Corporation develop the platform, but the gaming experience is user-driven through content creation and interaction. The Roblox model, or Roblox-ification of the gaming industry, describes a system where companies provide a hub for users and rely on players' unpaid labour to sustain it. This kind of practice is extremely successful, earning *Roblox* over 2.8 billion US dollars in 2023 (Clement, 2024a) and has been seen in many other games for years, including *Minecraft* (Mojang Studios, 2011), and *The Sims* series (Maxis, 2000-2023). It has also been implemented more recently into other gaming juggernauts like *Grand Theft Auto Online* (Rockstar North, 2013) and *Fortnite* (Epic Games, 2017).

The mainstream games industry is set up to maximize profit, to boost what is already successful, and avert risk at any cost to the detriment of both consumers and workers. Clark and Wang (2020) succinctly define the AAA industry when they state:

> Traditional mass media and game publishing models have operated with high barriers to entry and high production costs, reinforcing capitalist power structures, wherein the richest, most privileged, most connected and the most culturally, socially, and artistically normative have had

> the best chance to have their creative works made and exposed to a wide audience. (Location 73)

It is hard not to see the AAA game industry and culture as a toxic, totalitarian force. I agree with Dyer-Withford and de Peuter, who state that the video game industry (mostly referring to AAA) "is increasingly revealing itself as a school for labour, an instrument of rulership, and a laboratory for the fantasies of advanced techno-capital" (2009, p. xix, in Joseph, 2012, p. 94). Despite the problems exposed in the studies that have been cited above, the AAA video game industry continues along the same problematic trajectory. Its lay-offs, abuse, sexism, crunch, money-grubbing and predatory game mechanics, and overblown, homogenous, and exclusionary games end up being reflected in the aesthetics of their productions – an end product that strives toward hyperrealism and complex controllers – that perpetuates a dominant, limited, and toxic ideology. This is the emergency of video games, another example of capitalist realism that continues to thrive in modern society.

For video games, capitalist realism culminates in their aesthetics. Following Santiago Zabala (2017), who claims that to break out of naturalizing ideologies like capitalist realism we need an aesthetic force, I argue that one such disruptive aesthetic force in video games are pixel graphics and simplified gameplay, or *post-retro gaming* (Fulton & Fulton), which uses *hauntological methods* to glean elements from the past for the creation of new experiences and stories that appeal particularly to those unserved by AAA games. Hauntology is a central concept for my project, as it combines affect and aesthetic theories to consider forms of the past (pixel graphics, simplified gameplay) as critiques of the present's capitalist realism. To do this, hauntological media salvages elements of the past to imagine equitable alternatives to a problematic hegemony of play and production in games for the future (Fisher, 2012, 2014). Expressions of hauntology are aesthetic communications of feeling differently about the world, even feeling that the current world is wrong for you or wrong in general. It also has affinities with Sara

Ahmed's (2004) notion of queer feeling, especially feeling uncomfortable within the "comforts" of a heteronormative, capitalist society.

Recent independent or 'indie' developed games such as *Dys4ia* (2012), *Undertale* (2015), and *Celeste* (2018) use the aesthetics of early video games hauntologically to create powerful, affective experiences that subvert the narratives and gameplay of the problematic video game mainstream. Using pixelated graphics of the 8-bit and 16-bit eras, tropes from classic game genres—such as the puzzle, JRPG, and platformer—are used to confront and challenge dominant modes of play based on mastery and control, and to refocus play and engagement on story, ethics, and embracing failure. Based on their dated look and simple gameplay, nostalgia has been identified as a driving appeal of these games (Lipkin, 2012; Newman, 2004). But the frame of nostalgia that places this design aesthetic solely in the past sees video game history as a straight and ascending line of technological progress in gaming that privileges "natural" industry development. It ignores shadow economies, such as emulation and non-professional game making, that have continued to make use of these aesthetics. I argue the view that the appeal of these games merely nostalgic is too narrow. Instead, I argue that their appeal is primarily hauntological, using nostalgia for disruptive and progressive aims. Furthermore, these games lend themselves to narrative modes that provide representation for LGBTQIA+, BIPOC, and neurodivergent people; identities that are at best underrepresented and at worst stigmatized, ridiculed, abused, and/or ignored in mainstream gaming culture (Campbell, 2018; Ferrari, et. al., 2019; Süngü, 2020). Using the forms of the past – such as pixel graphics and earlier forms of gameplay – post-retro games break through the wall of capitalist realism to give us new and different ways to feel about media and our world.

Objectives

This dissertation asks: what is it about modern indie and DIY games' use of the rhetoric of pixel graphics and simpler gameplay, or post-retro aesthetics, that creates such powerful affective experiences? Furthermore, in what way do these games work hauntologically to create a positive and affective alternative to the hegemony of play and production of capitalist realism perpetuated by the mainstream and AAA video game industry?

Guided by affect theory, my project analyzes the politically charged aesthetics of post-retro games as a reaction, challenge, and alternative to white supremacist, male dominated, and hegemonic socio-political norms in the industry. My multidisciplinary approach studies video games through the combined lenses of affect theory, aesthetic theory, and critical industry and platform studies. In its integration of affect, aesthetics, and politics, hauntology ties all three approaches together for a unified look at post-retro games.

Affect theory informs my approach to the study of post-retro games by using a phenomenological understanding of playing games. When one encounters a video game, they open their mind and bodies to a network of knowledges and emotions that inform and influence their experience. Meaning is produced through how the player feels about the actions they perform and stimuli they see and hear in the encounter with the game. Yet, affect theory also considers the repository of emotions, knowledge, and knowledge of emotions that inform the encounter between the player and the producer. Understanding cultural knowledge and practices as not solely thought and conscious, but also as felt phenomena allows one to see how ideology can feel natural to some and how certain gameplay practices can be understood as normal or inherent. Emotions are political and everything experienced through the body and any understanding of how one fits in the world, such as capitalist realism, is affectively charged.

Tied closely to affect is an embodied approach to aesthetic theory that sees the entire experience of a constructed encounter with an object to be the subject of study. While incorporating the felt experience, I will be using aesthetic theory to read the specific meanings produced by pixel graphics and stripped-down gameplay as an opposition to the hyperrealism of AAA games. My approach looks to theorists such as Santiago Zabala, Gianni Vattimo, and Jacques Rancière, who champion the emancipatory power of art to reorient naturalized understandings of being in the world.

Finally, critical industry and platform studies, especially those focused on the practices of the games industry, provide background into the problems with the current state of production and its positive alternatives. These studies pull back from a strictly formal analysis of games to provide context for modern post-retro aesthetics and take into account real world efforts in game making that are working against capitalist realism. My project pivots indie game and platform studies toward a formal analysis to give a fuller account of games culture and production at the intersection of emotions, graphics, gameplay, and politics.

Methods and Sources

My research sample is non-random and purposive, consisting of three independent video games with post-retro aesthetics and gameplay and a strong narrative. My sample was determined in part by my expertise and knowledge of the meta-genre and through searching two major online marketplaces for video games: Steam and Itch.io. These platforms allow multiple keyword or 'tag' searches to filter results for games, such as those categorized as "retro," "pixel graphics" (or "pixel art"), "story rich," and "indie."

I have been a fan of pixel graphic games (and video games in general) since playing *Excitebike* (Nintendo, 1984) on the family Nintendo Entertainment System in the late 1980s. As the mainstream video game industry moved largely to 3-D graphics, I remained a generation behind playing the Super

Nintendo and Sega Genesis. When I acquired a Nintendo 64, and a bit later a PlayStation, that focused on 3-D polygons over pixels, I would still revisit 2-D games, especially when emulation of older systems was possible on PCs. While still interested in modern games, I preferred games with pixel graphics and found my way to the underground Flash game scene that recycled the gameplay, tropes, and graphics of pixel games and is seen as a precursor to the commercial indie game boom in the late 2000s and early 2010s.

When the commercial indie games like *Braid* (Number None, 2008), *Super Meat Boy* (Team Meat, 2010), and *Fez* (Polytron Corporation, 2012) hit the mainstream, I played them with everyone else and fell in love with these kinds of games. For roughly the past 15 years I have been playing games with pixel graphics, seeking out and experiencing innumerable titles for my own pleasure. My expertise in this meta-genre comes from a lifetime of playing games with a keen interest in pixel aesthetics in both retro and modern games, following the development of these graphics from the 1980s to the present.

When taking on this project, my knowledge of these games guided my keyword searches in Steam and Itch.io and enabled me to determine an exemplary sample of ten titles. The rich commentary by players on these sites, in the comments section of each game in Itch.io and the reviews and forums on Steam, allows for a depth of understanding of each game that assisted in the process of selection. I then narrowed my sample to three key works for in-depth analyses: *Dys4ia*, *Undertale*, and *Celeste*. *Dys4ia* (2012) is a highly regarded game that uses classic gaming tropes to tell a story about the developer Anna Anthropy's experiences with hormone replacement therapy. It was made with the popular and accessible game making platform Adobe Flash and was released at the tail end of the popularity of Flash games. *Undertale* (2015) marks the first retro-style indie game to win Game Of The Year on a popular gaming website ("PC Game of the Year - IGN's Best of 2015 Wiki Guide," 2016). *Undertale*'s popularity drew significant attention to retro-style indie games, and its release date marks a substantial increase in retro-style releases. Extending my timeline to 2018 allowed me to study

Undertale's numerous followers, including *Celeste*. This game garnered even more critical acclaim than *Undertale* and is more gameplay-focused than the many narrative-driven games that preceded it, while still being categorized as "story rich." All three of these examples explore narratives uncommon to mainstream video games, such as queer identities and relationships as well as mental health and anxiety, while using post-retro aesthetics. The remaining seven titles are touched on as further examples in the third chapter.

Data collected was assessed using an interdisciplinary approach that combines theories of affect, aesthetics, narrative, and socio-cultural operations, as discussed above, to formulate a theory for how the deliberate use of retro aesthetics influence my sample's affective and narrative experience and work against hegemonic, capitalist systems. My theoretical framework is built from both foundational and contemporary authors in affect, aesthetics, and game studies. Brian Massumi (2002) and Sylvain Tompkins (2008) are the foundation my framework is built on. Both theorists see affect and emotion as pre- and post-cognitive drive signals that motivate or demotivate us to action. Affect is inseparable from everyday human experience. It is felt and perceived in the mind and body while being influenced by and developed through societal conditions and learning and is always-already political and ideological (Ahmed, 2004; Boler 2004). Engaging with media involves an affective feedback loop of immediate and stored physical and neural stimuli, memory, and learning, referred to by Kara Keeling (2007) as "motor contrivances." Embodied affect, while present in encounters with other media, comes to the forefront with video games in a "cybernetic assemblage" (Keogh 2018, p. 22) with the player and input device (i.e. controller, keyboard and mouse, or phone). The control apparatus is incorporated into our bodies as an extension of it. Much like in the real world, once habituated to the input device, we do not think about our movement through a virtual world; we instead gain an embodied knowledge of movement through habit (Keogh, 2018; Massumi, 2002; Merleau-Ponty, 2013). The input device in games becomes our way

to feel the game world through an embodied affect coupled with affect felt from the audio-visual stimuli, or a game's aesthetics.

Affect is tied to aesthetics. In line with pragmatist theorists like John Dewey (2005), I define aesthetics as not only how something looks or how it feels, but the entire sensory experience of an event. The experience of aesthetics is dependent on how one feels in relation to an event (Carroll, 2002). The event in video games emerges in the coming together of interaction, visuals, and sounds. As Graeme Kirkpatrick (2011) explains: "To fully experience form in a game we have to draw it out by playing well and we do this with our hands" (p. 100). The event emerges sonically, visually, and haptically through the body's movement. Kirkpatrick likens the aesthetic experience to playing an instrument that also produces audio-visual stimuli.

According to aesthetic theory, the experience of art, or any aesthetic object, is dependent on recognition. Gianni Vattimo states that one must already understand an artwork's form and meaning before it becomes fully perceptible as art. This understanding comes from shared meanings and feelings that tie people, and their beliefs, together in a shared understanding of what the world is and what is possible, what Rancière calls the distribution of the sensible. The distribution of the sensible is a powerful aesthetic and affective state that can naturalize problematic ideologies. In the global west today, the distribution of the sensible involves a world picture (Heidegger, 2002) that is hegemonic, colonial, and capitalist. This particular world picture has been named Capitalist Realism by Mark Fisher (2009): a state where capitalism is so ingrained in our society and minds that we cannot imagine a life outside it.

According to Sara Ahmed, in order to think differently about the world, one must feel differently. As she writes concerning Queer Feelings, this can be an inherent sense or, as claimed by Vattimo, can be produced through an aesthetic shock. Aesthetic theorists, including Zabala and Rancière, identify an encounter with particular art that produces an immediately felt and perceived

angst that can reorient one's distribution of the sensible and point toward different ways of feeling and being in the world. I argue that this kind of shock occurs in post-retro games.

As Aubrey Anable (2018) argues, games are affective systems, micro representations of being in the world. The interplay between games systems, audio-visual stimuli, and socio-cultural practices makes them effective for ideology representation communicated aesthetically. Therefore, when paired with the aesthetic shock of post-retro aesthetics, video games become an effective (and affectively charged) way of reorienting the distribution of the sensible for alternatives outside of capitalist realism.

In producing games that use elements of the past, post-retro games are using Hauntological methods to shock a player out of video games' capitalist realism. First coined by Jacques Derrida, the term has recently gained popularity as popular culture seems to be constantly reiterating the same forms for easy profit, instead of innovating: a culture, in other words, trapped by capitalist realism (Davis, 2005; Fisher). In this world we live in, hauntology becomes a way to look to the past in order to make something new. I will primarily be using Marc Fisher's take on hauntology for its emphasis on that phenomenon's confrontation of the present.

While my specific topic has not yet been explored in academia, many non-academic writers have explored the resurgence of pixel graphics and nostalgia (see Byford, 2014), as well as the emotional affect of my three samples (see Grayson, 2018). Therefore, I have researched and included critical games journalism from sites such as *Polygon*, *Kotaku*, and *The Verge* for insight into my subject, as well as fan forums and YouTube videos on the subject.

Existing Literature

Analyzing how the deliberate use of pixel aesthetics affects the gaming experience needs further attention in academia. Most post-retro games are considered indie games, but studies of the indie meta-genre have focused on the definition, history, political economy, and socio-cultural contexts of

production and consumption of their subject (Clark & Wang, 2020; Harvey & Shephard, 2016; Joseph, 2012; Ruffino, 2020; Vanderhoef, 2016) with an emphasis on the industry over formal elements. Indie game aesthetics, specifically pixel graphics, have primarily been seen as either markers of authenticity (Juul, 2019), the result of affordances of their creation platforms (Salter and Murray, 2014), or as appeals to nostalgia (Lipkin, 2012). What is missing from scholarship on these kinds of games is a textual analysis that avoids simplistic or essentialist viewpoints based on concepts like authenticity or nostalgia.

While my study builds on the valuable socio-political work of the game scholars referred to above, I will be primarily conducting a formal analysis of these games using affect and aesthetic theory. My study brings together four strands of inquiry that are distinct but feed into one another when considering post-retro games: affect theory, hauntology, aesthetic theory, and platform studies. Following Aubrey Anable (2018), I see games as affective systems and my understanding of affect is firmly rooted in the cultural studies approach of Tomkins, Massumi, and Ahmed. However, I see affect play out in video games in an embodied way similar to Keogh ((2018). Where I differ from Anable and Keogh is in my specific focus on aesthetics and use of aesthetic theory. My work considers aesthetic theory that takes a critical, almost Marxist approach from figures such as Rancière and Zabala, but understands the experience of aesthetics, like affect, to be embodied. I see the aesthetic experience of a video game in the same way as Kirkpatrick, who relates it to the playing an instrument, and return to Keogh to read this idea as tied to both visual stimulus and the experience of space within the game world. Of course, unlike the aforementioned scholars, I am interested specifically in pixel graphics and restrained gameplay.

While post-retro games are modern objects, they have aesthetic and affective ties to the past, though concepts of nostalgia or authenticity provide only a limited account of their appeal. Hauntology has been evoked in relation to films, literature, and visual art, but its theory of using the promise of the past to confront an unjust present rings true with many recent games that feature pixel art visuals. It

also combines elements of affect and aesthetic experience that are politically charged. Following the spirit of hauntology, it is not my intention to explain away or reduce the appeal of post-retro games to something superficial or sentimental, but to explicate how they are part of a greater effort to reimagine a better future through a reconsideration and reimplementation of the past. In merging foundational and more recent takes on affect and aesthetic theory, as well as platform and critical industry studies, my dissertation, like hauntology, melds artifacts of the past with the present to read how post-retro games work for a better future.

Chapter outline

Chapter 1 – A History of Nostalgia and Games

The aim of this chapter is to decouple the notion of contemporary uses of pixel graphics as solely nostalgic in motivation and reveal how these graphics have always been present in gaming since their invention in the late 1970s. I begin with a historiography of video games as they pertain to pixel graphics. Bolstered by a selection of historical works, I critically recount popular YouTube documentarian Ahoy's *A Brief History of Graphics* to examine the popular conception of pixel graphics' trajectory from dominance to obscurity to nostalgic revival. I pay particular attention to how the rise of indie game popularity was seen as a nostalgic return to pixel graphics before debunking this notion by exploring how these aesthetics were consistently present in gaming, just not in the mainstream. I argue that it is in fact the efforts of large AAA companies, particularly Nintendo, who have used present-day deployments of pixel aesthetics as a nostalgic appeal to a halcyon gaming period to market their products, and I examine how this constructed nostalgia for an ideal past in gaming has led to the papering-over of racism and sexism in retro games and an ignorance of non-commercial labour in gaming. I conclude the chapter suggesting that instead of seeing pixel graphics as exclusively nostalgic,

we consider them as a residual form (Raymond Williams, 1977), something from the past, with aesthetic ties to the past that is still present today, a theory that sets the stage for hauntology.

Chapter 2 – Hauntology and Post Retro Games

Following from the first chapter, this section dives into what hauntology is and how it relates to post-retro games. After defining and differentiating hauntology from nostalgia—the former being a progressive energy while the latter a regressive one—this chapter acts as a critical review of literature and theories that inform my subject. I begin by outlining my understanding of aesthetics, jumping off from foundational theorists like Rudolph Arnheim (1974) to more recent scholars like Ritu Bhatt (2013) to elucidate the wide range of bodily experiences that are felt during and inform an aesthetic event. I then discuss the aesthetic experience of video games and their unique blend of visual, audio, and haptic input and feedback that creates game 'feel.' With the mention of feeling, I shift to affect: how we experience emotions and how our experiences and knowledge inform our emotions. I examine how society influences our feelings and renders affect political before moving on to the affect in video games. Here, I look at how video games are themselves systems of affect or models of an affective experience of being in a world. These inherently politically-charged game worlds return us to how, through affect and previous knowledge, aesthetics become political as well. The chapter ends with an explanation of what Jacques Rancière calls dissensus, how aesthetic encounters have the power to change minds, and how video games are particularly adept as this. Through their use of hauntology, post-retro games produce a unique aesthetic shock that immediately short-circuits the relation between new games and hyperrealistic graphics, and in turn promotes better equity through many aspects related to their pixel graphics, simplified controls, and narratives.

Chapter 3 – Post-Retro Dissensus: Three Case Studies (Dys4ia, Undertale, Celeste)

My most substantial chapter is where I put theory into practice and explicate how my three case studies, *Dys4ia*, *Undertale*, and *Celeste* are hauntological works. Each game is analysed through four categories: *Design* discusses the surface aesthetics of the game, i.e. visuals, sounds, and controls; *Play* looks at how the aesthetics come together in gameplay and what arguments are being made through the gameplay process; *Story* picks apart the game's narrative for how it tells the story and how it is dissimilar to mainstream AAA game stories; and finally *Equity* considers how all the previous aspects, game options, and technical elements allow for a wider or different appeal to the game and better accessibility, compared to AAA titles. To shed light on the wider landscape of hauntological, post-retro games, each case study ends with a *Further Playing* section that highlights other titles that do similar things to the prime examples in narrative, gameplay, accessibility, and/or philosophy.

Conclusion – 8-bit Futures

Wrapping up this study, I take stock of the previous chapters and arguments made within them, and, as the title suggests, look to the future of post-retro games. I problematize the recent state of commercial indie games, as they fall away from hauntology and become more like the AAA titles they apparently were opposed to in the 2010s. Yet, I conclude on a hopeful note by turning my focus to the DIY game space to examine hauntology today and in the days to come. In particular, I examine the game making engine Bitsy, which is locked in a hauntology through its imposed 1-bit graphics and approachable aesthetic-focused creation interface. In turn, the games produced by said engine become inherently hauntological themselves.

What to Expect

This project is highly critical and does not make excuses for the injustices that result from the emergency in video games. I do not want to paint the individuals that support forces that perpetuate the racism, sexism, abuse, and exploitation through exclusionary, industry focused histories, valorizing of nostalgia, or creation of games that reproduce toxic gameplay as one-dimensional villains. Yet, it is important to highlight the ideologies that are reproduced from a short-sighted documentary, a forum post lamenting how games "aren't like they used to be," or a game that presents itself as an underground alternative but is just about killing people and getting points. Despite holding these issues up to a critical lens, my ultimate goal of this project is hope. While acknowledging the problem, I want to point to the solution, to the anti-capitalist, equity-minded energy that is going on today—or more specifically in the recent past. In the face of a bloated AAA industry, that hopeful force is hauntological post-retro games, that pull from the past to show us a better future in gaming.

With an interdisciplinary approach to the subject that brings weighty and complex theories of aesthetics and affect to modern platform studies, this dissertation makes a significant contribution to current debates in game studies. Technical advances are often an oversized focus in discourses on gaming, from forum posts, to journalism, and to academic studies. Yet, at a time where the AAA industry seems to be on the verge of collapsing under the weight of its endless progression, my project proposes we look back as a way of moving forward. By salvaging elements of the past to renew hope for the future, hauntology is a guiding principle of this project. However, this is not just reflected in my argument that post-retro games are a way forward in the face of a crumbling AAA industry. I also look to salvage theories of the past, to reexamine foundational texts like those of Silvain Tompkins, John Dewey, W. E. B. Du Bois, and even Martin Heidegger to see how they support more recent texts and how they can help up see a better future in games and society at large.

I want to show how foundational theories add to the study of video games today. In doing so, I aim to appeal to, bridge the gap between, and bring new ideas into two scholarly camps: modern game studies and studies of affect and aesthetics. Like hauntology, this project does not sit comfortably in either the past nor the present. It intentionally plays around with temporality, troubles conception of the past, criticizes the present, but presents hope for the future.

Chapter 1 – A History of Nostalgia and Games

Introduction

As Dominic Arsenault (2017) observes about game studies, "we define our history according to a number of historical centers determined from market success, and market success comes through corporations brandishing superior technology" (p. 13). This focus on market success is also reflected in popular histories of video games such as *The Ultimate History of Video Games Vol. 1* and *2* (Kent, 2001/2021), *The Video Game Explosion: A History from PONG to Playstation® and Beyond* (Wolf, 2008), and *Game On!* (Hansen, 2016) that chronicle the innovations and development of large gaming companies. These accounts, both scholarly and popular, largely ignore independent, non-commercial, or alternative game production. As Brendan Keogh (2023) points out: "The ways in which the videogame field was aggressively formalized through the 1990s and 2000s has led to a popular imagining of videogame production as first and foremost a commercial enterprise, and only abstractly as a creative and cultural practice" (p. 47). Because this commercial, capitalist viewpoint dominates accounts of video game history, games with pixel graphics and simpler control schemes appeared out of the ordinary and out of time among modern games when they rose to popularity in the 2010s. Bolstering this viewpoint, journalists, internet commentators, and large gaming companies (Nintendo, in particular) construct contemporary pixel graphic games as nostalgic (Ahoy, 2013, 2015; Baker, 2016; Custodio, 2020; Gunnery, 2016; McCarthy, 2021; Moher, 2022). To see pixel graphic games as wholly nostalgic is to adopt a techno-progressive worldview that misperceives the motivations of contemporary pixel graphic game development. It also situates games that fall outside the AAA sphere as regressive, if they are mentioned at all. In many accounts of the history of video games, independent game production, or indie games, are only given substantial coverage in the 2010s as a nostalgia-

infused disruption to the AAA industry. While attention paid to indie games is never bad, this understanding erases the long history of game development outside the mainstream.

In this chapter, I argue that pixel aesthetics in modern independent games are not just nostalgic (that is, a regressive throwback), but a stylistic form that has persisted since the development of their graphical technology. Seeing them as retro, outdated, or solely nostalgic favours an account of the history of video games that privileges technological progression and the marketing campaigns of large, mainstream (or AAA) companies, primarily Nintendo. This perspective sidelines independent, alternate, and non-commercial production and conflates pixel aesthetics solely with nostalgia. In the marketing of and discourse around games, nostalgia is harnessed to exploit a segment of the gaming public using legacy assets in order to maximize profits of legacy IP. In contrast, contemporary independent games using pixel aesthetics are often innovative and risky new ventures. While these games are indebted to past technology and borrow from classic gameplay, they are an example of residual media, media that are informed by aesthetics that were created in the past, but which are still in circulation today. As will be explored in later chapters, contemporary pixel games use of the past is a political, aesthetic, and affective effort to steer game development in a new, more equitable direction.

To illustrate my argument, I begin this chapter with a history of pixel graphics through the lens of popular video game histories to highlight their emphasis on the technical feats of big companies and the lack of coverage of independent production until the 2010s, when these games became available through commercial distribution channels developed by Valve and Microsoft. As a result of the lack of accessible information on indie game history, I show how popular press and commentators have constructed modern indie games as nostalgic. To refute this construction, I explore the origin of pixels and pixel art and point to non-commercial, independent, and alternative production that has occurred simultaneously with AAA production since the 1970s. Challenging the idea that pixel aesthetics are retro, I pay particular attention to pixel graphics beyond the 1990s, such as those found in emulation,

homebrew, and *Flash* games, and posit reasons for their exclusion from popular conceptions of game history. This discussion leads to an analysis of how AAA companies, specifically Nintendo, have constructed these aesthetics as nostalgic to sell old products and how non-critical nostalgia for the graphics of older games can overlook the racism, sexism, and labour injustices of large game companies. This strategy of reusing past IPs and products is part of a larger market trend called the nostalgia mode. This chapter ends by explaining that indie games with pixel graphics are not merely nostalgic but part of a movement that uses residual media to break out of capitalist realism using hauntology. The intricacies of this practice, and its combination of affect, aesthetics, and politics, are dissected in the following chapter.

History of Pixel Graphics

Despite the narrow, techno-progressivist scope of many accounts of video game history, understanding that perspective is vital for analyzing how nostalgia is constructed around pixel graphics. The following is a critical examination of the popular history of game graphics as represented by YouTube channel Ahoy's video *A Brief History of Graphics* (2015). Ahoy are a video production team that specialize in videos on gaming history and gameplay elements. They began producing videos in 2010 with a series on weapons in *Call of Duty: Modern Warfare 2* (Infinity Ward, 2009) and other First Person Shooter (FPS) games. In 2013, they expanded their coverage to the history of video games with videos such as "Which Video Game Introduced Dual Wielding?" "What Did We Learn This Generation?" and "A Brief History of Video Games." While they continued to produce content on video game guns, their output started to focus more heavily on history and "insightful gaming videos" (quoted from the About section on their YouTube channel). I chose Ahoy's video as a key source for its accessibility, reach, and coverage of the topic. The video is free to watch on YouTube, has 5.9 million views, and gives an

overview of graphics and game development from the inception of video games until the 2010s. Therefore, this video stands as exemplary of a relatively recent, easily accessible, and highly consumed account of video game history. Furthermore, this account is not exceptional, but maps onto several other historical accounts of video game history. Their coverage of AAA games, such as the *Call of Duty* franchise, suggests their grasp of games is firmly within the mainstream. What is revealed in Ahoy's video is a narrative of video game graphics that focuses entirely on the market success and technological advances of big studios, with little mention of games outside of capitalist modes of production.

A Brief History of Graphics starts with *Pong* (Atari, 1972), the first arcade game with significant market success. However, the genesis of video games began earlier, in 1958, and was a non-commercial enterprise, with *Tennis for Two*, developed by William Higinbotham and Robert Dvorak. Created at Brookhaven National Laboratory, a site primarily for nuclear and high energy research, this was a two-player game using oscilloscope technology that followed similar rules to table tennis. Displayed on a cathode ray oscillograph, the graphics of *Tennis for Two* featured two lines, a long horizontal line representing the ground and a short vertical line in the middle functioning as a net. A glowing dot represented the ball that would briefly leave a trace of light as it bounced from one end to the other. While I could not find evidence that this was part of their formal research, the game was not created or sold as a product and the scientists were not setting out to be game developers. Tellingly, this non-commercial history of the first game, is skipped over in Ahoy's video in favour of video gaming's first big market success.

Following the discussion of *Pong*, Ahoy focuses on the transition from vector to raster imaging technology, a process that allowed for more detailed graphics. Derived from oscilloscope technology (used for *Tennis for Two*), vector graphics manipulated electron beams of a cathode ray tube (or CRT) to produce sharp lines and polygons (Ahoy). Vector graphics were used in the early iterations of *Asteroids* (Atari, 1979), which feature geometric outlines of a triangular spaceship and the titular space rocks.

While only coloured by the black of the monitor screen and the searing white of the electron ray, *Asteroids* featured smoother gameplay and animation compared to early raster games. While the raster process produced a blockier image and choppier animation, it could render far more detail and colour than vector graphics. This technology produced the first pixel graphics for video games. In describing the shift from vector to raster, Ahoy touches on *Tennis for Two*, but only as a stepping stone to *Asteroids* and other vector arcade games, which are used as a comparison to 'more advanced' raster technology.

The next step in graphical advancement recounted by Ahoy is smooth scrolling, which simulates movement through an environment. This technology advanced action in games beyond single screens, as seen in games like *Pac-Man* (Namco, 1980) and *Q*bert* (Gottlieb, 1982), to games that could scroll across an extended environment, as seen in *Defender* (Williams Electronics, 1981), *Xevious* (Namco, 1982), and *Zaxxon* (Sega, 1982). While the team at Ahoy brushes over the non-commercial inception of video games, I would argue that their coverage of raster graphics and smooth scrolling is corporation agnostic. While the output of big-name companies makes up all examples, examples are a mix of classic arcade titles (*Pac-Man*, *Q*Bert*) and lesser-known entries (*Xevious, Zaxxon*). Ahoy's account does show how the shift from vector to raster was a critical development in video games, especially considering pixel graphics' endurance in the industry.

After this point, Ahoy pivots to heavy coverage of the technical inventions of specific companies and a strong focus on known IPs (intellectual properties). Further advancements in pixel graphics led to bigger sprites and the illusion of depth, and these are tied to big names in gaming. 16-bit systems, which appeared in the arcades in the 1980s and in the home in the late 1980s to early 1990s, had more power to render more complicated images and produce large, detailed characters. This ability led to the rise of 2D character fighting games such as *Street Fighter 2* (Capcom, 1991). In addition, depth and perspective were simulated in games through parallax scrolling and sprite scaling. Parallax scrolling is a technique that puts the background and foreground on different layers of the image and scrolls each layer at a

different speed as a sprite traverses the environment, giving the illusion of depth. Ahoy cites *Shadow of the Beast* (Reflections Interactive, 1991) and *Sonic the Hedgehog* (Sonic Team, 1991), games released on the *Sega Genesis* (*Mega Drive* outside of North America), as prime examples. 16-bit games on consoles and in the arcades also featured sprite scaling, which allowed games to simulate perspective by shrinking and enlarging sprites to appear further and closer to the player character. Sprite scaling moved shoot-em-ups and racing games from a top-down perspective to a more front-facing one. Examples featured by Ahoy are arcade titles that used Sega's *Super Scalar Tech*, such as *Hang On* (1985) and *Space Harrier* (1985). Both were later ported to the Sega *Genesis* in the late 1980s and 1990s. Apart from *Street Fighter 2*, a long-running game franchise, Ahoy's coverage firmly situates Sega as a primary driver of pixel graphic advancements in the 16-bit era, parroting market rhetoric like "Blast Processing" when describing the speed of *Sonic*.

While pixel art was most prominent in the 1980s and 1990s, or at least the most remembered, other early graphical styles also existed. Ahoy points to how *Dragon's Lair* (Cinematronics, 1983) implemented laser-disc technology to use actual film animation as video game graphics. While it looked great for the time, the gameplay was limited, allowing the player to only input commands at specific times in the animated scenes (timing which was the primary gameplay challenge). Arcade fighters such as *Pit Fighter* (Atari, 1990) and *Mortal Kombat* (Midway, 1992) used digital photos as sprites, lending low-fidelity photorealism. Finally, computer games like *Prince of Persia* (Broderbund, 1989) and *Another World* (Delphine Software, 1991) used rotoscoped digital graphics for their characters, which appeared much like other pixel art but with more natural, more true-to-life movement. In what is deemed the "Multimedia Advent," Ahoy points to CD-ROM games like *Myst* (Cyan, 1993) and *Night Trap* (Digital Pictures, 1992), that used increased storage space for pre-rendered backgrounds, and Full Motion Video (FMV) for point-and-click adventure games.

Film animation, rotoscoping, digital images, and multimedia games are all constructed as stop gaps on the way to three-dimensional (3D) graphics, the inevitable destination of game graphics, according to Ahoy. While the video allows that 2D game development continued, it claims that by the mid-1990s, pixel graphics were falling out of favour. As the narrator proclaims: "Two dimensions are all very well and good. But even the earliest game developers yearned to extend into the third."

After their coverage of 2D graphics outside of strict pixels, the video transitions to what it calls "The Polygon Realm." As with the explanation of sprite scaling and parallax scrolling, the transition from 2D to 3D is attributed to two of the biggest companies in the 1990s, iD Software and Nintendo. Along with advances in digital storage (i.e., the CD-ROM) and dedicated graphics cards explicitly built for 3D (commonly referred to as GPUs), the mid-to-late 1990s ushered in the 3D polygonal era of gaming for both home consoles and PCs (Ahoy; Arsenault et. al., 2013). While touching on a lesser-known PC game, *Descent* (Parallax Software, 1995), 3D graphics are credited again to iD software (*Quake*, 1996), Nintendo (with *Super Mario 64,* 1996), and Sony's first home console, the *Playstation*, with *Resident Evil* (Capcom, 1996) and *Tomb Raider* (Core Design, 1996). According to Ahoy, the aim of 3D graphics was realism, beginning with blocky polygons and progressing to photorealism in the 2010s. From this point forward, Ahoy focuses on 3D games until their account of indie games of the 2010s.

Like many video game histories, such as *The Video Game Explosion: A History from PONG to Playstation® and Beyond*, *The Ultimate History of Video Games Vol. 1* and *2,* and *Game On!*, Ahoy's account, as I have shown here, assumes that realistic 3D graphics are the destiny and culmination of video games' visual representation. Not only that, but according to their perspective, the history of video games unfolds through the technical advancements of big players in the industry. "The videogame industry" is popularly imagined as the highly publicized commercial market, but this only accounts for a small and specific area of activity in games (Keogh, 2023, p.3). What these conceptions miss is the

robust presence of non-commercial and independent games that were not only produced and played at the same time as the AAA titles but were just as instrumental in the development of the industry.

The "Rise" of "Indie Games"

As seen with *Tennis for Two*, video games began as non-commercial experiments. While many video game histories largely ignore and omit non-commercial and independent games until the late 2000s, they continued to be produced and played alongside the output of the big players from the 1970s. However, due to gaps in game history coverage of independent games, pixel graphics are commonly seen as a lost aesthetic adopted by modern small studios as a novel and nostalgia-fueled response to the complexity and hyperrealism of the AAA industry. While recent independent games are great alternatives to mainstream titles, seeing them as merely nostalgic or retro favours a corporate-centric view of video game history, as seen in the accounts of Ahoy, *The Video Game Explosion*, *The Ultimate History of Video Games,* and *Game On!* These texts cast independent games before the mid-2000s as minor asides in the triumphal trajectory of AAA market successes and technical advances.

Wolf's *The Video Game Explosion* (2008), for example, paints earlier indie games as little more than footnotes in history. This book devotes a single chapter, by Brent Camper, to independent games. While it is a welcome break from a technology- and corporation-driven account of video game history, the chapter focuses on only two types of games. The first is experimental physics games, which play with simulated movement, kinesthetics, and gravity. Often avatar movement is controlled in limited and/or awkward ways, with the game's primary goal being to experiment with what can result through the game's allowances and the avatar's AI physics. For instance, *Stair Dismount (tAAt, 2002)* has simple polygonal graphics depicting a flight of stairs and the avatar at the top. The player clicks one part of the character's body (head, hand, foot, stomach, etc.) in time with a force meter that continuously fills to determine how the body part is hurled down the stairs. Different combinations result in different

outcomes, movements, and damage amounts. Other examples mentioned by Camper are *Elasto Mania* (Balazs Rozsa, 2000) and *N* (Metanet Software, 2004). The chapter's second type of indie game is homebrew games for Nintendo's *Game Boy Advance* handheld console. 'Homebrew' typically refers to original, fan-created games for AAA consoles. This type of game production ranges across most game consoles, yet the *GBA* is the only one mentioned here.

Unfortunately, both sections on these two kinds of indie games give little more than an overview, and the chapter lacks any mention of other types of indie productions. While physics games and *GBA* homebrew are essential outputs of indie production, the chapter barely scratches the surface in the six pages allotted to indie games in *The Video Game Explosion*'s otherwise comprehensive 380 pages. The cursory account of this area of game development and the specificity of the types of games focused on constructs indie games as rare, anomalous, and unimportant for gaming history compared to the products of the AAA industry. This account helps paint a picture of the industry devoid of independent production, where pixelated and 2D graphics largely disappeared between the early 1990s and late 2000s. Because of this, when indie games with pixel aesthetics gained mainstream attention and corporate support in the late 2000s, they seemed to appear 'out of nowhere' and harken back to a 'lost age.'

The term "indie games," as it is commonly used today, often refers to a meta-genre of games that emerged out of an explosion of popularity in the late-2000s to early-2010s of video games produced outside of the AAA studio system, made by small teams, or sometimes just one person. Often, these are original IPs and are typically lower-budget and less technically advanced titles. Many of these indie games implement 2D graphics (many with pixel graphics) and stripped-down control schemes, similar to earlier 8-bit and 16-bit games distributed on the *NES, SNES,* and *Genesis* consoles. Early critical and market successes of the meta-genre include *Braid* (Number None, 2008), *Super Meat Boy* (Team Meat, 2010), and *Fez* (Polytron Corporation, 2012). These three games were platformers that took

inspiration from classic 2D games of the 1980s and 1990s, such as The *Super Mario* series (Nintendo, 1983-2019) and were a stark contrast to big-budget 3D games. This influx of indies was perceived as an explosion of creativity and a nostalgic return to classic gaming. However, this perspective was the result of a few intervening factors: the omitting of independent production in canonical video game histories (as discussed above), AAA companies adopting online distribution, and media constructing new retro games as nostalgic, and nothing more.

The appearance of indie games as coming out of nowhere in the 2000s is partially due to the launching of online distribution marketplaces by big players in video games in the mid-2000s, as Tristan Donovan points out in his fuller, less US-centric history book *Replay: The History of Video Games* (2010). As Donovan reveals, online game distribution started in the 1990s with browser-based games made with Java (a versatile programming language that first appeared in 1995) and Flash (an artist-oriented software for animation and games, which will be discussed below). Broadband internet speeds introduced in the 2000s and widely adopted over the next few years made downloading media much faster than dial-up connections. In light of the success of games distributed online, like *Alien Hominid* (The Behemoth, 2002/2004) and *Bejeweled* (PopCap Games, 2001), and faster internet speeds, AAA computer game developer Valve opened up their game client *Steam* to other developers in 2005. Initially created as a portal to buy and launch Valve-made titles, *Steam*'s allowing other developers to sell games on their client boosted the visibility of smaller titles and afforded independent gamemakers some legitimacy through association with Valve. The same year, Microsoft launched the *Xbox Live Arcade* for the *Xbox 360* console. Like *Steam*, this was an online marketplace for independent and smaller games bolstered by the reach and reputation of Microsoft and its popular console. Notably, *Xbox Live Arcade* hosted breakout indie hits like *Braid* and *Fez.* As these new online marketplaces arose in the 2000s and lower-budget game development became more financially viable, indie game producers were "no longer confined to traditional studio environments and [instead worked] across a

spectrum of formal and informal contexts" (Nicoll and Keogh, 2019, p. 3). With game engines such as *Unity* and *Unreal* becoming free to use, the door opened to a slew of new developers who did not have the budget or technical knowledge to create games from scratch: "Unity, with its accessible editing interface, flexible licensing structure, and modular toolset, is framed by company representatives as an almost revolutionary piece of software that is 'democratizing game development' and 'empowering game developers'" (ibid.). Young (2018) also highlights that, along with game engines, distribution platforms like *Steam* and *Itch.io* removed the need for gamemakers to sell to stores or create their own e-commerce solutions directly. The result of corporate support for online distribution of indie games created an explosion in attention and awareness of these titles. Indie games' stark contrast to the aesthetics of AAA studios, their eruption on the mainstream market, and a lack of coverage of early non-commercial game production, resulted in commentators seeing indie games as a sudden nostalgic return to the gameplay and genres of past titles.

The "rise" of indie games in the mid-2000s, as documented in Ahoy's *A Brief History of Graphics,* highlights their commonality with retro games. The narrator introduces them as games that "purposefully evoke a bygone era, drawing from a rich history of graphics. A palette of styles steeped in nostalgia" (36:10). Notable examples mentioned by Ahoy include *VVVVVV* (Terry Cavanagh, 2010) for its adherence to the graphical and gameplay limitations of the *Commodore 64* computer, *Super Meat Boy* for its use of cartoon mascots like *NES* era platformers, and, interestingly, *Limbo* (Playdead, 2010) for its similarity to shadow theatre. While they concede that these games are not simply "retro-remakes" (37:16) and implement modern mechanics, they also proclaim that "indie games are not afraid to regress" (36:40). The popular perception of these games as nostalgic is understandable when following the historical narrative outlined by Ahoy. To them, pixel graphics and 2D games disappeared in the early 1990s with the advent of 3D games, and their reappearance in the mainstream constructs a specific narrative that circumscribes these diverse works as throwbacks, nostalgic, and regressive.

Defining indie games, particularly those featuring pixel graphics, as aesthetically and technologically regressive and steeped in nostalgia is not unique to Ahoy. This sentiment is echoed in many accounts of the indie scene. In their blog, *Musings of a Mario Minion*, Tabitha Baker (2016) celebrates indie games' "abstract retro" and "pixel based" designs in the face of "cookie cutter FPS shooters and action adventures" (para. 3). As they put it, indie games are "a reversion back to the good old days, when gameplay was about conveying an experience and just plain fun" (ibid.). Similarly, Sheva Gunnery (2016), writer for *Indie Haven*, a now-defunct source for indie game news, classifies the pixel style of indie games as "nostalgia gaming" (para. 5) and offers an argument for their seemingly recent appearance in culture:

> This is a very new phenomenon in games, and it's alive in both game demand and game supply — players want games that remind us of our favorite games from childhood, and developers want the same thing. The people who work in the industry now as designers are people who grew up with games, and who are passionate about them. The recent rise of 8-bit graphics can, at least partially, be attributed to a longing for games past for players and developers alike. (para. 10).

More recently, *Wired*'s Anne McCarthy (2021) provided a complementary account of "retro-looking games" (headline) to Gunnery's, with some expert support. *Wired* is a long running magazine that launched in 1993 as a monthly print publication devoted to new technology and which capitalized on the growing adoption of and interest in digital media at home and work. In the early days, *Wired* was very much a men's magazine with a tech focus: it "was about the freedom of 'frontier' entrepreneurship and a new capitalism" (Bødker, 2017, p. 75), appealing primarily to white males and white male fantasies of dominance in the new digital age (Ferrari, 2020). Today, the magazine is primarily online (but a print edition is still available) and while it is still primarily tech focused, it has expanded its coverage to pop culture, business, and health. McCarthy's article is in the "culture" section of the

website and while a strong male-centric focus is lacking (though all interviewees have masculine names), there is still the influence of capitalist and techno-progressive ideologies.

While their byline claims the appeal of pixel graphics in modern games is "only partly to do with nostalgia," the author fails to elaborate what other non-nostalgic parts are. McCarthy compares recent pixel art games to retro gaming, the practice of playing games released in past decades, especially those that feature pixel graphics. Twitch streamer Chris Schranck (who goes by FutureManGaming) is quoted as saying retro gaming makes you "happy to be feeling like a kid again" (para. 3). Schrank elaborates that adult life is rife with responsibilities and anxieties. Retro gaming allows players to regress to a carefree, childlike state. The streamer adds: "It's the nostalgia, and remembering being young again" (ibid.). McCarthy quotes Michael Fraser, a therapist who works with video game addiction, who says: "Playing older games—or games made to look retro—transport the gamer" (para. 7), adding: "It takes me back to a simpler time" (ibid.). McCarthy consults other experts in the field such as Jacques Jopitre Jr., co-founder of SohoMD, who identifies the intrinsic aspects of "classic gameplay" and extrinsic aspects of games with pixel graphics as "associated with positive past experiences, in terms of people and places, making it a trigger for positive emotions" (para. 10). Jopitre Jr. ultimately claims that: "Some combination of both factors [intrinsic and extrinsic] is what is driving the renewed interest in the genre" (ibid.). McCarthy concludes that retro-looking indie games "are built for gamers who want a new, well-developed game with higher replay-ability, but an older-looking design and sound that reminds them of being a kid" (para. 18).

All the examples above see the pleasure associated with so-called retro-style indie gaming as emanating solely from positive emotions derived from the memories of an idealized childhood: i.e., nostalgia. Especially in McCarthy's article, pixel graphics belong to an aesthetic that has been surpassed by more complex technology. Their lo-fi look is equated to a simpler, less technically advanced time. Nostalgia is mentioned numerous times, and the "rise" of these games is highlighted and constructed as

both a bold breakthrough and a return to form. While the aesthetic of these games, especially ones with pixel graphics like *Fez* and *VVVVVV*, is influenced by the classic platformers of the *NES*, to categorize them as new but nostalgic overlooks the history of independent games and pixel graphics since the 1990s and falls victim to a capitalist construction of gaming's past.

The Prehistory of Pixels and Indies

As evidenced in the accounts above, many sources paint indie games, specifically those with pixel graphics and simplified controls, as returning to the past to provide a nostalgic escape from the stagnant AAA industry. While this perspective thumbs its nose at mainstream games, it ironically ignores a broader history of game development outside corporate trajectories. As a look at pixel art before and after the 1980s and 1990s and a brief historical survey of indie games and emulation will show, pixel aesthetics are neither a late 2000s trend nor tied to 1980s games.

Pixel art is not beholden to computer graphics but appeared in art millennia before the invention of raster imaging. Meredith Hoy (2017) distinguishes digital aesthetics as images constructed from or given the appearance of "individuated units of 'digits'" (p. 35) as opposed to the smooth lines of analog aesthetics. This definition detaches the aesthetic from computer hardware and reveals that the digital appears before electronic computation in art and crafts such as pointillism, knitting, and embroidery. In a post on *Pixelation.org*, user Cure (2016) presents a history of pixel art that traces it back to the 3rd millennium BCE and Mesopotamian mosaics. Cure also points to tapestries from Hellenistic Greece in the 3rd century BCE, cross-stitching in the 2nd century BCE, Wampum belts around 1500 CE, needlework in the late 1500s, and pegboards and *Lite-Brite* in the 1960s as examples of pixel art. Russell Kirsch made the first digital photograph in 1957: "a 176x176 px image of his son with a bit depth of 1 bit per pixel" (para. 12; this claim is widely corroborated elsewhere). The term "pixel,"

deriving from the term “picture element,” first appeared in 1965 in an article by Fred C. Billingsley (Lyon, 2006). The exact etymology and meaning of “pixel” is hard to pin down as multiple definitions exist in different contexts. Using pixel to refer to an element of an image, however, circulated through internal company documents, academic papers, and eventually textbooks throughout the 1970s. In a 1976 patent application, Michael Wilmer uses pixel as an abbreviation of *picture cell,* not *picture element.* This shift in the term caught on and is the meaning used in a 1982 paper by Adele Goldberg and Robert Flegal that first uses “Pixel art” to describe a bitmap image that uses “black and white cells or *pixels*” (quoted in Lyon, p. 9). Interestingly, as Lyon notes, computer graphics did not adopt the term pixel until the 1980s, replacing the use of *raster-elements* and *dots*.

The above chronicle of pixel art complicates the pixel’s association with 1980s video games. A look at independent games before the late 2000s also complicates the perception of the ‘newness’ of retro-style indie games. For instance, Jesper Juul (2019), in an article for *Polygon,* “The indie explosion that’s been going on for 30 years (give or take),” illustrates that independent, alternative games have been around since the 1980s. The ideas in this article are further extrapolated on in his book *Handmade Pixels* (2020). While Juul notes that what was widely considered the first video game, *Spacewar!*, was non-commercial, he points out that to call it “independent” is erroneous, as “there was nothing to be *independent* from” (para. 5). While *Spacewar!* should not be seen as the first ‘indie’ game, Juul goes on to state that:

> [S]ince the 1970s, there has always been a more or less well-defined center of financially strong developers or publishers and a periphery of smaller, often transient hobbyist developers that work on smaller budgets […]. (para. 6)

Before the 1990s, Juul contends that lines between hobbyists and corporate developers were more blurred, particularly in the home computer markets. Donovan reports that while the 1970s saw a

boom in arcade games, computer games were also being produced by those with access to computing technology (often through academia, tech businesses, or government work). Computer game makers were not beholden to commercial pressures of the arcades and experimented with the limited hardware capabilities of the time to produce text adventures. Noted releases include *Colossal Cave Adventure* (Will Crowther, 1976), *Zork* (1977), the first in a series of text adventures by Infocom, and *Mystery House* (1980) by Ken and Roberta Williams, who would go on to create the company Sierra On-line and publish many fondly remembered graphical adventures series (i.e. *King's Quest,* 1984-1998, and *Leisure Suit Larry*, 1987-1996). Many text and early graphic adventures were developed and directly distributed by small companies to computer stores in Ziploc bags. This market was not dominated by more successful companies like Infocom and Sierra On-line. Instead, the model of direct sale of bagged floppy discs to retailers opened the door to any developer who had the hardware to make copies of their creations.

Donovan also points to the online successor to text adventures, the MUD (Multi-User Dungeons). These games are graphic-free, text-only multiplayer experiences, like online versions of text adventures where players explore created worlds, complete goals and quests, and chat with others on the server. The first *MUD*, simply called "MUD" created by Roy Trubshaw and Richard Bartle, was launched in 1980 (Donovan, p. 316). Sadly, apart from details about the creators and their efforts to develop and refine *MUD*, Donovan provides little detail on other *MUD*s. He seemingly brings up this type of game to serve as a predecessor for graphical Massive Multiplayer Online games (or MMOs) like *World of Warcraft* (Blizzard Entertainment, 2004). However, *MUD*s continued to be developed and played for decades after their inception. I remember friends immersing themselves in *MUD*s in my high school's computer lab in the early 2000s, and there are still several active titles today, including *Aardwolf MUD* (Imm, 1996), *Archae* (Iron Realms Entertainment, 1997), and *Discworld MUD* (Bennet, Richmond, Reith, and Scott, 1992).

While big companies dominated the arcades, the home computer market before the 1990s was filled with small companies and bedroom coders. According to Juul, significant factors that delineated the line between AAA and indie game development more firmly were: advancements in technology that opened the door to bigger budget projects; the advent of game engines which allowed an easier way for more people to work on a single product; and the growing home console market, which built a high barrier for development and distribution for smaller teams. Venues for distribution of hobbyist and indie games, such as the shareware model (selling cheap 3½-inch computer discs with game demos in various stores), were crowded out by larger developers: for example, iD software borrowed the shareware model for their demos of *Wolfenstein 3D* (1992) and *Doom* (1993).

Into the 1990s, Juul credits the arrival of CD-ROMs as a catalyst for alternative, independent games. Using examples such as *Myst* (Cyan, 1993), *Laurie Anderson's Puppet Motel* (Voyager Company, 1995), and *Peter Gabriel: Eve* (Real World Multimedia, 1996), Juul sheds light on a style of interactive media before the 2000s that could be categorized as either "alternative games" or "alternatives to games" (para. 26). Powered by the storage capacity of CDs, these games featured video and audio fidelity impossible on cartridges or floppy discs, but player interaction in these games was limited. Many titles adopted a play style similar to point-and-click adventures like *The Secret of Monkey Island* (Lucasfilm Games, 1990) but from a first-person perspective. In these alternative games, players often navigated pre-rendered 3D environments and discovered media elements like videos and audio or solved puzzles. Some followed a story, relying on puzzles to advance the narrative, such as *Myst*, where the player uncovers mysteries on an abandoned island.

In contrast, other CD-ROM games were more akin to a multimedia museum exhibit like the CD-ROM included with Wu-Tang Clan's *Wu-Tang Forever* album. Another group of early CD-ROM games were more akin to a collection of mini-games, as is the case with *Puppet Motel* and *Eve*. While

mainstream gaming was focused on command-and-conquer gameplay, these more sedate and contemplative games were a notable contrast.

Juul is careful not to claim any of his examples as specifically independent, as this is a highly portable term dependent on context. However, he does illustrate how histories of games, when portrayed through company-focused accounts like Ahoy, are greatly lacking. There have always been individuals and small teams creating independent or alternative games since the medium's inception. Homebrew, physics games, and the explosion of retro-style games of the 2000s and 2010s are not exceptions or disruptions but part of a broader trajectory of games. My survey above of the history of independent games is selective: it does not include the innumerable games and genres produced outside corporate histories' purview before the 2000s. However, it does shed light on the continuing existence of a world of game production outside the mainstream. While this wider-ranging view gives perspective to the supposed freshness of indie games today, the nostalgic image of retro-style games is challenged by other officially ignored histories such as emulation, homebrew and bootleg games, and the *Flash* scene of the early 2000s.

Pixel Art Past the 1990s

As I have argued throughout this chapter, pixel graphics are not inherently nostalgic, or at least not just the product of the past. Pixel art started long before computers and was the dominant form of graphics in the 1980s. However, playing and producing games with pixel aesthetics did not cease when AAA game companies moved to 3D graphics. As we will see with emulation, independent and illegitimate games, and *Flash*, pixel graphic games have continued well past the 1980s. When considering the history of emulation alongside Bernard Siegert's (2015) theories of the end of media and

illegitimate and underground production in light of Consalvo and Paul's (2019) notions of game "realness," pixel art's "nostalgic" quality is called into question.

When speaking of video games, emulation refers to playing games designed for specific (often obsolete or legacy) hardware platforms on current hardware platforms. Commonly, this is done by using software on a home computer to play games produced for consoles. Early home computer emulators focused on titles from the *NES*, *SNES*, and *Genesis* consoles and have now expanded to emulators for various home computers (such as the Commodore's *C64* and *Amiga*) and more modern consoles like the *PlayStation 3* and *Xbox 360*. In exploring emulation and its relation to nostalgia, it is worth considering Bernhard Siegert's theory that, after the computer, there is no media, only representations of former media objects through the computer's interface. Starting from the arguments of media theorist Friedrich Kittler (1999), who states: "[once] formerly distinct data flows [are turned] into standardized series of digitized numbers, any medium can be translated into any other" (p. 1-2), Siegert claims we have "a total media link on a digital base [that] will erase the very concept of medium" (p. 2). Using Kittler, Siegert states that media have been translated into computer code, "they are no longer real, they are de-ontologized" (p. 85). Of course, to say that media are no longer ontological after the computer—to say media no longer exist—is hyperbolic. I believe Siegert is suggesting that media are (or can be) represented through a single *medium*: the computer. Today, listening to music, reading, writing, and watching movies no longer need their original 'hardware' (gramophones, books, typewriters, and film projectors). Instead, they all expressed as binary code that flows through computers: PCs, laptops, digital audio players, or mobile phones.

Video games have always been code and thus could be considered always-already part of this singular medium. However, older video games have gone through a similar flattening to other media. What are now referred to as retro games depend on specific media objects. For example, if someone wanted to play *Super Mario Bros.,* they needed a physical cartridge and the proper hardware, namely

the *NES*. A flattening of video game media, similar to what Siegert discusses, was enabled in the mid-1990s with console emulation (Altice, 2015; "History of Console Emulators," n.d.; "History of emulation," n.d.; "Video game console emulator," n.d.). A reliable history of emulation is hard to find, but 1989 seems to be agreed upon as the beginning of video game emulation as we know it today. This date marks when developers could run software from a Macintosh computer on an Amiga Computer with a program called the "A-Max" (Kaluszka, 2001; The Scribe, 1999). As home computers became more powerful, software was developed to play game files, also called ROMs, developed for different video game consoles. Nathan Altice places the creation of the first Famicom emulators in 1996, with many more to follow in the fall of the same year. The most popular *NES* emulator, *Nesticle,* was released in 1997 (Altice), along with *ZSNES* for the *SNES*, and *Genecyst* for the *Genesis* ("History of Emulation"). The *NES*, *SNES*, and *Genesis* were discontinued in 1995, 1999, and 1997 (Knight, 2016; Reisinger, 2009). In the case of the *NES*, *SNES*, and *Genesis*, emulation for these consoles was picked up as these systems exited the market. As their manufacturers abandoned them, the games of these consoles, their pixel graphics and simplified gameplay, were not forgotten. They did not become outdated and were not usurped by future gaming consoles, as historical accounts would have one believe. Instead, they were integrated into the computer medium, access widened, and their lives continued. Whereas before, many video games used to be tied to specific consoles in production during specific periods, they were now all accessible as downloadable files able to be played on most home computers without this technological or historical context. As they became playable on the computer and reduced to files on a website or computer folder, their histories flattened, and access to them was all through the same means.

The accessibility resulting from this flattening of video game history into the medium of the computer via emulation renders nostalgia for retro-style indie games not necessarily apt in explaining the appeal of pixel aesthetics. It is just as likely that someone first encountered *Super Mario Bros.* on an

emulator last week as someone having played it during their childhood in the 1980s. With emulation and ROMs, players have easier access to games' code, and as a result, ROM hacking, homebrew, and demake (remaking newer games for older hardware) development communities have sprung up that are not primarily invested in nostalgic gaming, but rather use past games as the basis for creating new games. This kind of game making is mentioned in *The Video Game Explosion*, discussed above, but it was not tied solely to the *Game Boy Advance*. It is associated with many emulated consoles. ROM hacking involves altering code in a ROM to make changes to the game; this can involve adding new levels or environments to games, tweaks to the gameplay, and modifying the appearance of sprites. One example is *Chrono Trigger Coliseum* (Kajar Laboratories, 2006), a hack of *Chrono Trigger* (Square, 1995), which amps up the challenge of combat and adds an arena where characters can play with the battle system. Another is *Strange Mario Bros.* (Acmlm, 2000), a humorous overhaul to the original *SMB* that provides a set of new levels that are, well, strange. There are also numerous hacks to add different characters to *Streets of Rage 2* (Sega, 1992), such as the DC comic book heroes (Zinom, 2012) and Robocop (Felipe, 2012). Homebrew, on the other hand, creates new games for older hardware. For example, *Alter Ego* (Shiru, 2011), a remake of a *ZX Spectrum* game for the NES, and *Pogo Cats* (YGGI, 2012) also for the *NES*, where you play a greaser or pin-up girl and ascend levels by pogoing on platforms. Other homebrew titles begin life on an older system and are ported to other platforms, such as *Pier Solar and the Great Architects* (WaterMelon, 2010), developed originally for the *Sega Genesis* and *Sega CD*, and later brought to the *Sega Dreamcast* (2015), *Wii U*, *Sony PlayStation 3*, *Xbox One*, and *PC* (2014). *Tanglewood* (Big Evil Corporation, 2018) was also created for the *Genesis* but was subsequently released on the PC (you can even play the Genesis ROM of the game on an emulator if you prefer). Key demakes include *Halo 2600* (Ed Fries, 2010) which adapts the original Xbox title *Halo: Combat Evolved* (Bungie, 2001) for the *Atari 2600* and Shenzhen Nanjing Technology's NES version of *Final Fantasy VII* (2005), originally made for the Playstation (Square, 1997), that shrinks the 32-bit polygonal game down to 8-bits pixels.

As might be noticed from the dates in parentheses, hackers, homebrewers, and demakers have continued to be active since emulation began and continue today. Hacks can be found on ROMhacking.net dating back to the 1990s; the earliest listed is Yanshan Software's *Tank 1990* (1990), a hack of *Battle City* (Namco, 1985). The earliest homebrew, *Mouser II,* was released in 1997 by Tony Young. As I write this, there are already several ROM hacks released today, and I am sure you will find the same result if you check right now. While not as prolific, homebrews seem to have been released steadily into the 2020s. As we can see, the creation and distribution of pixel graphics or retro-style games are not locked in the time of their release. However, these aesthetics and even the original hardware's software limitations have been consistently upheld in game making throughout the past 30 years or more. This domain of development is not solely populated by hobbyists either: *Tank 1990*'s Yanshan Software and the *FFVII* demake's Shenzhen Nanjing Technology (or SNT) were well-known publishers in China (*Unforgettable Historical Heroes*, 2022; Larson, 2021). It is hard to find English language information on these companies (or any information at all), but they appear to hold an important place in the history of games in China. In an article by MINNews, the headline proclaims, "Yanshan Software and Alien Technology have influenced generations of Chinese players" (*Unforgettable Historical Heroes*, 2022). Larson notes that SNT has released over 100 titles and is notorious among Western gaming communities, where they are considered ROM hacks or bootlegs. (para. 3).

Larson uses Consalvo and Paul's (2019) notion of game "realness" when discussing the *FFVII demake*. Markers of gaming realness are often tied to certain developers, platforms (consoles and distribution), and existing properties (para. 5). As Larson states: "when a game does not match the gaming community's standardized definition of realness it is seen as illegitimate and lesser, such as when labelled as a bootleg and left unacknowledged in discussions of the franchise" (ibid.). In other words, games that are not developed by "real" developers (hobbyists or unlicensed international game

makers) or distributed through "real" distributors (online marketplaces of Sony, Nintendo, Microsoft, or Steam, or brick-and-mortar stores like GameStop) are deemed "not real games." While their position in the grey market (the shaky area between legitimate and illegal markets) may exempt emulation, ROM hacks, homebrews, and demakes from popular historical accounts, their legality does not negate the creative labour devoted to these games. Similar questions of legitimacy are rarely targeted at game corporations, despite inconsistencies in their official releases: Larson points out that several versions of the original FFVII have been released, such as the 1998 PC port that rewrote most of the game's code, an updated version released in Japan, and the *Final Fantasy VII Remake* (Square Enix, 2020). Since Larson's writing, the remake has received a new version titled *Intergrade* (2021), boosting graphics and adding DLC (Downloadable Content). Larson explains that despite the different versions of *FFVII* released by Square Enix, there have been no discussions of whether they are "real" or "legitimate." It seems that legitimacy lies in the reputation and image of the creators, a notion that primarily privileges large corporations and prestige publishers, often in the West or Japan. As a result, small or international creators are left out of the video game canon (as will be touched on later in the chapter, game legitimacy is often divided along gendered lines as well). This dismissal seems particularly pronounced with modern indie games' most immediate forerunner, the *Flash* game.

Salter and Murray (2014) explore *Adobe Flash* as a pioneer of today's indie game aesthetics. Initially owned by Macromedia when it came into popularity in the late 1990s and early 2000s, Flash was an internet browser extension that allowed webpages to host animated and interactive elements. The software used to create *Flash* elements was initially developed for professionals. However, its ease-of-use and "artist-friendly" development environment attracted a supportive community and widespread DIY game and animation production (p. 7). Flash games and animations enjoyed a broad reach thanks to the output primarily being published online and played or viewed in a browser (p. 10). *Flash* came before mobile phones, when the gaming industry was pushing bigger and more technically advanced 3D

games with complex controls. As a result, there was a gap in games with simpler, less intricate aesthetics and controls. *Flash*'s ability to be hosted on websites with the integration of a widely adopted web extension made them easy to distribute. Without the need to buy or download large games, *Flash* titles could be quickly loaded and played during a break at work or with some free time at home. These games were attractive because they "provided many of the core gameplay and subjects that occurred in longer-form games but at a much more accessible level of time commitment" (p. 67). While one could distribute Flash games anywhere on the net, many sites devoted to hosting Flash content acted as hubs for games and animated shorts. One of the most popular was *Newgrounds*. Anyone could upload their creations to the site for free, but they would need to maintain a positive score to stay on the site, which other users voted on. This ease of publication allowed everyday gamemakers and animators to create and experiment in a low-stakes environment. (In the early 2000s, a friend and I created a few animated shorts that we uploaded to *Newgrounds;* sadly, they were voted off in a couple of days.)

Tutorials for making *Flash* games focused on reverse engineering and recreating platformer games like *Super Mario Brothers* (Salter and Murray, p. 15, p. 44-45). The simple keyboard inputs as the default controls suited browser-based play. Thanks to these affordances, *Flash* saw a slew of 2D platforming games as gamemakers recreated old games, remixed them, or developed something new. There were two prominent visual styles for *Flash* games, a flat cartoon style and a pixel art style. Examples of the flat cartoon style are the beat-em-up *Dad n' Me* (Tom Fulp and Dan Paladin, 2005), featuring a child wrestler as the playable character; *The skullkid* (korded, 2002), where you chainsaw your way through an office building as the eponymous character; and the stickman-lead, *Sonic*-like platformer *Fancy Pants Adventures* (Dr Nero CF, 2006). Ranging from simple (*Fancy Pants*) to crude (*skullkid*), and even to quirky, professional-level artistry (*Dad n' Me*), flat-cartoon style games had a hand-drawn quality presented through rigid and clean digital art tools. This aesthetic is commonly regarded as the "Flash style," but a slew of games adopted a pixelated look.

Several Flash games feature original pixel graphics, such as the puzzle-platformer *Time Fcuk* (Bluebaby, 2009), run-and-gunner *Robin the Mercenary* (matakukos, 2009), and slice-of-life, point-and-clicker *Line Simulator* (XxwaSSupxX, 2010). However, many early Flash games borrowed sprites and environments from 8 and 16-bit games. Thanks to emulation, gamemakers and animators could capture images from games and import them into *Flash* as sprites. A process I was familiar with was bitmap tracing. This method involved capturing a screen shot of each desired frame of gameplay in order to animate a sprite, converting the screenshots to bitmaps, importing the images into the development platform, using the "trace bitmap" function and isolating the sprite or background from the still as a frame of animation. One would do this several times and collect each tracing to assemble an animated unit. My friend and I used this method when trying to make an animated short with the characters from *River City Ransom* (Technōs Japan, 1989). We never finished the project, but were thrilled by its possibilities. However, many games using bitmap tracing or a similar process *did* come to fruition. *Mega Man RPG* (Emperor Evil, 2001), for example, used sprites from the *Mega Man* series of games (Capcom, Inti Creates, 1987-2020) as characters in a turn-based JRPG using sprites. There was also *Bad Dudes vs. Bin Laden* (Tom Fulp, 2001), a fighting game where you, not unproblematically, beat up Osama Bin Laden as a lead character from beat-em-up *Bad Dudes* (Data East, 1988). *Romancing Eternity* (FoGiMoS, 2003) was an ambitious, epic point-and-click adventure that borrowed assets from *Romancing SaGa* (Square, 1992) from the *SNES*.

Flash also saw numerous creations that featured nudity, sex, torture, extreme violence, and many times a mix of all four. Lack of regulation and financial pressure led to many adult-themed titles. Interestingly, despite their short length and pick-up-and-play-ability, or their casual nature, many *Flash* games feature traits such as high difficulty, extreme violence, and female objectification, many aspects valued within the hegemony of play. However, there were numerous games that were more geared toward female audiences such as dress-up games (essentially digital versions of paper doll cut-outs), yet

these titles did not receive much attention and were mostly ignored by video game press and mainstream gamer culture. The perception of *Flash* games as short-form experiences opened creators to experiment with novelty and play with simple mechanics and graphics that borrowed from classic gaming and influenced the indie industry. As Salter and Murray observe: "The single-player games produced in Flash shaped the boundaries of game aesthetics, popularizing the edgy, typically low-fidelity or intentionally pixelated, high-difficulty and innovative variations on traditional game mechanics that would characterize future entries in the independent games genre" (p. 65). Still, histories of video games widely ignore this pocket of production and the perceptions of recent indie games as novel callbacks persist. This exclusion could be partially due to the dispersed and unconstrained distribution of *Flash* games being hard to pin down and document concretely.

To make matters worse, Adobe discontinued support for *Flash* on December 31, 2020, and blocked content from running in *Flash Player* on January 12, 2021 ("Adobe Flash Player End of Life"). So, what was not already lost to time through the temporality of the internet or *Newgrounds*' voting system was prevented from exhibition by Adobe, further adding to erasure. Thankfully, *Internet Archive* has developed an in-browser emulator for *Flash* and is hosting (as of writing this) 5524 games and animations. *Newgrounds* has also developed the *Newgrounds Player* to access their massive library. (It is thanks to these venues and Purposeless Rabbitholes' "Flash Games Nostalgia Bait" YouTube video that I was able to research this section).

Another reason for *Flash* games' exclusion in the canon of gaming history is their lack of game "realness." As discussed above, real games are typically tied to established developers and platforms or, to put it another way, ones deemed legitimate through corporate entities and a gaming culture that has grown up with the hegemony of play outlined in the introduction chapter. Their existence outside of established capitalist structures for games and their borrowing of IPs in their sprite art may position them as a bootleg similar to ROM hacks or the output of Yanshan Software and Shenzhen Nanjing

Technology. Their short, casual nature could also influence their perception as real games. As Brendan Keogh (2018) states, casual games on phones and social media have been "historically dismissed […] as mere distractions that lack both the thematic and mechanical complexity of more traditional console and PC videogames" (p. 62). In her study of gendered perceptions of casual games, Amanda C. Cote (2020) found that interviewees felt casual games did not "count" as real games, echoing Consalvo and Paul's notion of game realness (p. 821). While Cote clarifies that her data does not suggest that casual games are considered more feminine, their persistent categorization as lesser than other games reproduces the hegemonic masculinity inherent in the hegemony of play. Furthermore, many gamers aggressively police the borders of real and not real games.

The #Gamergate movement which saw widespread harassment and abuse toward women in the gaming industry and culture is the prime example of this policing. This event was spurred on by positive press attention given to the game *Depression Quest* (2013), an independent interactive fiction about mental illness developed by Zoë Quinn (Mortensen, 2018). Despite being a "[h]orrible excuse for a 'game'" (hellofour20, 2014) or not a real game at all, as many user reviews on Metacritic (media review aggregator website) would tell you, the game was supposedly given favourable coverage on popular gaming online gaming website *Kotaku* (although the good review in question may never have existed [Eordogh & Gault, 2014]). With the help of rumors spread by her ex-partner, Quinn was accused of trading sexual favours to game journalists for good reviews of her game. As a result, Quinn was doxed (her personal information shared on the internet, such as her address) and harassed by a group of gamers calling for "ethics in gaming journalism" and bullying and attacking many people in speaking out about sexism in gaming and creating more equitable games. A detailed discussion of the full extent of #Gamergate is outside the purview of this project, but it stands as a harrowing example of the vitriolic reaction in gaming culture to games that do not adhere to what is normalized in the hegemony of play. In a later section of this chapter, I will discuss how nostalgia played into #Gamergate, as well. It is hard

to identify the exact reason for the historical short-sightedness of *Flash* games or any emulation-adjacent games in video game histories, especially when some *Flash* titles or characters moved to legitimate platforms. For example, *Meat Boy* (Johnathan McEntee and Edmund McMillen, 2008) was a prototype for the popular indie title *Super Meat Boy*. Likewise*, Alien Hominid* (The Behemoth, 2002/2004) also appeared on *PlayStation 2* and *Game Boy Advance*, two "legitimate" platforms that featured pixel art games after the industry moved to 3D and polygons. In fact, many consoles throughout the 1990s and 2000s released pixel art titles, putting a further wrinkle in the prominence of pixels as products of the past. While 3D graphics dominated the market in general, popular fighting game series like *King of Fighters* (SNK, 1994-2022) made games with pixel-based sprites until 2010's *King of Fighters XIII*. *Nippon Ichi Software* began releasing pixel graphics games in the 1990s for the *PlayStation* and continued to the *Playstation 4* and *Nintendo Switch*. *Disgaea* (2003-2021) was a popular series of theirs and only made the jump to fully three-dimensional graphics with its sixth entry in 2021 (it had previously combined 3D and pre-rendered environments with 2D sprites).

Through tracing the production of so-called retro-style games or titles that feature pixel graphics from the mid-1990s to the 2020s, from emulation, homebrew, and demakes, to the *Flash* scene, we can see that the "retro" aesthetics of indie games since the late 2000s did not come out solely out of the 1980s. Instead, they are part of a stream of development that continued to iterate on game forms and genres abandoned by the AAA industry, for the most part, in the fifth generation of consoles (the time of 32- and 64-bit systems such as the Playstation and Nintendo 64, roughly 1993 to 2006). The exclusion of the games and platforms mentioned in the above sections from popular western conceptions and the history of video games like Ahoy and *The Video Game Explosion* could be due to many factors. Many of the games discussed in this section fall into the category of emulation (ROM Hacks), bootleg (homebrews), and DIY (*Flash* Games), rendering them not legitimate enough to be considered "real games," as they are not accessed through mainstream corporate venues. The western-centric sources I

have researched could also explain the omission of Chinese gray market releases (such as those made by Yanshan or Shenzhen Nanjing) and releases more popular in Japan (*King of Fighter* or *Disgaea*). What all these examples also share is a lack of technical innovation. Large corporate entities did not make these games, and these titles did not push hardware limits. They instead iterated on forms that already existed. As a result, they were ignored by the tehno-progressive capitalist narratives of video game history.

Deconstructing Nintendo Nostalgia

A powerful example of a AAA developer that continues to iterate on older game designs abandoned by its peers and through which the nostalgic and the hauntological are complexly intermixed is Nintendo. Nintendo's treatment of their past IP, particularly with their post-1990s, pixel-based portable *Game Boy Advance* was the outcome of Nintendo game designer Gunpei Yokoi's idea of "lateral thinking with withered technology" (Alt, 2020, para. 25). As mentioned above, the *Game Boy Advance* (or *GBA*) continued to release games with pixel graphics into the 2000s. However, Nintendo's marketing of the handheld console and the games released for it contributed to the perception of pixel graphics as nostalgic. Beyond the ignorance of video game histories and mainstream embrace of 3D graphics in the 1990s onward, the construction of pixel graphics as nostalgic has been influenced by the marketing and output of AAA game companies, primarily Nintendo, even if the design philosophies of Nintendo's game designers have strong hauntological impulses. As Alex Custodio (2020) illustrates in their book, *Who Are You?: Nintendo's Game Boy Advance Platform*, Nintendo relies heavily on creating nostalgia for its products in its marketing of gameplay, especially regarding the titular handheld.

Game Boy Advance was a 32-bit portable console released in 2001 and discontinued in 2008. It was the follow-up handheld console to 1998's *Game Boy Color* (*GBC*) and could play original *Game Boy*

and *GBC* game cartridges, along with its dedicated library. At the same time, it featured a variety of genres (including 3D-style shooters), and most releases for the system featured low-resolution pixel graphics, a contrast to the polygonal visuals of its stationary contemporaries, Sony's *PlayStation 2*, Microsoft's *Xbox*, and Nintendo's home console the *GameCube*. Despite its low-powered capabilities, the system was successful. In the first weekend of its release, it sold roughly 500,000 units in Japan (Eng, 2001), the same number as its home console contemporary *PlayStation 2* had on its first day (Arnold, 2001). Its lifetime sales were 81.51 million, falling 10th in the top 20 highest-selling consoles and beating out the *NES* (13th place) and the *SNES* (15th place) (Owens, 2021). Most games on *GBA* are similar to the games, platforms, and scenes discussed in the previous sections, given their use of pixel graphics past the 1990s. However, these games differ from these previously discussed games as they were a product of a corporation (*Nintendo*) that purposely leveraged nostalgia for profit.

When I first bought the *GBA*, I remember thinking: "Wow! This is like a *Super Nintendo* I can carry around with me!" And that seems to be the reaction *Nintendo* hoped for. As Alex Custodio (2020) argues, "Nintendo's brand is built on nostalgia" (p. 19). The corporation relies heavily on "recursive innovation" (ibid.) in hardware, software, and company image. This is to say that Nintendo often favours revisiting older or outdated hardware and their limited capacities to create cheaper, more portable systems or to implement unique control schemes (such as the *Wii*'s motion controls). While the other two home console giants (Sony and Microsoft) push hardware limits, Nintendo is happy to adopt lower power technology for their systems, which allows for different advantages. For example, the original *Game Boy*'s 2-bit dot matrix display paled when compared to the Sega *Game Gear*'s backlit, full-colour display. Nintendo's system, however, had a smaller form factor and considerably longer battery life, much more conducive to portable play. Even today, as the *PlayStation 5* and *Xbox Series X/S* boast 4k resolutions and 60 to 120 frames-per-second, Nintendo's *Switch* features a 1080p resolution with flagship games running at 30fps. The trade-off is that the *Switch* can be both a TV-connected console

and a portable handheld system, something unachievable with the massive size of Sony and Microsoft hardware and the power needed to run them. The *GBA* was no exception to this recursive innovation, relying on a 32-bit processor and pixel graphics. As Custodio points out, its backward compatibility—which allowed the user to play original *Game Boy* and *Game Boy Color* games—and continuation of the *Game Boy* brand with the "advance" tacked on, was "decidedly backward-looking" (p. 14). The argument can thus be made that, in its backward-looking approach to technology, Nintendo games are hauntological. In eschewing the push for the most advanced hardware and salvaging elements of the past, Nintendo has shown that top-of-the-line technology is not needed to be successful in the modern gaming market. In their recursive approach they are fighting against the perpetual push for hyperreality.

Beyond hardware, Nintendo is recursive in its consistent remakes and making games from previous generations available on current consoles and products. The *SNES* featured several titles initially released on the *NES* as compilations*,* such as *Super Mario All-Stars* (1993) and *Ninja Gaiden Trilogy* (Tecmo, 1995). The *Wii, WiiU,* and *3DS* sold games from older consoles through the *Virtual Console.* On their current console, the *Switch*, Nintendo's online subscription includes access to a selection of *NES*, *SNES, Nintendo 64*, and *Genesis* (!) games. They are happy to keep their past success in clear view to the customers of the present, but it is in their over-reliance on their past that their hauntological approach appears to be leveraged primarily for profit. The *GBA*, a prime example of Nintendo's backward-looking business model that has been criticized for its significant number of remakes and rereleases (Custodio, p. 18). The portable's library of games features 32 re-releases of *NES* games and 36 re-releases of *SNES* games (*List of Games Re-Released onto Nintendo Handhelds*, n.d.). Many original *GBA* titles made by Nintendo reused characters and IPs that appeared in previous generations. For instance, *Wario Land 4*'s (2001) eponymous character originally appeared on the *Game Boy*, *Metroid Fusion* (2002) is the fourth entry in a series that started on the *NES*, and *Kirby and the Amazing Mirror* (Hal Laboratory, 2004) is the sixteenth title to feature the squishy pink sucker. Original

characters and IPs were more common in third-party or subsidiary developer's games, such as *Golden Sun* (Camelot, 2001), *Ninja Five-0* (AKA *Ninja Cop*, Hudson Soft, 2003), and former *Flash* title *Alien Hominid*. However, the most popular and promoted games were remakes, re-releases, or sequels. The top 3 best-selling games are all *Pokémon* (Game Freak, 1996-2022) titles, which began on the original *Game Boy* (one of which is a remake of the original title). The top ten bestsellers include five games featuring Mario, a rerelease of *The Legend of Zelda: Link to the Past* (2002), released first on the *SNES* (1991), and another *Pokémon* title at number ten (Celine, 2017). The popularity of games with familiar characters in familiar franchises is intentional on Nintendo's part, as they design their brand awareness around their stable of established IPs and customers' memory of them.

Additionally, Nintendo positions themselves differently in the gaming market to other contemporary consoles. Along with eschewing powerful graphical technology like Microsoft and Sony, the company forwards a family-friendly image (Penwell, 2022; Whitehead, 2013). Nintendo made children's toys before entering the video game business and even marketed the release of their first American console the Nintendo Entertainment System as a toy, not an electronic (Orland, 2020; Erik Voskuil, n.d.). In Japan, the NES was called the Famicom—an abbreviation for Family Computer. After Nintendo's GameCube console, armed with comparable hardware and more mature titles, failed to compete with Microsoft's *Xbox* and Sony's *PlayStation 2* (Anderson, 2016), the company focused primarily on younger players and a family-friendly audience with their *Wii* and *Wii U* systems (Allchin, 2011; Sinclair, 2013). While Nintendo have been publishing and hosting more mature games on their newest console, the *Switch*, in the past few years (Lyttle, 2018), their "kid-friendly" image still reigns (Murray, 2022). While making their products more approachable and inclusive for younger players and non-traditional gamers (those not fully literate in the hegemony of games), it allows Nintendo to keep their classic characters in the spotlight and continuously remind consumers of halcyon childhood gaming experiences.

Nintendo's reliance on recognizable characters may be best exemplified in their ad campaign for the portable. As outlined by Custodio, the "Who Are You?" campaign featured ads on TV and at the movies as well as on billboards and around transit areas asking which iconic Nintendo character (i.e. Mario, Link, Peach, Donkey Kong, Samus, etc.) the viewer identified with (p. 13). By asking to identify with a favourite character, the ad campaign was trying to remind people of playing as Nintendo characters in their youth. Custodio further claims:

> For many of Nintendo's consumers, Mario, Peach, Link, Zelda, and a host of other treasured characters guided their self-discovery and produced feelings of delight, frustration, pride, comfort, and control through specific software titles on specific hardware objects. (p. 19)

While the *GBA* might be a prime example of the company's recursive innovation in marketing and software output, Nintendo continually banks on nostalgia for the beloved games of the *NES*, their first home console. While recognizable characters change with time, Nintendo always refers back to their origin. Custodio uses the example of the *Legend of Zelda* series to illustrate how nostalgia is ingrained in the company's titles. Based initially on developer Shigeru Miyamoto's childhood memories of exploring the caves and countryside of Sonobe, Japan (p. 24), these titles are set in a world of magic and monsters, often beginning with the hero, Link, as a child themself. Many entries involve time travel, lack a linear timeline, and follow similar narratives allowing for a consistent return to an originary moment with every new game. While Nintendo updates graphics and controller complexity with the times, they never forget to emphasize memory. Beyond recursive innovation in their tentpole products, Nintendo exploits nostalgia further in their hardware releases. In 2016 they launched the *NES Classic Edition* (also called the *NES Mini*), followed by the *SNES* version the following year. These were plug-and-play consoles designed to look like miniature versions of their eponymous hardware and hosted a selection of software released on the systems. They included replica controllers and offered video filters to emulate CRT TVs (along with a Pixel Perfect mode) common in the 1980s and 1990s. Nintendo has also

released replica controllers in conjunction with the additions of *NES*, *SNES*, *N64*, and *Genesis* games on the *Switch*.

Nintendo is an exception to other AAA companies as it refuses to progress along the same technical trajectory. Instead, it iterates on residual media and older, less powerful hardware. In this way, it can be considered hauntological. However, Nintendo's leveraging of its past to construct a nostalgic desire for its future products falls into a reliance on nostalgia that is common in today's marketing.

When Nostalgia Becomes Nefarious

In writing about indie game style, Nadav Lipkin (2013) identifies nostalgia as more than an appreciation of aesthetics: "it is the result of the political protests against the mainstream in the form of a return to blissful youth through reminding players how much the games of their childhoods meant to them" (p. 10). Consequently, this "political protest" demands a rejection of the concerns of the present in favor of an imaged, essentialist time and space in the past. Similar to pixel graphic games, James Newman (2004) theorizes that the nostalgic desire for retro games emerges, in part, from advertising that highlights "pure gaming," which suggests an "emphasis on gameplay over the trappings of presentation" (p. 165) and separation from story, politics, and social issues. Akin to how Daniel Herbert (2017) theorizes today's experience of watching movies on VHS, playing retro and indie games are established here as transporting one to an "imagined 'golden age'" (p. 8). Barbara Stern (1992) speaks of a "yearning for yesterday" in individuals that is expressed by "reproduction of past activities or by the recollection of symbolic representations in memory" (p. 11). However, memories of the past are idealized and gloss over complications or negative aspects. In line with Stern and Herbert, these commentators construct indie games as nostalgic, succumbing to a "warm glow from the past" (Davis, 2011, as quoted in Lipkin, p. 10) and ignoring the political complexities present in modern and retro games.

The discourse around video games today (for the most part) no longer ignores sexism, race, and exploitation in the games industry which may make gaming of the past seem more innocent. But this perceived innocence and lack of politics is only felt by those whose gaming experience is informed by a gaming culture that has traditionally targeted white male children and adolescents. As discussed in the introduction chapter, video games have long been made for boys and have pre-produced patriarchal values and white supremacy. Mejia and LeSavoy (2018) explore how the male gaze was reproduced in video game graphics as early as the 1980s. Early gaming consoles could not render graphics with the same fidelity as current systems and, therefore, were unable to display detailed women's bodies for objectification. However, sexual difference was represented through the interaction of sprites. As Mejia and LeSavoy found, sprites representing male and female characters were often differentiated between active and passive roles. In her video series *Tropes vs. Women in Videogames*, Anita Saarkesian (2013-2015) discusses the "Damsel in Distress" trope in classic and modern video games. This cliché involves a male hero driven to action to save a kidnapped or otherwise endangered female character. While this trope is present in media at large, it is a dominant narrative device in many early *NES* releases, such as *Super Mario Bros*., *The Legend of Zelda*, and *Double Dragon* (Technōs Japan, 1988). It is still used in recent installments of these series. As damsels in distress, female sprites are never playable or active in gameplay or narrative but act as prizes for male sprites. The woman-as-prize tope is even present in *Metroid*. While the protagonist Samus is a woman, this is only revealed when players beat the game and she "'becomes' female by stripping off her Power Suit at the very same moment in which she transitions from an active player-controlled character to a passive sprite" (Mejia and LeSavoy, p. 90). Often cited as an early female protagonist and perhaps an exception to the damsel-in-distress trend, Samus as a woman is still offered up as a prize for the player.

Uneven racial representation was also common in games of the 1980s and 1990s. Much of the racial inequality in games appeared as stereotypes, exclusion, and/or tokenism. For example, Rico

Norwood (2021) reveals that Black playable characters in 1980s video games were predominantly in sports titles. Exceptions included games with what he calls a "color choice," a singular non-white PC. One can find the colour choice in beat-em-ups characters such as Edgar in *Quartet* (Sega, 1986) or Adam in *Streets of Rage* (Sega, 1991). Apart from Black characters, other racialized PCs are primarily found in tournament fighting games like *Street Fighter II* (Capcom, 1991) and *Mortal Kombat II* (Midway, 1993). Norwood laments that beat-up-em titles "reframed Blackness from the tracks and fields to the streets and alleyways, which was not really a positive leap" (para. 15). Additionally, fighting games rely on stereotypes such as Balrog, a black boxer modelled after Mike Tyson, and Dhalsim, a violent south-Asian yogi in tribal garb, both from *Street Fighter II*. Norwood also notes that Black and Brown female characters did not appear in games until *Mortal Kombat II*'s Jade. In all these examples, players could choose to play as racialized characters and not forced, as in many games featuring white protagonists.

As touched on in a previous section in regard to #Gamergate, public response to critics like those mentioned above from white male gamers are often forceful claims that video games are and have long been apolitical. For them, to point out race or gender issues in gaming is in fact the problem. Video game critic The Act Man (2017) explains in his video essay "Feminists & SJW's VS. Video Games," that the reason white males are most protagonists in games is because they are the target demographic. As he states, "[t]he majority of people in America are white, majority of sexual orientation is straight, and the majority of people who play hardcore games are men" (11:30). The "hardcore games" he is referring to are popular triple genres such as FPS, tournament fighting, sports, and open world action-adventures, which he claims are predominantly played by men, according to an unsourced graph he shows in the video. According to him, diversity is not an issue, video games just reflect the demographics of American gamers. To point out lack of diversity or uneven gender representation is to try to force video games into a strict set of standards that does not adhere to the demographic of players. Gamers are more concerned with the narrative and technical qualities of games; they just want

to be entertained. “What we don’t want,” The Act Man proclaims, “is a social ideology infesting and restricting the hobby we love” (33.39). In defense of keeping politics out of games (or more accurately criticizing the inherent politics of games), The Act Man reminisces that when he was growing up those who played video games were considered nerds and bullied for their interests. Video games, and tabletop gaming like D&D, was a refuge for young men to indulge in their interests without outside of the judgement of others.

The Act Man’s warm and fuzzy feelings for a time before politics became a pressing issue in gaming culture when white male gamers could enjoy their white male protagonists reveals the ugly regressive quality of some expressions of nostalgia. Like the interviewees of Anne McCarthy, The Act Man yearns for a simpler and supposedly more innocent time, that in reality was just as sexist or racist as today, but which he was unbothered by. His dedication to his preferred kind of games for his preferred demographic is expressed through the time and effort it took to write, edit, and produce his video. However, this kind of nostalgia has been expressed in far more aggressive ways.

Nostalgia for an earlier era in gaming that is forcefully resistant to the political discourse of today becomes particularly nefarious when considering the event #Gamergate. Anita Saarkesian was a prime target for the movement, who, among others, received threats of death and assault and had her personal information leaked online, for publicly criticizing sexual representation in games (Mortensen, 2018). As evidenced in Breitbart article “GamerGate: A Year in Review,” the narrative constructed by GamerGaters (those who are against people like Saarkesian) was that “social justice warriors” were seeking to destroy good, apolitical video games with fraudulent claims of injustice and should be aggressively pushed back against (Bokhair, 2015).

The vitriolic response seems out of place when watching Saarkesian’s series, *Tropes vs. Women In Video Games*. While she criticizes the games, she does not condemn them or call for their destruction,

she even admits to playing and enjoying several games. And yet, as Torill Elvira Mortensen (2018) reveals, several GamerGaters saw her criticisms and those of others as a conspiracy to "pacify White men [and] hand the power of the 'western world' to the Jews or Islam by encouraging politically correct digital games" (p. 788). Mortensen points out that there have been many instances of gendered harassment in gaming culture before 2014 and that scholars, such as Mia Consalvo, had been pointing out gender issues in gaming before 2014. Yet, #GamerGate stands as a very loud and visible movement that still resonates today.

Instead of feminism or social justice warriors, today it is "wokeness" that is supposedly ruining games. "Woke" as defined by Merriam-Webster is "aware of and actively attentive to important societal facts and issues (especially issues of racial and social justice)" ("Definition of WOKE"), and this term has been adopted as a derogatory term to refer to games, or other pieces of media, that cynically pander to a public that demands wokeness. However, wokeness typically plays out in video game protagonists not being white men, inclusion of BIPOC and LGBTQIA+ representation, and narratives that acknowledge racial and social injustices (Bonthuys, 2019; Makwana, 2022; Wolfshead, 2022).

Everything mentioned above is a brief snippet of the sexism and racism happening in video games since the 1970s. However, it is enough to question the image of retro games as uncomplicated and apolitical. The nefarious nostalgia for older games described above is not for a time when politics were not present in games, but for a past where nothing was deemed political because it was a white all-boys club. They are yearning for an idealized time in their childhood when they were unaware of the politics of video games and were discovering these new digital experiences. When games were a refuge outside of the larger world, not a complicated part of it. They are also grafting a specific encounter to retro gaming and pixel graphics, one highly dependent on class (the privilege of owning video game systems as a child) and childhood experience (one devoid of trauma, abuse, etc.). This perspective also does not account for encounters with retro games outside of their original industrial context (i.e.

emulation). As discussed above, it is just as likely that someone first encountered *Super Mario Bros.* on an emulator last week as someone having played it during their childhood in the 1980s. Furthermore, as we have seen with Nintendo, corporations capitalize on nostalgia to sell their products. What players are nostalgic for may not be their genuine experience but what companies have constructed to feel like the warm glow of a simpler time.

Nintendo has glommed onto old characters in *Mario*, *Link* and *Samus*; dusted off old software with is remakes, re-releases, and *Virtual Console*; and recreated old hardware in the form of their retro controllers for the *Switch* as well as their *NES* and *SNES mini*s. However, this attachment to retro is not exclusive to Nintendo or video games but is a symptom of capitalist realism, Marc Fisher's (2009) theory that capitalism has dominated society for so long and so thoroughly that we cannot even imagine an alternative. For example, Fisher (2014) laments the state of current popular music for regurgitating the past. As he illustrates, "[t]he reliance of current artists on styles that were established long ago suggests that the current moment is in the grip of a formal nostalgia" (p. 20). He also states that "cultural time has folded back on itself, and the impression of linear development has given way to a strange simultaneity" (p. 20). Fisher uses the Arctic Monkeys' 2005 single "I Bet You Look Good on the Dance Floor" and its music video as an example of this "peculiar temporality" (p. 20). He describes that when he first saw the music video, he was convinced that it was a clip from the UK television program *The Old Grey Whistle Test* (1971-1988), a show known for hosting performances by its era's popular alternative bands (to use an anachronistic term), such as Roxy Music, Sparks, and the Talking Heads. The Buzzcocks 1978 performance of "16 Again" on the show feels similar sonically and aesthetically to the Arctic Monkeys' music video. "At least to a casual listen, [the Arctic Monkeys] could quite easily have been a postpunk group from the early 1980s" (p. 21), yet the band was not marketed or perceived as a retro group. Fisher states that "[b]y 2005 the rates of innovation in [rock music] had enormously slackened" (p. 22). Here Fisher suggests that the Arctic Monkeys are not seen as retro because their post-punk style

has continued to be replicated since the 1980s, with little change. The reluctance to innovate is due to an over-reliance on past styles to risk aversion and ensure marketability and profit by record companies. This stagnant production practice is similar to the emergency of video games explored in the introduction chapter, where companies rely on pre-sold properties and familiar media forms and styles to reduce development costs and secure a greater return on new products. This practice, when recycling styles of the past, leads to what Fisher calls the "nostalgia mode," a theory developed by Frederic Jameson (p. 22-23).

Fisher explains Jameson's nostalgia mode as "a formal attachment to the techniques and formulas of the past, a consequence of a retreat from the modernist challenge of innovating cultural forms adequate to contemporary experience" (p. 23). To illustrate the nostalgia mode, Fisher uses Jameson's example of *Star Wars* (1977) as a pastiche form of space adventures, recalling *Buck Rogers* serials (1939) (p. 23-24). *Star Wars* does not directly refer to *Buck Rogers,* and its up-to-date special effects make it visually a product of its time. Nevertheless, it re-uses the narrative formula of its predecessor to appeal to its audience's nostalgia. *Star Wars* also uses formal elements of earlier genres like the Samurai, Wuxia, and Western films. Of course, it could be said that all artistic works take up old formulas and reuse them in different ways. To claim all viewers of *Star Wars* had nostalgia for old sci-fi serials and sword-fighting films is as essentializing as calling indie games retro. When I first watched the film in the 90s, I was more familiar with films influenced by *Star Wars* than its influences. However, what Jameson spots in *Star Wars* is the self-conscious recycling of tropes meant to appeal to the audience's nostalgia (like Nintendo's first-party titles). For those who had no nostalgia for its influences, *Star Wars* appealed to them through its adherence to familiar tropes its genre. It fit nicely alongside other sci-fi adventures such as *Westworld* (1973), *Zardoz* (1974), and the *Planet of the Apes* series (1968-1973), which were also influenced by past media. Interestingly, genre tropes re-used by *Star Wars* became nostalgic again and re-used in more contemporary media such as TV's *Firefly* (2002-2003) and the

Guardians of the Galaxy films (2014-2017), the latter revving up its nostalgic appeal with a soundtrack filled with Rock and Pop hits from the 1970s. Even more recent and blatant are the new films, TV shows, and video games in the *Star Wars* franchise that infinitely reiterate characters, worlds, designs, music, and even film techniques of the original trilogy of films.

This trend is not limited to audio-visual media either but is spread across various commodities. For example, the Off-White™ x Air Jordan 2 sneakers released in November of 2021 were a recreation of a style from 1986, complete with Michael Jordan's signature (Thorpe, 2021). As far as sneakers go, these Jordans are not alone. Many big shoe (and other clothing, for that matter) manufacturers bring back their old designs. Take, for example, the recent releases of Reebok's *Club C* in the style of the original 1985 design, Adidas' *Stan Smith* style from the 70s, and the New Balance x Staud *574* that recalls the design and colours of the shoes from the late 80s. As I write this, on my desk sits a turquoise IKEA *FORSÅ* desk lamp styled to look like a mid-century piece of furniture, resembling those of Czech designer Joseph Hurka. I am also listening to music wearing new AKG *K240* Studio headphones, a classic design seen on Eddie Murphy in the music video for his 1985 single "Party All The Time." The nostalgia mode infects our world through a steady flow of endlessly produced commodities designed to evoke familiarity to pre-sell them.

The affective power of nostalgia to sell products has proven effective. As discussed above, Stern claims that nostalgic advertisement can work on the empathy of consumers, encouraging them to "feel into" an "imaginative recreation of a past golden age associated with the product" (p. 16). Via Braun (1999) and Keller (1993), Muehling, Sprott, and Sultan (2014) explain that consumers typically associate positive feelings toward products linked to positive past experiences. The authors also quote Kathryn Braun-LaTour (2007) to highlight that "[t]he feeling of remembering a past event, particularly from early childhood, is quite powerful" (p. 403, as quoted in Muehling, Sprott, and Sultan, p. 75). Therefore, companies rely on this affective remembrance to push products. In their study, Muehling, Sprott, and

Sultan curiously found that regardless of their past, participants responded more favourably toward ads that evoked nostalgia over those that did not (p.73). This finding suggests a deeper association of an imagined, rather than an experienced (if reimagined) golden age to positive feelings. The next chapter will discuss the deeper relation between memory and feeling as it relates to pixel graphic games. In a world where the nostalgia mode dominates the market, seeing modern indie games as a product of this is understandable. However, this perspective ignores video game production outside the corporate-driven and capitalist market.

Maintaining the Residual

As discussed in the introduction, we exist in a society so dominated by a capitalist ideology that we can hardly even imagine an alternative, i.e., capitalist realism. The histories of video games that prioritize technical progression and large corporations over independent and hobbyist energies reflect this capitalist worldview. While nostalgia can be a market-driven and narrow way to classify the appeal of modern indie games with pixel art, there is some merit to identifying their link to the past. These games are not solely nostalgic but an example of a residual form.

When I speak of residual forms, I mean it in the same sense as Raymond Williams (1977). Williams explains: "[t]he residual, by definition, has been effectively formed in the past, but it is still active in the cultural process, not only and often not at all as an element of the past, but as an effective element of the present" (p. 122). As illustrated in this chapter, pixel graphics and simplified gameplay originate in video games of the 1970s and 1980s. However, these aesthetics have continued to be adopted and developed since the 1990s via emulation, ROM hacks, *Flash* games, and so on. *Braid*, *Fez*, and *Super Meat Boy* are not new kinds of retro-style games. They are iterations of a residual form.

The nostalgia mode sees companies repeatedly reaching to the past for aesthetics that are different from present-day market commodities but still breed familiarity and recognition. Furthermore, advertising seizes on our own affective experiences to imbue new products with warm feelings of nostalgia. Many historical accounts of video games privilege a trajectory of technical progression by large corporations that position pixel graphics firmly among the aesthetics of the past. It is also a symptom of capitalist realism that creative products are read through a lens of progression, and anything that does not fit that lens is deemed unnoteworthy. Seeing current pixel graphic games as an appeal to nostalgia makes sense within our current state of capitalist realism, especially when the output of corporations is most visible and valorized and non-capitalist or less-commercial endeavors are ignored and devalued. It would also be short sighted to say that appealing to nostalgia was not part of the intention of the creators of post-retro games, as the recognition of past game tropes and styles of gameplay are key to making these games recognizable and readable. However, when we consider the long life of independent or alternative games (reaching back to the early 1980s), or how pixel graphic games continued to be played and produced (through emulation, *ROM* hacks, Homebrew, and *Flash* games), seeing modern indie games as merely nostalgic is a misunderstanding of their use of pixel graphics and simplified game mechanisms. Especially in a world where nostalgia is often used as a tool for corporations like Nintendo to affectively market products as always-already familiar and reinforce the myth of a golden age of gaming.

While indie games with pixel graphics and simpler control schemes are not only nostalgic, they are linked to the past through their use of residual forms. They are a highly affective and political aesthetic movement that seeks to break out of capitalism through the past. In short: they are hauntological, an artistic practice that uses elements of the past in the present to propose a better future. Hauntology is an affective and aesthetic energy that is fully grasped through an understanding of theories of affect and aesthetics. The next chapter lays the foundation for conceptualizing modern indie

games with pixel graphics as politically charged, residual forces for good with an examination of theories on hauntology, affect, aesthetics, and their interplay.

Chapter 2 – Hauntology and Post Retro Games

The operations of nostalgia and the significant space it takes up in today's cultural production is connected to the pervasive discourse that the current capitalist system marks the natural and inevitable culmination of global society, a belief which has led to "the failure of the future" (Fisher 2012, p. 16), forcing a looking back to the past. This discourse involves a supposedly stable and secure idea of the world, or "world picture" (Heidegger, 2002b), delegitimatizing dissenting voices that speak against our current neoliberal status quo. In terms of today's mainstream video game culture, there is also a pervasive sense that we have arrived at a culmination in video game development, with its high-resolution graphics, hyper-detail, verisimilitude—in other words, its ever-closer replication of the real world. The sense that the future of video games has failed can be seen in the numerous perplexed and angst-filled YouTube videos asking why video games 'are not fun anymore,' which fuels a nostalgia for the past of videogames, taking the form of retro gaming. This nostalgia can support the status quo by encouraging a regression into the naïve comfort of and consumption of commodities that evoke a constructed ideal past, instead of challenging the present and/or imagining different and better futures. One such challenge to the present can be seen in contemporary video games that use pixel graphics and simplified gameplay for more than nostalgic ends, games which can be described as *post-retro* (Fulton & Fulton, 2010). Crucial to the understanding of the felt experience of nostalgia and post-retro games is the notion of chrono biopolitics, an understood and deeply felt understanding of one's relation to time informed by capitalist influence. In embracing supposedly superseded graphics and control schemes, these games can be seen as a hauntological force, an aesthetic intervention that salvages elements of the past and short circuits a clean chrononormativity to propose a better future. In this way, post-retro games weaponize their aesthetics to produce shock (Vattimo, 2010) and cause dissensus (Rancière, 2015) for goodness (W.E.B. DuBois, 1926, via Taylor, 2016). As will be discussed later in this chapter, I

borrow from Gianni Vattimo, Jacques Rancière, and W.E.B. DuBois to examine how post-retro games re-orient a person's conceptions of the medium to present more ethical video games.

Hauntology and nostalgia are different energies or pulls on the same spectrum that bring the past to the present. Nostalgia is regressive and comforting, recoiling into the warm glow of halcyon days (with some nuance, as will be discussed later). As I discuss in the previous chapter, nostalgia is often used as a tool of capitalist realism that exploits the aesthetics of the past to sell products in the present that are already encoded with positive feelings. Hauntology on the other hand is progressive and distressing: it acknowledges the past in the present and can pull the past out of its comfort zone to extract potential, change, and a better future. As will be discussed in this chapter and the next, many modern pixel graphics games (ones I call post-retro games), are hauntological, not solely nostalgic. They borrow aesthetics of the past to disrupt capitalist realism in the present and work toward a better future instead of dwelling in the solace of memory. To analyze specific post-retro games in the next chapter and undercover their use of hauntology in detail, this chapter lays out a framework. I begin with a brief explanation of the term "post-retro" before moving on to establishing a definition of nostalgia and comparing that definition with hauntology. To analyze how hauntology as an aesthetic and practice applies to post-retro games, I establish how I understand aesthetics and how aesthetics apply to video games. As aesthetics are highly dependent on emotions, I then move on to an exploration of affect, how affect is political and how video games are machines of affect. An explication of the politics of aesthetics and their relation to the affective video game experience follows. The chapter ends by bringing theories of affect and aesthetics together to uncover how post-retro games produce shock through dissensus in the face of the stagnant and homogenous AAA gaming industry, using hauntology to push for goodness.

Why the term "Post-Retro"?

I understand the term "retro" as an adjective to describe media and trends of the past, especially when they are revived or imitated in current media, fashion, or lifestyles. Primarily this expression of retro style is un-critical and primarily a display of nostalgic celebration of the past. We can understand retro gaming as playing games today that were made decades ago. Fulton & Fulton's (2010) term "post-retro" best describes my focus. In short, post-retro games "utilize a retro aesthetic mixed with both retro and modern gameplay elements to create a wholly new experience" (p. 474). In their guide to making games with *Flash*, the authors lay out characteristics of post-retro such as: a retro visual aesthetic (i.e. graphics that look 8-bit, 16-bit, or vector-based, hypnotic visuals), modern music, and, most importantly for my purposes, an affect that both evokes and resists past games and the feelings players normally have for them. The prefix "post-" is a nod to postmodern, post-punk, and post-digital movements. These genres of art acknowledge what has come before while departing from it. Finally, the term's birth out of the DIY *Flash* scene ties the games it defines to the creative explosion of gamemaking that came about from the software's accessibility and the adaptability of the simple mechanics of the classic platformer (Salter & Murray, 2014). So, in short, post-retro describes games that adopt and adapt retro aesthetics (be it in visuals or gameplay), with a self-awareness of past games, yet also with a deliberate resistance to straightforward nostalgia. With their backward-looking etymology, the past-presence of post-retro games are best seen through the lens of hauntology.

Nostalgia and Hauntology

While both phenomena refer to the past, the use of nostalgia and hauntology in media have key differences. As mentioned above, hauntology is progressive and nostalgia is regressive. As Clay Routledge (2015) claims in *Nostalgia: A Psychological Resource*: "When the present or future seems

overwhelming, we often look to the past nostalgically to right the ship" (p. 3). While it is laced with sadness, nostalgia is comforting, a way to escape the troubles of the modern day by looking towards happy memories. There is nothing bad or inherently nefarious in nostalgia. It is comforting and soothing and is a primary element that drives the appeal of great art, including post-retro games. Yet, when over-relied on by capitalist ventures, especially in marketing, nostalgia becomes a tool that recycles the past for profit and can help solidify the status quo.

The concept of nostalgia originated as a perceived disease felt by Swiss mercenaries, soldiers who were hired by various European rulers (Routledge, p. 4). Combining the Greek words "nostos," meaning "return to the native land" and "algos" meaning pain, the term was coined in 1688 by medical student Johannes Hofer (ibid.). It was soon discovered, however, that this feeling was not exclusive to the Swiss but widely experienced throughout the world. The study of nostalgia in the context of homesickness and more generally, the 'homely,' was largely neglected until the twentieth century and the growth of psychology as a field of research. At this time, the term was redefined through the lens of Freudian psychology, describing a yearning to return to childhood or even to a fetal state (p. 5). The idea of nostalgia was separated from its initial ties with homesickness, and its affective range was broadened, including both negative and positive feelings, like a 'bittersweet' emotion (p.5-6). As Routledge explains, while a sad, longing feeling is brought on by nostalgia, "reflecting on or idealizing past experiences and states can generate positive feelings in the present" (p. 6). In the late 1980s, according to Routledge, research on marketing found that individuals feel attachment or prefer products and media they consumed in their childhood, adolescence, and even early twenties (p. 6). Consequently, many companies pounced on nostalgia to market their products, as discussed in connection with Nintendo in Chapter 1.

The nostalgic image that is associated with Nintendo of a boy in the 80s playing *Super Mario Bros.* (Nintendo, 1983) in his living room on a CRT screen is, of course, a constructed ideal. It is similar to

the image of a white, affluent, nuclear family in the 1950s, as presented in classic television comedies like *Leave it to Beaver* (Harry Akerman, 1957-1963). As Stephanie Koontz (1992) reveals in her book *The Way We Never Were: American Families and the Nostalgia Trap*, mid-century families were considerably poorer and less white than they were depicted on TV. Yet, the notion of the "ideal" nuclear family that we are expected to feel nostalgia for still permeates Western culture. This ideal TV family whitewashes over the complexities of social and family life at the time and holds up an unattainable image for today's families to compare themselves against. Similarly, the boy playing Nintendo in the 80s hides the complexities of the early video game industry and its sexist and racist gaming content. The goal of lifting these images up is to maintain a status quo that adheres to, or seeks to adhere to, a hegemonic ideal. As Susan Stewart (1992) insists, "[n]ostalgia, like any form of narrative, is always ideological: the past it seeks has never existed except as narrative, and hence, always absent, that past continually threatens to reproduce itself as a felt lack" (p. 23). Nostalgia presented in marketing is often not based on lived experience but is instead a constructed narrative imposed on the past that makes us feel something is missing in the present. Marketing holds out the promise that this lack in the present can be fulfilled through consumerism, as seen in Nintendo's mini-NES and SNES plug-and-play systems, or the retro-inspired shoes discussed in Chapter 1.

Nostalgia has reached such a peak in Western society that it has a large influence on art and media. What Marc Fisher (2012) calls "the failure of the future" (p. 16) describes an over-dedication to the past and general lack of innovation in media. As I discuss in Chapter 1 with reference to the nostalgia mode, Fisher posits that art is at a cultural impasse. For example, electronic music, which has been thought to sound "futuristic," no longer does. As he laments: "Twenty-first-century electronic music had failed to progress beyond what had been recorded in the twentieth century: practically anything produced in the 2000s could have been recorded in the 1990s" (p. 16). According to him, there is no innovation in culture any longer, and all the possible future art and media we were told to expect have

failed to arrive. In turn, we have accepted a world where "culture would continue without really changing, and where politics was reduced to the administration of an already established (capitalist) system" (ibid.). We have been living in the failed future for so long that the nostalgia mode is the norm of cultural production, as evidenced from the long list of nostalgia-laced products from Chapter 1. I am no longer surprised or intrigued when I see advertisements for new versions of old TV-shows, such as Peacock's *Saved by the Bell* (2020-2021), *Punky Brewster* (2021), and the dramatic reimagining of *Fresh Prince of Bel-Air* (2022-ongoing), I am just tired. Beyond the reuse of genres and tropes in video games, similar reiterations of the past proliferate. For example, Atari has released a series of *Recharged* games that remake their classic titles, such as *Asteroids* (1979/2021), *Centipede* (1981/2021), and *Yars Revenge* (1982/2022) with retro futuristic, vector-style graphics. As well, Capcom has been remaking its early *Resident Evil* titles at an increasing pace in the past few years. The remake of the first entry was released in 2002, remakes of the second and third came in 2019 and 2020, respectively, and the fourth released in 2023. Capitalism has homogenized the present and future through its reliance on the past.

As might be revealed in the decade old sources I am using, I am not original in my arguments that nostalgia is regressive. However, more recently, Elisabeth Wesseling (2016) has criticized such judgments about nostalgia as reductive. She argues that "[n]ostalgia is generally considered to be a merely reactionary form of resistance against modernity that cannot ever have constructive effects on the shaping of contemporary society and culture" (p. 2). To open up the study of nostalgia to more nuance, she points to Svetlana Boym's (2001) notion of "reflective nostalgia." For Boym, nostalgia comes in two forms. What Boym names "restorative nostalgia" is what I have been discussing above: the desire to uncritically return to an idealized past. "Reflective nostalgia," on the other hand, returns to the past to imagine what futures could have emerged from its unfulfilled hopes and dreams. Nicola Sayers (2020) highlights the relation of reflective nostalgia to utopian thinking, the imaging of an ideal and/or equitable world in the future.

Reflective nostalgia and imagining utopias create a space for a more nuanced approach to nostalgia, though I feel it is not fully apt to describe post-retro games. These games not only imagine utopias but put them into practice through gameplay, invading gaming culture with new ways of play through elements of the past. Games that will be discussed in detail in the following chapter, such as *Dys4ia* (Anna Anthropy, 2012), *Undertale* (Toby Fox, 2015), and *Celeste* (Maddy Makes Games, 2018), are made to appeal to players through nostalgia, as will be discussed in their aesthetic links to past games, but they are imagining possible futures at the same time. They borrow from the past, but they point to something new as well, something better. This is why I consider the concept of hauntology more relevant to describe them.

Coined by Jacques Derrida (1993) in *Specters of Marx*, hauntology gained popularity in the 2000s and 2010s, as an overwhelmingly gloomy outlook on humanity's future cast a shadow over a capitalist culture that constantly reiterated the same forms instead of innovating: a phenomenon known as "capitalist realism" (Davis, 2005; Fisher, 2012, 2014). In his book, Derrida troubles the common conception of existence as stable and present and instead posits a fluid presence tied to the past (Davis; Jones 2021). Hauntology, for him, is a spectral intrusion that challenges our commonplace understanding of the world, "The ghost [that] pushes at the boundaries of language and thought" (Davis, p. 379). Through this haunting, temporal linearity, life and death are productively destructed and the "voices of the past or the not yet formulated possibilities of the future" call toward those living in the present (ibid.). Nostalgia finds the past comfortably, as it is remembered or constructed, an image of the way things were. While similar, hauntology is more disjointed, messy, and incomplete. It is anxious and nagging, not soothing and complete. Hauntology's spectral figure comes from the past to invade the present to remind of lost futures and point toward possible ones. Like a ghost, hauntology is never present, as Martin Hägglund (2008) puts it, it is both "*no longer* or *not yet*" (p. 82). It can never quite be grasped as it exists in memories and the virtual. As Ashley P. Jones (2021) explains, "the ghost's

presence is an amalgamation of what was, an ideal, and what could be" (p. 410). Hauntology resists control. It is tied to the past, but its use of memory is never for naïve comfort. It instead opens the present to possibilities imagined in the past.

While pixel graphic games undoubtedly hold a nostalgic appeal, post-retro games also present a more unsettled and hopeful reinvention of the past. These games use residual media and aesthetics to haunt the present and to make moves toward a more equitable future, instead of simply dwelling on the past, but never in a clear or comforting way for the player. Both nostalgia and hauntology operate through affect, yet hauntology itself operates similarly to feelings themselves, tangled in a mess of memories, emotions, and politics that uses the aesthetics of the past to intervene in the present.

Aesthetics

It is through aesthetics primarily that post-retro games use hauntology affectively to short circuit the capitalist realism of AAA games. The experience of video games, while dependent on sight and sound, is also beholden to an embodied aesthetics. My definition of an aesthetic experience, or an event, is a combination of what Noel Caroll (2002) identifies as affect- and content-oriented approaches. Affect-oriented approaches emphasize an "experiential qualia" (p. 146), including pleasure, which he associates with Immanuel Kant; freedom from the ordinary, linked to 1890s artist Aubrey Beardsley; and what John Dewey called the consummatory—a feeling of unity, integration, and wholeness in an event. Content-oriented approaches define the objects of an aesthetic experience or what features of an event evoke an experience. Rudolph Arnheim's (1974) gestalt theory is an example of this. In his writing on gestalt theory, Arnheim breaks down perception of art into a process that first recognizes size differences between objects, then shapes, their specific form, how the elements work together, and finally, what they are expressing. Essentially, gestalt theory explains Dewey's feeling of unified whole as the result of many parts (whether that is characteristics of the art piece, a person's cognition, or both)

working together. Carroll ultimately concludes that if the experience of an event is directed to its form, then that experience is aesthetic, which combines both content- and affect-oriented approaches. Like Carroll, I find both content and affect hard to separate in an event.

Affect and content combine prominently when analyzing immersion into audio-visual media. Julian Hanich (2011) discusses how pleasure in watching a horror film is not necessarily about noticing its form, but rather a play between an unreflective immersion into the filmic world coupled with a jolt out of it to one's body in moments of fright. Elsewhere, Hanich et al. (2014) explore how aesthetic pleasure in sad films also involves a kind of letting go, an immersion in the narrative world that results in being moved to feel sorry for the characters on screen. The emotional/embodied feeling determines aesthetics for Hanich et al., and pleasure is not necessarily tied to form but the extent of the desired bodily effect. While I do not hope to benefit in any tangible way from a horror film, I do expect to gain some affective response. I am interested in feeling fear, not necessarily in appreciating the form of a horror film (though that is part of the pleasure).

The embodied response to horror, sad films, and eating also highlights the physicality of the aesthetic experience, something that needs more attention in theory. Ritu Bhatt (2013) states that Western epistemology has historically directed the science of the sensory to sight. Instead, she sees aesthetics alongside Galen Cranz as a "deeply felt sensory experience—not solely as visual experience" (p. 7). Emily Brady (in Light and Smith) claims that traditional Western aesthetics has privileged certain senses, such as sight, over lower, bodily senses like smell. Moving away from a strict physicality to a general phenomenological approach, Mark Johnson (in Bhatt) uses John Dewey to say that any experience that we extract a unifying meaning from is aesthetic. While keeping the definition open, Paul Crowther (2001) molds Dewey into an emotional whole when stating, "Art is the making of symbolically significant form out of, or into, sensuous manifolds," sensuous manifolds being "complex wholes which are present to the senses or realized in imagination or through emotional identification" (p. 4). I align my

definition with the theorists above, I define aesthetics as any event that evokes the senses and is perceived as a unifying whole. Aesthetics are not solely experienced through sight, but felt throughout the body and senses. This departure from the focus on sight in aesthetic theory is crucial to understanding the aesthetics of videos that in addition to audio-visual stimuli, rely on the body to be fully experienced.

The Aesthetics of Video Games

While the body is integral to all aesthetic experiences, video games provide a combination of both audio-visual experience and direct bodily actions. Accordingly, Graeme Kirkpatrick associates the aesthetic experience of a video game with playing an instrument. As Kirkpatrick states, "Movements and actions performed [in video games …] are keys to sensations that create specific kinds of experience of space" (p. 89). Artistic form here is not just material or visual but felt through the direct manipulation of the game world through proficiency using the input device and its haptic feedback. The physical experience is akin to the grasp of rhythm, embodied knowledge of key placement, and finger strength and dexterity needed to play a song on piano along with the haptic response of the keys. Much of the literature on video games understands their aesthetics according to how they look. Simon Niedenthal (2009), for instance, states that video game aesthetics are conflated with graphics or "eye candy." Yet, the experience of the video game world cannot be experienced without the physical intervention of the player. Often to experience the game as a unified whole, a player must also learn to perform specific combinations of inputs. One cannot experience a game of *Street Fighter 2 Turbo: Hyper Fighting* (Capcom, 1992) as the developers intended without a certain mastery of special moves (such as Ryu's blue energy ball, the Haduken), punches, kicks, blocks, and jumps, but also the feel of the buttons and their response to touch. As Kirkpatrick contends, "[video game] form is elaborated only when the player finds the rhythmic associations necessary to reveal its possibilities" (p. 37). It is the performativity of video games, their implementation of "a performative act to generate meaning" (Kim and Seifert 2007,

p. 1) that primarily differentiates them from other audio-visual aesthetics. However, ignoring the audio-visual stimuli is impossible in theorizing an aesthetic experience for video games.

Looking and listening are equally vital to the gaming experience as movement. As Keogh (2018) nicely puts it:

> Videogame experience depends on a hybrid sensorial engagement of using a motor gesture to push a button while looking at a screen depicting moving images as virtual objects and spaces while listening to sounds and music. (p. 110)

The combination of sights, sounds, and touch comes together nicely in the idea of "game feel" (Swink, 2008). This term is not strictly an academic term, but something broadly understood by game makers, players, and, of course, journalists and writers. Game feel is not quantifiable, but it is highly calculated to provide an affective experience through the combination of inputs and outputs available in games. For example, *Super Mario Bros.* possesses a particular and identifiable game feel, what is sometimes called an 'aesthetic'. The game features a well-defined, brightly colored pixel world. While unfamiliar and alien, with bricks suspended in the air and giant green plumbing pipes rising from the ground, it still signifies a recognizable outdoor environment with blue sky, clouds and green shapes of flora. This stage is also accompanied by jazzy, peppy music that suggests a playful tone, especially when contrasted with the subterranean stage two, which features a dark background, deep blue bricks, and panicked, low-toned music. Mario also has a specific aesthetic feel to how he is controlled by the player. Pressing the right digital input moves him forward but recreates momentum: there is a brief period of acceleration. Once you let go of the input, Mario takes a moment to slow to a stop. His jumps also start quick and slow briefly at the crest, only to speed up again as he descends. You can move him midair but the directional input is not as sensitive as moving him on the ground. This slippery, semi-imprecise movement gives the character the feel of weight and momentum. Coupled with sound effects like a *boing* for the jump, a *boop* when you jump on enemies, a quick crash sound for breaking bricks, and a

short series of abrupt, gulping tones when Mario enters and exits a green pipe not only give further weight to your action but colour the sonic aesthetics of the game world.

*Super Mario'*s game feel is distinct even compared to its brightly pixeled, peppy soundtracked, slippery contemporary *Alex Kidd in Miracle World* (Sega, 1986). While both are platformers with similar aesthetics, *Alex Kidd*'s slipperiness has less of a drag, and his jumps ascend more quickly and allow for less control in air. Alex can also punch, where Mario must rely on power ups to expand his moveset beyond jumping and running. *Alex Kidd*'s environment and sprites have higher detail, which curiously give them a more rudimentary look than *Mario*'s. It is like comparing an amateur drawing of an anime character (*Alex Kidd*) with a professional artist's simplified cartoon (*Mario*). The music in *Alex Kidd*, while peppy, is not very memorable and borderline annoying, while *Mario*'s tunes stay with you for days after playing. When the sights, sounds, and controls are put together, two otherwise similar games, like *Super Mario Bros.* and *Alex Kidd in Miracle World* have distinct game feels. This can be said about all games, even games that are considered to be less interactive, such as visual novels, interactive fiction, or dialogue and combat segments of 8 and 16-bit JRPGs.

While one might describe the experience of action-oriented games in relation to a player character's movement through the game world, game feel for visual novels, interactive fiction, or JRPGs is more dependent on audio-visual stimuli. How the art looks, how the words look, how the environment, characters, and text appear on screen, the animation of visual elements, the music, the voice acting (if present), sound effects: all play into how these games feel. Yet, at the same time the responsiveness of moving a cursor, selecting options, how options are highlighted when a cursor is over them add to a haptic game feel.

The term *game feel* best describes the aesthetic experience of video games, as it captures how performativity (no matter how overt or subtle) combines with the visuals, sounds, and haptic feedback of the input device to create the event. While they do not use the term, Savva et. al. (2012) evoke game

feel in their Dewey-influenced, pragmatist approach to the subject: “the aesthetic experience constitutes itself as a result of a shift through different types of affective engagement that is triggered by the proprioceptive feedback derived by the way the player’s body is involved in the game” (p. 11). Proprioceptive feedback describes the interplay of body and mind in perceiving stimuli as it relates to the body’s position and movement. What Savva, et. al. are describing here is that while the body is central in playing video games, the experience is informed by affective responses to several stimuli, not just physical. However, stimuli that are not specifically physical still feed back into the physical, while performance of in-game actions in turn reveals meaning through sights and sounds. In other words, it is the game feel that is experienced through the cybernetic assemblage of a video game that determines the aesthetic experience. I use cybernetic assemblage in the same way as Brendan Keogh (2018): as a term for when the control apparatus is incorporated into our bodies as an extension of it.

How the player carves out meaning with controller in hand (or mouse and keyboard, or phone) defines the video game event. The aesthetic of video games is revealed in full as the player immerses themselves in the cybernetic assemblage of hands to input device to interface. As Keogh explains, “the player makes sense of the videogame through a body that is an amalgamation of organic, technological, and audiovisual elements made in the moment of play by the videogame they are playing” (p. 40). Immersion is vital here, but I do not use this term to mean completely ‘losing oneself’ in the game world (though I am not excluding it either). Many games, especially mobile games, do not expect or ask the player to be fully immersed. Rather, I mean immersion in the sense of internalized connection to the allowances of the game, what Keogh refers to as a “flow of agency” (ibid.), based on the Mihaly Csikszentmihalyi (2009) theory of “flow,” or focused absorption in a task. Much like the experience of affect, the aesthetic of video games is experienced through an embodied and internalized rule set that is enacted to produce meaning, in a focused and/or immersed state.

As an aesthetic experience—that is any encounter that evokes the senses and can be perceived as a unifying whole—video games are highly affective and embodied. The video game itself presents a game feel (the combination of input, haptic, and audio-visual stimuli that present the specific character of a game) meant to stimulate affective understandings of space, action, and narrative. Yet, the noun "feel" is not enough to describe the event. The experience becomes whole when acted upon by a player who has internalized controls and uses their knowledge and actions to play the game. *Game felt* may be best to describe the aesthetic experience of video games from the player's perspective. The term combines the product and the interactive experience, while entangling it with affect.

Of course, games can be felt beyond an ideal cybernetic assemblage. Many people feel games without achieving competence using their input devices. Others choose to watch games being played, and still experience their aesthetics to a certain extent. While a mastery of controls may reveal the intended experience of the video game to the player, it does not define all experiences. A restricting aspect of many games is that their intended *game felts* depend on a priori knowledge, a habitualized literacy of modern controls and input devices, i.e., the hegemony of play (Fron, et. al. 2007) discussed in the previous chapter and the introduction. Video game aesthetics and aesthetics in general can be limiting and even oppressive through their reliance on ideologically determined recognition. Ideology and the experience of aesthetics in general are highly reliant on one's feelings. While hauntology is an aesthetic style, its power lies in its affective sway.

Affect

One cannot fully explore game feel (or *game felt*) without exploring the theory of feeling or affect theory. The video game event is not only an aesthetic experience but an affective one as well. Much like hauntology, affect retains a spectral quality and defies chrononormativity, where the past and

future fold into the present feeling body. Especially when understanding the affective power of video games, the embodied experience is vital as the aesthetic experience.

Affect theory revels in the fuzziness of how things feel, seeking to uncover and explore the interplay of psychology, biology, and sociology in emotions and feelings. Brian Massumi's (2002) exploration of affect, while challenging to untangle, is very productive when understanding the interplay of emotions, embodiment, and the sociocultural. Massumi places affect in a virtual space between pure feeling and cognition. He equates affect with intensity – a visceral, indescribable experience—and emotion with quality, as something part of a "signifying order" that reduces affect to a shared cultural meaning (Stenner, 2019, p. 40). While separation of affect and emotion is vital for Massumi, he contradictorily emphasizes that feeling and cognition cannot be separated. As he states, "The most material of experience, the firing of a single neuron, is always-already positively sociocultural" (Massumi, p. 209). Raw sensation is irreducible from learning, and thus affect is tangled up with emotion; therefore, it is unproductive to separate them.

In just defining terms alone, a web of relations between different temporalities emerges in affect, especially in the writing of Massumi. His notion of the virtual, while cryptic, animates the futurity of affect. The virtual is the first stage of a perceived affect: it comes just before feeling as a jumble of learned instinct, memory, and expectations that is never consciously perceived but informs the experience pre-consciously. As Massumi puts it: "The virtual, the pressing crowd of incipiencies and tendencies, is a realm of potential" (p. 40), and "the virtual as cresting in a liminal realm of emergence, where half- actualized actions and expressions arise like waves on a sea" (p. 41). Massumi's explanation of the virtual ingeniously acts like the virtual itself, bumping up against understandability, allowing the reader to nearly grasp the concept, only to obfuscate and transform understanding into an amorphous feeling (e.g., confusion or frustration). It is in the ungraspability of the virtual, its perpetual state of becoming that the "past and future brush shoulders" (p. 41) on their way to the present. Lauren Berlant

(2011) explains that “the visceral response is a trained thing, not just autonomic activity”, further adding “memory and the past emerge in mediated zones of visceral presence distributed across scenes of epistemological and bodily activity” (p. 61). While your memories write affective scripts that inform your present, these scripts also set the stage for what will be felt through anticipation. As Massumi elucidates, “anticipation, extends the actual moment beyond itself, superposing one moment upon the next, in a way that is not just thought but also bodily felt as a yearning, tending, or tropism” (p. 101).

The body is the nexus of affect. In feeling the world, one’s body becomes the center of experience and expression of emotions. As Sylvan Tomkins (2008) points out, the face is a critical site for communicating and reading affect, often aided by body language. In this way, feelings have been called contagious for their ease of transmission from body to body (Gorton, 2007). Tomkins explains that children effectively learn behaviour by witnessing and catching emotions, especially when others react to their actions. The past, present, and future collide again here as we learn to express emotions through the visible expression of others and use this memory to predict appropriate feelings and displays of feelings. Beyond reading and expressing emotions, affect is activated through contact, proximity and intensity on the body.

The position from which one experiences life, the proximity of an object to the body, pressure on the skin, or “impression of a surface” (Ahmed, p. 24) determines the intensity of both a physical and emotional feeling. The felt proximity of an object is also tied up with expectations and anticipations of what will be felt—working in tandem with what Massumi calls a “narrative continuity” (p. 25), or how one understands their place in the world or reality. Additionally, anticipation is felt in the body, such as a clenched jaw or tenseness in the stomach. Embodied emotional memories dictate how we experience anticipation. Tomkins would call these scripts, while Kara Keeling (2007) calls them motor contrivances. Focusing more on embodied memory, motor contrivances “determine the variety and complexity of one’s body’s reaction, depending on past experiences” (Keeling, p. 13). When we finally feel what we

are anticipating, our attention shifts to our bodies. For example, through the feeling of pain, Ahmed describes a shocking, sudden awareness drawn to our skin, bodies, and proximity to objects.

> The experience of space is also tied to embodied affect and becomes an important factor of how one feels in games. Following his notion of narrative continuity, Massumi calls for an embodied and affective understanding of space. He illustrates his idea through an anecdote about how he can move around familiar spaces with ease but cannot easily map them out from memory. As he says: I realized that I could make my way to and from my office to the building's exit without error, but, if I had been asked to sketch scenes from the corridors or to map the route, I couldn't have done it with any accuracy. (p. 178)

Here he is arguing that architecture is primarily an experience felt in the body. One's motor contrivances store spatial and felt memory in motor functions but not in direct recall.

The Politics of Affect

The feedback loop of memories, expectations, and feelings creates what Massumi calls a "narrative continuity" (p. 25), or how one understands their place in the world or reality. And one's place in the world and how one feels about it is intrinsically socially constructed and political. Feeling comfortable or uncomfortable in one's body and surroundings is inherently political. Affect is also used to police bodies and prescribe comfort and discomfort in spaces for certain bodies through internalized and normalized feelings. These feelings are so ingrained that they cannot be thought out of but must be felt out of. Hauntology, as a disquieting force, works to make an encounter with art uncomfortable through affect. As we will see below, this becomes highly effective through video games.

As Megan Boler (2004) reveals, emotions tied to hegemonic ideals have been "culturally classified as 'natural,' benign, and normal" (p. 2). In Western society these norms are tied to capitalist realism. For example, the nostalgic nuclear family—the man who works, the woman who cares for children, and the children who model the examples of the parents—is devoted to the reproduction of our current system. A man who does not work is a loser, a woman who does not want children is selfish. Failure to live up to norms marks one as other or deficient. It is in our desire for success that we are affectively dedicated to norms of capitalist realism.

Success is also governed through what Elizabeth Freeman (2010) calls chronobiopolitcs, a socially constructed force that organizes people and their lives into optimal units of time to best serve those in power. Chronobiopolitics is most observable through wage labour: the exploitation of human work through organized chunks of time, such as an 8-hour workday, for the profit of business owners, landlords, and the government. But also comes into play in organizing one's sense of self through linear progression and being "productive." As Freeman states: "In a chronobiological society, the state and other institutions […] link properly temporalized bodies to narratives of movement and change […] such as marriage, accumulation of health and wealth for the future, reproduction, childrearing, and death and its attendant rituals" (p. 4). The trajectory of the nostalgic nuclear family is not achievable for many people. If one does not adhere to this chrononormativity they are set up to feel like a failure.

Ideas of success block out other ways of life that do not adhere to hegemonic ideals. Jack Halberstam (2011) critiques success in the Western world as tied to a dedication to a heteronormative capitalist ideology and instead advocates that we embrace failure. As he proposes: "while failure certainly comes accompanied by a host of negative affects, such as disappointment, disillusionment, and despair, it also provides the opportunity to use these negative affects to poke holes in the toxic positivity of contemporary life" (p. 16). This queer art of failure, as Halberstam calls it, falls in line with what Sara Ahmed names queer feelings. Instead of success vs. failure, Ahmed pays attention to comfort and

discomfort. She illustrates how many societies have constructed heterosexuality "as a script for an ideal life", in what she describes as "[t]he everydayness of compulsory heterosexuality" (p. 156). The coupling of man and woman has reached such an affective commitment in Western society that this romantic grouping is seen as default. Heterosexuality also affords easier access to milestones of chrononormativity, such as marriage and children, as well as feelings of comfort that makes everyday life a smoother experience. "Heteronormativity functions as a form of public comfort by allowing bodies to extend into spaces that have already taken their shape," Ahmed further adds: "One does not notice this as a world when one has been shaped by that world, and even acquired its shape" (p. 157). When a body adheres to a norm, not only does it feel comfort in spaces made in its images and for its image, but takes their comfort as a given, a natural state of being. It takes feeling differently to see normative comfort as discomfort. As Ahmed explains: "Discomfort is a feeling of disorientation: one's body feels out of place, awkward, unsettled" (ibid.). This discomfort is not a choice, but "an effect of bodies inhabiting spaces that do not take or 'extend' their shape" (p. 161). In turn, queer bodies are shaped by a failure to adhere to heterosexual norms.

Halberstam's and Ahmed's exploration of failure and discomfort reveals that while affect can work to control people, it also becomes a doorway to feel one's way out of imposed norms. It is through a body's failure to live up to heteronormativity or their feeling uncomfortable with the attributes of success that one can affectively grasp societal injustices. In other words, inequity is felt, and, in many cases, inequity is felt through failure and discomfort. As discussed above, those with vested interests in a heteronormative and chrononormative capitalist world will work to naturalize the ideology that works best for them. But by feeling differently about the world, and unsettling what is taken for granted, we can access different and maybe better ways to live. As Halberstam argues, "failing, losing, forgetting, unmaking, undoing, unbecoming, not knowing may in fact offer more creative, more cooperative, more surprising ways of being in the world" (p. 15-16).

Caught in a confused chronology, a feeling is never felt without the help of one's memory and expectation, one's learning and anticipation. It is not the goal of affect theory to solve this conflict; instead, theorists, like Massumi, prefer to bring it briefly into consciousness before diving back below the surface of poetic metaphor. Affect is both rooted in science, felt in theory, and informed by ideology. It is this hazy corporeality, in its tangled timeline, and pervasive politics that affect meets hauntology. Hauntology functions primarily through feeling and the imagining of better worlds through the past, through discomfort and rupture of chronomormativity, therefore any study on the subject must consider affect as well. Affect becomes ever more vital to understand when hauntology is combined with video games. In their creation of play spaces and interactive worlds, video games are themselves ideologically informed machines of affect. In this way, AAA games can be read as agents of capitalist realism seeking to naturalize their dominant ideology of heteronormativity and chrononormativity.

Video Games as Affect

Video games relate to affect principally through representation, a practice that "has always been an embodied experience" (Anable, 2018, p. 36). Video games can appear graphically very realistic, abstract, or simplified, but are always representing a physical and narrative experience that we are invited into. Games ask us to delve into their systems but also "engage and entangle us in a circuit of feeling between their computational systems and the broader systems with which they interface: ideology narrative, aesthetics, and flesh" (Anable, p. xii). It is in their reproduction of actions, reactions, and cues for how to feel about them; through visuals, narrative, gameplay, and sounds, that video games are affective systems (Anable). Games represent what it feels like to inhabit a world, but these representations are tied up with how the game makers understand our world.

As discussed above, affect is embedded with politics. In reproducing a world informed by the ideology of developers, video games are also inherently political through the operationalizing of value systems. As Bogost (2010) argues, video games "mount claims through procedural rhetorics" (p. 10). That is to say that, in representing a world that operates through a procedural ruleset, video games express ideas and arguments about society through how elements of the world are represented and what results incur from actions. For example, the classic Japanese Role-Playing Game (JRPG) *Dragon Quest* (Chunsoft, 1986)—released in North America as *Dragon Warrior* on the NES—makes an argument for male supremacy, meritocracy, capitalism, and colonialism through its narrative and game mechanics.

As discussed in the previous chapter, video games, especially classic games like *Dragon Quest*, tend to treat women as objects or rewards for male characters, and by extension, their players. This male supremacist plot device is named by Anita Saarkesian (2013) as the "The Damsel in Distress" trope. The driving force in *Dragon Quest*'s narrative is to rescue the princess, and while she is not the ultimate reward or final goal of *Dragon Quest* (after rescuing the princess you still need to fulfill tasks to challenge the Dragonlord), her capture and helplessness is the inciting incident of the narrative.

Meritocracy in *Dragon Quest* is espoused through its main gameplay loop: grinding. As you fight and defeat more and more enemies, your character gains more strength. Progressing in the game is a linear movement that involves a process of slowly gaining strength and money through work. Work in this game consists of fighting numerous enemies over and over again. This practice is called grinding and is a common component in JRPGs. The transactional quality of grinding mirrors the transactional character of capitalism. Your character is a worker and must use the currency they earn, whether money or experience points, to gain more wealth and strength in order to move further through the game world. Capitalism is also reflected in the need for money to do many things in the game, such as buy equipment and rest at an inn (to replenish health and magic points). On a deeper level, however, each NPC (non-playable character) exists as a transaction. NPCs you can interact with either sell you items,

offer you a place to stay, give you quests, or offer advice for your quest. Most interactions with NPCs work solely to support the machine, namely your quest to save the kingdom. There are, of course, a number of NPCs that give information that colours the narrative of the game and expands its lore, especially in later JRPGs, but in *Dragon Quest* there are few opportunities for reflection and free play, most allowed actions solely work toward capitalist goals.

Apart from transactions and dialogue from human NPCs, the only other interaction option is combat, primarily against non-human characters. During one's playthrough of *Dragon Quest* a slew of creatures must be killed to gain strength, starting from cute looking slimes and oddly anthropomorphic bats to an assortment of bird-like creatures, ghosts, zombies, sentient objects like suits of armour or bags, and many others. This violent gameplay reflects colonialist attitudes as your character ventures across land that is not inhabited by humans, and when encountered by beings seeking to possibly protect their home, you have no choice but to eliminate them. They are othered in the narrative of the game through their inhuman and monstrous appearance and vilified for their propensity to attack the player, but the player's actions are never questioned. Instead, the player is rewarded with capitalist gains. As will be discussed in the following chapter, post-retro games challenge the violent, colonialist nature of JRPGs, but many titles in this genre unquestionably replicate *Dragon Quest*'s combat mechanics. A further colonialist layer in JRPGs was popularized in creature-collector series *Pokémon* (Game Freak, 1996-2022) where the player character captures non-human creatures and pits them against each other in combat.

While I argue that *Dragon Quest* reproduces meritocratic, capitalist, colonialist, and sexist ideology, to call it propaganda would be wrong. I cannot speak to the intention of the developers of the game. Yet, to claim that the game is only a simple fantasy JRPG where you play hero and work to save a kingdom would be myopic. The game rules and its selected representation of its world where grind results in linear progress, interactions are limited to transactions or violence, eliminating othered

characters is rewarded, and its use of a damsel in distress, *Dragon Quest* presents an argument for the merits of these systems and by extension capitalist realism. Of course, we are not privy to the precise politics of the world, nor are given a chance to experience the day-to-day life of the inhabitants, that is outside the ability of this video game. As Bogost reveals: "meaning in videogames is constructed not through a re-creation of the world, but through selectively modeling appropriate elements of that world" (p. 59). Though ideological, tropes and clichés are employed for effective emotional effect and connection. Katherine Isbister (2017) suggests that in video games we are immersed in a setting, whether it is a representation that is seen and heard or even a mental image. We are "tricked" into feeling as if the game were somewhat real (p. 8) through affective shorthand like tropes, but also music and visual representation. She also says that we can read social cues from NPCs, much like we can read the affect of others' bodies, even if these cues are only written and represented through 8-bit graphics (as in the case of older JRPGs). Isbister relates pleasure in playing video games to immersing oneself into an audio-visual representation, similar to film and television.

Film is particularly affective through editing, which is "oriented, not towards the production of meanings (or ideologies), but directly towards a moment-by-moment manipulation of the spectator's affective state" (Shaviro, 2010, p. 188). Steven Shaviro uses the examples of Michael Bay's *Transformers* films (2007-2017) that prioritize rapid cuts to stimulate a frenetic, excited response in the viewer in action scenes instead of displaying coherent space and movement (p. 120). Shaviro argues that film evokes emotions not through direct communication of information, but through manipulating audio-visual stimuli in viewers that elicit affective responses. Ed Tan (2013) further explores how film uses clichés that require the viewer to "call up ideologically determined knowledge" to fill in gaps in the fictional space, in turn leading to a more deeply felt affective meaning in film (p. 34). Modern AAA games with high resolution graphics can use the more complex audio-visual power of cinema for affective response, whereas the 8-bit and menu-based *Dragon Quest* uses broader strokes such as

reliance on clichés (damsel in distress, cursed kingdom, good vs. evil), moody music, and monstrous enemies, to evoke emotion and meaning in its narrative. The interactive nature of games also adds to the affective experience, in what has been often referred to as immersion.

Isbister claims that emotional connection in a game occurs partly through parasocial interaction. This term refers to how movies and TV use audio-visual techniques to connect the viewer to the characters, for example through close-ups on someone's crying face, to stimulate contagious emotion through social cues and simulate an intimacy with the character. As Isbister states, "these techniques evoke emotion because they mirror the way our brains make sense of the world around us in everyday life" (p. 7). We plug into what is happening to characters through our own memories and experiences of feelings, and we either see the character experiencing or imagine they are feeling through audio-visual stimulus. Where movies/TV and video games differ, however, is in the movement of the player/viewer.

A key component to the experience of video games is the use of an input device, whether a gamepad, keyboard and mouse, or phone screen. Looking at video games phenomenologically, Brendan Keogh (2018) examines the lived experience of playing video games and how a controller or phone creates a "cybernetic assemblage" (p. 22) with the body (when the control apparatus is incorporated into our bodies as an extension of it). Keogh is primarily working from Merlau-Ponty's (2013) phenomenology of perception, which proposed that the world is not consciously perceived but felt and that being-in-the-world is a "pre-objective perspective" (Merleau-Ponty, 2013, p. 81 in Keogh, p. 23). We do not think about our movement through the world; we have an embodied knowledge of movement through habit. In line with this, we also perceive the world in a felt way, like Massumi's spatial awareness or Keeling's motor contrivances. Through this embodied perception, the objects in contact with our bodies are then part of our bodily awareness. Keogh recounts Merleau-Ponty's example that: "Without any explicit calculation, a woman maintains a safe distance between the feather in her hat and objects that might damage it" (Merleau-Ponty, p. 144 in Keogh, p. 24). Similarly, we incorporate the

controlling apparatus of a game into our body. Yet, unlike the feather, the controller becomes our way of feeling the game space.

Another key aspect to the embodied experience of games is how performance is somatic and proprioceptive (Keogh). That is to say, while we have a knowledge of face buttons on a controller and what they do, when we hit "X" to jump, our mind does not think "hit X" but instead "jump." The player adept with a controller experiences an embodied literacy, which translates game movement from pressing specific inputs to direct actions in the game world. As Keogh points out, however, the ease of embodied literacy in games comes with extended experience using dominant modes of inputs that have been habitualized through years of gaming in a particular way.

Due to their nature, combining audio-visual stimuli and haptic, games become "representations of experience (including feelings, attitudes, embodied positions, and various sorts of foregroundings and backgroundings of attention)" (Gee, 2008, p. 256). I agree with James Paul Gee, who contends that video games are "value-laden" and "perspective-taking" (ibid.), as well as Anable, who states that video games "give expression to ways of being in the world" (p. xii). In taking on the goals of a player character, internalizing them, and acting them out, players are participating in ideologically situated narrative continuities. Video games' use of affect to make claims about the world through representation is inarguably political.

Through the established hegemony of play and an adept grasp on games' affective power, AAA games immerse the player in their game world and in turn make ideological arguments that support capitalist realism (whether intentional or not). However, the AAA industry becomes ever more successful in creating these immersive experiences through their aesthetics. Indebted to affect, the aesthetic experience is likewise inherently political.

The Politics of Aesthetics: Shock and Dissensus

Aesthetics become political primarily through their reliance on memory, cliché, and our own understanding of our place in the world in a way very similar to affect. As discussed earlier in this chapter, following Dewey and others, I include any encounter that ignites the senses and retains unity to be an aesthetic experience. However, the perception of unity in an event cannot be achieved without recognition. Every element interpreted in a work is interpreted in relation to the whole and through a viewer's previous knowledge. Recognition guides interpretation, as Arnheim states: "What a person sees now, we are told, is simply the outcome of what he has seen in the past" (p. 48), or more succinctly, "Eyesight is insight" (p. 46). A work of art is perceived as art only when we can understand that it is art. Furthermore, the aesthetic experience is affectively reflective, as Gerald C. Cupchick (1995) claims: "Past emotional experiences help readers and viewers construe possible meanings of unfolding aesthetic events" (p. 177). Using William James, Cupchick first identifies subtle primary feelings of pleasure felt through the form of an event, such as "harmonious combinations of lines, colours, and sounds" (ibid.). This first step is where unity of the artwork is determined. Secondary, "coarser" feelings associated with past experiences soon follow and "reverberate" through the body. This step is where our taste for art comes in and we determine how we feel about the object. The two-part process results in multilevel meaning-making, where a subject reacts to the immediate perceived form and quickly reflects on its relation to memories of emotional experiences.

The reliance on past knowledge and emotions in aesthetic encounters points to prototypicality theory: "This model proposes that preference for a work of art is determined by the perceived typicality of the work, not by the work's collative features" (Silvia, 2005, p. 355). This means that memory and recognition are determining factors in experiencing pleasure in the event. For nostalgia, pleasure is found specifically in the recognition of an event. However, art is capable of breaking our familiarity. As Crowther explains:

> In acting upon the world, our starting-point is always inscribed in and informed by a pre-established stock of knowledge and beliefs. In approaching and engaging with the object on the basis of these, the object's resistance, and the new aspects of it which are disclosed through our exploration, serve to modify and, sometimes transform, our starting-point. (p. 10)

In the above quote, the author posits that when one's familiarity is broken by art, a subject's understanding of being in the world can be changed, or a re-distribution of the sensible is achieved. To achieve this result an aesthetic shock must occur to unseat one's distribution of the sensible.

The distribution of the sensible involves a shared understanding of what it means to exist and act in a world; an agreed-upon cultural understanding of how things are. I borrow this term from Jacques Rancière (2011) to explain how people are tied together and understand the world through shared understandings of meanings and feelings. Capitalist realism could be understood as a particular distribution of the sensible. Beyond Rancière's theory, the idea of capitalist realism appears in aesthetic theory by other names. Martin Heidegger (2002b) coined the term "world picture" to name a pervading view of the world that is both immediately perceptible and governed by certain a priori of how the world already is. According to Heidegger, society, whether consciously or subconsciously, perceives the world they live in like a picture; a sort of snapshot in time that can be taken in all at once, a unified, understandable whole. Nuance and framing of the world picture are ignored in favor of a simplified, singular vision of how things are. Furthermore, a picture is only recognized if the one viewing the picture is familiar with the elements represented. Therefore, the world picture becomes comprehensible if it adheres to what the viewer already knows. Capitalist realism could easily fall into an example of a world picture, as well. Especially when implemented to sell products, as discussed with the "new" TV series and shoes that recall old ones, nostalgia finds a home in capitalist realism. While comforting, change and innovation is blocked out in this grainy, overexposed, Polaroid ™ world picture. While there is nothing inherently nefarious in the "world picture," it does place the individual and their ideology in the centre

of world as a whole and builds a foundation for manipulation of worldviews through simplification and reiteration (and enforcement) of norms.[1]

While I contend that many aesthetic experiences can have no effect on one's world picture, for many theorists, a true aesthetic experience reorients the viewer's distribution of the sensible. As Vattimo puts it: "In the genuine work of art a language is born that was never spoken before, heralding a general reordering of the world" (p. 67). This encounter evokes Heidegger's (2002a) notion of shock (or *Stoss*). As described by Vattimo, this conception of shock is an immediately perceived angst in an aesthetic encounter where "the world [a person] was accustomed to seeing becomes strange, is put into crisis in its totality, because the work proposes a new general reorganization of the world" (p. 70). Thus, one is immediately affected by an aesthetic force that rattles their world picture—Heidegger's *Stoss* therefore pairs nicely with what Jacques Rancière (2015) calls dissensus. The opposite of consensus, dissensus is a "re-configuration of the common experience of the sensible" (p. 140). In other words, dissensus disrupts sites of consensus, such as the world picture, to present a new articulation of what is understood and what can be understood.

Dissensus is performed to present goodness, in W. E. B. Du Bois' (1926) sense of the word. Through Paul C Taylor's (2016) reading of Du Bois, goodness points to "the one true method of gaining human sympathy and interest" (section 27, as quoted in Taylor, p. 95), while being tied up with (but not beholden to) ethical principles. In aiming for goodness, dissensus unsettles consensus, the world

[1] It's worth noting before continuing that while Heidegger's theories will play a significant role in this section, I do not condone the actions of Martin Heidegger, the person. The theorist was a member of the Nazi party, an antisemite, and does a poor job of communicating his ideas. Unlike Massumi, who models his theory of affect through his writing style, Heidegger writes in circles and often obfuscates his meaning through convoluted stacking of ideas. Massumi, himself, is not the epitome of ethics or morality either, with his full-hearted advocacy of cryptocurrency, but is far better at communicating his ideas (he is also not a Nazi). The appearance of the world picture, to Heidegger, is in part the result of the mass adoption of photographic technologies, like cinema and photography. His alarmist approach takes on what were relatively new technologies at the time of his writing (1938) come off as technophobic, but still resonate with the digital world today. Heidegger is reprehensible, yet he has had a big influence on aesthetic theory, in particular theories that are useful to my arguments.

picture, or capitalist realism favouring a more just distribution of the sensible, a goal that aligns with hauntology.

An encounter with art that produces dissensus ignites a shock through a sudden break of the sensible into a new orientation of the perceived world. What was familiar is now strange, and this shock is followed by an angst that seeks to reconstruct a world view from newly received, and affectively charged, knowledge. While I would argue that shock is present in all aesthetic experiences, it does not need to be life changing. Hanich (2011), for instance**,** talks about the image and sound supported "brief, highly compressed type of fear" (p. 127) that elicits pleasure in horror films. Horror films do not reorder the viewers' world, but the shock does support the experience. It could also be argued that the sudden experience of pleasure in an event can also elicit a kind of shock: a sudden taste of sweetness when eating a candy, or the gleeful spike of stimuli from a funny joke.

Whether or not its purpose is ethical, aesthetic shock is a useful tool for dissensus. To return to Santiago Zabala from the beginning of this chapter: for him, it is precisely this affective hit that can break out of today's emergency (the world view that everything is fine, despite the many global atrocities). While Zabala focuses on grand socio-political issues such as war, pollution, and genocide, our current emergency penetrates many aspects of the industrialized and tech world. For example, workers for online retail giant Amazon experience dreadful working conditions and aggressive union busting tactics from the company (Blackwell, 2020; Eidelson, 2022; O'Donovan, 2022) yet the world continues to rely on it for a plethora of shopping needs. As discussed in the introduction, where the emergency appears in video games, specifically, is in the AAA industry and culture of video games which are dominated by corporations that perpetuate exploitative labour practices, work to de-politicize sexist, racist, colonial, and capitalist narratives and gameplay and are locked in endless technological progression. In turn, post-retro games become one aesthetic force that breaks out of this emergency, capitalist realism and reliance on marketable nostalgia through hauntology.

Dissensus in Video Games

Consensus in video games can be seen aesthetically through AAA video games' continuous push for hyperrealism. Video game aesthetic technology has advanced so much that graphics can present characters and environments with high verisimilitude. Not only can games put the player in the shoes of the PC, but they can reproduce sophisticated cinematic meaning-making in cut-scenes and gameplay to present a hyperreal event. With the use of complex controls that afford players more varied actions and high-fidelity graphics, these video games, while based in fantasy, provide tropes and ideology that map onto the real world. Their implementation of recognizable tropes in control schemes, narratives, and gameplay goals presents the player with an easily graspable, even frictionless, onboarding for each title (provided they have adept literacy of the hegemony of play) coupled with an immersive aesthetic and affective experience. However, while we see higher resolution graphics, near life-like characters and world, and more and more action allowances through control schemes, this reliance on recognition for risk aversion makes for a largely homogenous output. As discussed in the introduction, the top five selling games in the US in 2023 were *Hogwarts Legacy* (Avalanche Software), *Call of Duty: Modern Warfare 3* (Sledgehammer games), *Madden NFL 24* (EA Tiburon), *Marvel's Spider-Man 2* (Insomniac Games), and *The Legend of Zelda: Tears of the Kingdom* (Nintendo). All five are entries in long running game series or adaptations of multimedia franchises, and all fit into established genres (i.e. open-world adventure, first person shooter, and sports simulator). These titles also take full advantage of the graphical capabilities of the PC or modern gaming consoles and feature aggressive, command and conquer gameplay.

It has also been revealed in recent years that the publishers and developers of these games have perpetuated abusive, sexist, and exploitative labor practices (Campbell, 2018; Consalvo, 2008; Fron et al., 2007; Harvey & Shepherd, 2016; Keogh, 2015; Süngü, 2020). Despite negative press, these

companies are moving several millions of units and sustaining an unending cycle spitting out slick and stale retreads. While technically advanced, beautifully detailed, and exquisitely ray-traced, these titles offer nothing new.

In the words of Heidegger (2012): “Progress has no future [, …] it merely takes things that already are and expedites them ‘further on their previous path’” (p. 89). While AAA games offer more realistic graphics, according to Zabala, representations of reality can no longer produce truth. In “a world that needs new interpretations instead of better descriptions” (Zabala, p. 9), dissensus occurs in post-retro games. Using retro aesthetics, these games use pixel graphics and simplified gameplay to disrupt the push for verisimilitude in favour of goodness.

Using pixel graphics common in video games of the 8-bit and 16-bit eras (roughly the late 1970s to early 1990s), post-retro games disrupt the halted progress of mainstream games in their hauntological interpretation of supposedly superseded aesthetics. To reiterate, I am using Mark Fisher’s (2012, 2014) interpretation of hauntology that describes something that is in the present, haunted by the past, and pointing toward an imagined future. As discussed in Chapter 1, many post-retro games are labelled as nostalgic throwbacks, but that is a limited view. A company’s reliance on nostalgia to sell products hampers creative innovation, in favour of recycling old media and aesthetics for easy recognition. The market’s use of nostalgia’s affect to sell feeds into what Marc Fisher (2012) calls “the failure of the future” (p. 16), as discussed in Chapter 1. This temporal failure involves the lack of cultural innovation, the only progress is a move further into capitalist realism. The aversion of risk and over-reliance on forms of the past to ensure profitability. Hauntology short circuits this by looking to the past not for comfort but for what we can salvage, what still remains, and what new alternatives we can imagine.

First and foremost, post-retro games use hauntology in their image. The shock of pixel graphics in the face of realistic visuals can rewire the gamer's expectations of what to expect in a modern game. As representation in sprites (or character models) and environments are more abstract, clarity of what is represented is blurred. As they are immediately perceptible and stand out from AAA games, pixel graphics are key in producing shock. This aesthetic shock unsettles games' grip on verisimilitude and immediately demands gamers to adjust their cognitive expectations of how game elements are represented. While the aesthetic shock is important for these games, it is not enough for dissensus. Furthermore, at first blush, these post-retro games appear as little more than nostalgia, but this perception is complicated when engaging with a title through narrative, gameplay, and aesthetics. Therefore, initial shock of pixels or the comfort in their image is only part of the dissensus they produce.

In theorizing what he calls "the Intolerable Image", Rancière (2011) critiques the ability of images alone to produce shock, especially when attempting to draw a viewer's attention to global atrocities. We are swamped by images in media, therefore another image alone would have no impact on us. As a truly intolerable image, Rancière demands not direct visual representation and deliberate messages but uses of the image that work to represent their subjects beyond direct representation. For Rancière, the epitome of the intolerable image is Sophie Ristelhueber's picture of an Israeli roadblock on a Palestinian road from the 'WB' series. It refuses to show the separation wall, a grand representation of the conflict. Instead, she turns to something seemingly insignificant, a crumbing roadblock. "Not the emblem of war, but the wounds and scars it imprints on a territory" (104). Ristelhueber is simply presenting this image with no strong strategy for its effect. It is this subtlety that makes the image so powerful. It is the indeterminacy of effect and affective representation of the conflict that makes it the epitome of the intolerable image.

The risk aversion seen in AAA games or products marketed using nostalgic appeals seeks to control the effect of an audience, to reduce indeterminacy in the market. To a certain extent, this is

impossible, as video games become intolerable images in their need for player input for meaning to be produced. However, risk of market failure for mainstream games is reduced in their homogeneous products. Post-retro games become fully the intolerable image through their inherent video game indeterminacy but also their experimentation with visuals, narrative, and form. Dissensus is further produced in these video games through their ability to unseat a passive spectator.

While the intolerable image sparks dissensus, the process is furthered by producing what Rancière calls an "emancipated spectator." There are two primary and complementary ways someone can be emancipated. "[T]he first, the spectator must be roused from the stupefaction of spectators enthralled by appearances and won over by the empathy that makes them identify with the characters on the stage" (p. 4). In requiring interactivity, video games innately "rouse" spectators to action and, in their use of avatars as a locus for gameplay, identification, and a certain amount of empathy with said avatars is needed to progress. For example, if one is to play *Super Mario Bros.* (Nintendo, 1985), the player must identify with the avatar (Mario) in as much as it is their connection to the game world, empathize with the avatar enough not to want harm to come to it (even if for solely gameplay purposes), and use controls to move around obstacles and jump on enemies.

The second step of emancipation requires that distance "must itself be abolished" (ibid.). "The spectator must be removed from the position of observer [… and] drawn into the magic circle" (ibid.). The term "magic circle", in particular, is important to video games, as it has been widely used and critiqued in describing gameplay procedures for immersion and persuasion (See Consalvo, 2009; Flanagan, 2009; Nieuwdorp, 2005; and Bogost, 2010). It is through the first formulation that the second is achieved. When you are made to interact with a world through Mario, for example, and act in his favour to win the game, immersion into the magic circle is inevitable.

The emancipation of the spectator in retro games, like *Super Mario*, is distinct from modern AAA games as they use stripped-down controls and more abstract visuals for representation. The complex controls, intricate haptic feedback, and highly detailed graphics aim for verisimilitude and even a naturalized (or habitualized) hyperrealism. In their push for realism, these games present themselves as politically neutral, while obscuring hegemonic ideology. While the intolerable image and emancipated spectator can be factors in AAA games, they lack dissensus: striving for goodness.

Adopting the simplified gameplay and pixel graphics like retro games, post-retro games fully produce dissensus through hauntology. In the case of post-retro games, affect and hauntology works in tandem with dissensus to point toward goodness. In their seemingly outdated visuals and stripped-down control schemes, post-retro games are evoking the memory of retro gaming in a player, either through personal experience, a second-hand knowledge from a past-obsessed pop culture, or both. There is familiarity, generated through nostalgic aesthetics, but also affective and aesthetic shock in the games' stark difference from the AAA. Additionally, in presentation alone, post-retro games are using their aesthetics for accessibility. Without the use of complex controls or the need for powerful hardware to run the games, these titles allow those without a familiarity with modern controls or up-to-date graphics card and/or controls to play these games. Dissensus arrives in their wide availability and approachability alone, yet the narratives presented in many post-retro games additionally provide representation for the marginalized and presentation of gameplay beyond the usual aggressive, command-and-conquer goals. Narrative and gameplay are key factors that unsettle straightforward nostalgia in these games. The comforting aesthetics of retro games is implemented, but their expanded representation and narratives that represent LGBTQIA+, BIPOC, and neurodivergent issues and people, and their subverting of typical command and conquer gameplay disrupt their perception as merely nostalgic. Post-retro games may be borrowing aesthetics from the past, but they are disrupting the hegemony of play rampant in mainstream retro games.

It is through the accessibility of retro aesthetics, exhibition of different kinds of gameplay, and fuller representation of people and ways to feel about the world that post-retro games use hauntology for dissensus to promote goodness. In the next chapter, I will be examining a selection of post-retro games grounded by three key titles, *Dys4ia*, *Undertale*, and *Celeste* for how they use hauntology to imagine a better world for games.

Chapter 3 - Post-Retro Dissensus: Three Case Studies (*Dys4ia*, *Undertale*, *Celeste*)

Introduction

Pixel graphics and simplified controls alone do not make a hauntological game; there must also be some push for social justice. As defined in the previous chapter, hauntology is the practice of using elements of the past in the present to imagine a better future, and dissensus is the key to making post-retro games truly hauntological. Dissensus is an artistic practice that confronts an unjust world through aesthetic and affective means in order to reorient one's common understanding of how society works and their place in it, or their distribution of the sensible. This is done not for shock alone (although shock is involved) but to push for goodness, and a more equitable world. In sum, hauntological post-retro games implement elements of the past, such as pixel graphics and simplified gameplay, but use their aesthetics and their affective power to create games that provide wider representation and ways to play not offered by the limited hegemony of the mainstream AAA industry's output.

In order show how post-retro games use dissensus, I analyze three key examples of hauntological games: *Dys4ia* (Anna Anthropy, 2012), which uses tropes of classic puzzle games to tell a story of the developer's experience with hormone replacement therapy; *Undertale* (Toby Fox, 2015), a Japanese Role Playing Game (or JRPG) that subverts the command and conquer gameplay of the genre to encourage a criticism of genre tropes and evoke a wide range of emotions based around gameplay choices; and *Celeste* (Maddy Makes Games, 2018), a challenging yet accessible platformer that uses its difficulty (and assists) to recount the experiences of the main character's struggle with mental health. Using their aesthetics, gameplay, and narrative, these games create gaming experiences to subvert expectations around what a game and game experience is, especially on an affective level. They change common male hero fantasies to stories that represent and appeal to those who do not want to or cannot adapt to the hegemony, or simply want something different. While adapting the graphical style

of the 8-bit and 16-bit gaming eras as well as their control schemes, these titles are accessible to those without up-to-date computers or gaming consoles that can run modern AAA games and without a strong literacy of complicated inputs common in these types of titles. They also offer positive representation for those that are BIPOC, LGBTQ2IA+, and neurodivergent. To show how my chosen titles are hauntological, this chapter analyses the three titles through four key elements: *Design*, *Play*, *Story*, and *Equity*, followed by a *Further Playing* section that situates my examples among other hauntological contemporaries.

Following an introduction to the title, the first section, *Design*, describes the models and methods used within the game's visual, sound, and interaction design. It discusses how these games reflect design elements of past gaming, but also how they do not reproduce them in any straightforward fashion. From a design standpoint, hauntology is primarily apparent in the three games through their pixelated graphics, the most noticeable instance of the salvaging of the past. All titles use pixel graphics, reminiscent of the 80s and 90s, a stark contrast to realistic visuals typical in a modern AAA game. Their aesthetic design is where the games produce the initial shock: the immediately perceived disorientation that Gianni Vattimo (2010) claims is vital to a transformative aesthetic encounter. This aesthetic shock unsettles expectations of verisimilitude and immediately demands gamers adjust their cognitive expectations of how game elements are represented. As discussed in the previous chapter, aesthetic shock is the primary element of dissensus and therefore outlining how the games look is vital to understanding their hauntological character. Like the visuals, the audio of the game will be examined for how it reflects or contrasts with retro game sound. The use of music and sounds that imitate the chiptune audio of older games can have powerful nostalgic effects, but also work similarly to pixel graphics in providing a stark contrast to the lush, instrumental scores of AAA games. More high fidelity and orchestral sounding music together with retro-style visuals can also disorient the player or create a more nuanced aesthetic that adds to a game’s hauntological power.

The *Design* section will also include a discussion of controls, as it is through these input devices that the player interacts with and generates or co-creates meaning in games. As Graeme Kirkpatrick (2011) reveals, physical interaction with the game controller is integral to the aesthetic experience of video games. Therefore, how the game's input controls borrow and play with established conventions of retro games, and how their stripped-down character contributes to their hauntological quality, will also be examined in this section. In line with sight and sound, aesthetic shock also extends to the embodied encounter with stripped-down controls in post-retro games. AAA games often require controllers with ten buttons (often including two analog triggers), a digital directional pad, and two analog directional inputs, along with a habitualized, embodied knowledge of how these controllers function. *Dys4ia, Undertale*, *Celeste*, and other post-retro games, in contrast, adopt the simplified controls and therefore gameplay styles of older games, using only four directional inputs and two action buttons, a computer mouse, or touch controls. In this way, they reject the convoluted gameplay of AAA titles that are supported by more complex controllers. Many post-retro games that do not use mouse input or touch controls can be played using a few keys on a standard computer keyboard. Without complex controls, these titles ape the mechanics of earlier games and are more accessible to those not habituated to the hegemony of play.

Where the *Design* section will cover how the chosen games do or do not adhere to retro design conventions, or how they play with retro tropes from a design standpoint, the sections that follow outline the second part of hauntology: the push for goodness. Here I use W.E.B. Du Bois' (1926) sense of goodness to mean an ethical and equitable approach to telling stories (Taylor, 2016), or in more common terms, social justice. Any discussion of a game's audio, visual, and input design is incomplete without a discussion of how it *feels to play*. While the first section provides a more or less a critical reading of technical elements, the *Play* section looks at the experience/feeling that results from a player's interacting with the game's design. In this section I ask how the gameplay and related game

mechanics of the title align with, subvert, or transgress expectations of retro gameplay and provide alternative play to AAA games. Beyond input mechanics, many post-retro games feature gameplay that subverts common gameplay goals and narrative expectations and their related affective impact, such as the feeling of mastery that comes from "winning" a game through the honing of one's technical skills—what Christopher Paul (2018) calls toxic meritocracy. The three key games discussed here, while using gameplay conventions common in AAA retro games, disincentivize, question, or prevent beating or "winning" the game in a traditional sense. In doing so these games work hauntologically to provide different gameplay experiences or game feels than what is common in AAA gaming. Guided by Jacques Rancière's (2011) theory of the emancipated spectator and informed by several games scholars (Consalvo, 2009; Flanagan, 2009; Nieuwdorp, 2005; and Bogost, 2010) explored in the previous chapter, this section explores how the games' 'magic circle' mounts arguments through the affective experience of the video game.

All three key games are queer games in how they express queer feelings (Ahmed, 2004) in gameplay (as well as queer representation in narrative). In essence, these games feel *different* to play. Bo Ruberg (2015) explores the queer potential of games to be 'no fun,' or at least not fun in the traditional sense. Instead of playing into the toxic meritocracy or smooth linearity of overcoming challenges, leveling up, and eventually winning, *Dy4ia*, *Undertale*, and *Celeste* dwell on negative gameplay emotions like frustration, doubt, and failure that are not losing or fail states to be left behind on a path to winning, but core to the gameplay experience. This emphasis on negativity (for lack of a better word) takes up ideas about the queer art of failure as developed by Jack Halberstam (2011). Here failure, or at least failure according to heterosexual and capitalist ideals, is embraced instead of avoided. Smooth fun and linear progression are characteristics of chrononormativity and capitalist realism, and do not reflect the reality of the lived experiences of queer individuals as well as BIPOC and

neurodivergent people. In embracing or dwelling in what may be seen as negative in capitalist realism, these games queer gameplay.

While affective experiences are inherent to gameplay, *Story* is where these games communicate goodness more directly. The *Story* section will describe the narrative or message that emerges or is co-constructed through play. In this section I ask how the story and character representation push for goodness. Instead of telling stories that support command and conquer gameplay, a hero versus an evil force, my chosen games feature interactions between protagonists and antagonists in a more nuanced way. Bad guys are never simply evil but fleshed out characters with motives that evoke sympathy. Like their gameplay, the stories of these games are not designed as confident command and conquer narratives but are filled with doubt, insecurity, and also acts of friendship, love, and cooperation. In addition to queering their narratives, these games want to move the player and confront negative feelings in order to work through them. As stated above, these games are also pushing for goodness and social justice in representation. All these games not only feature queer gameplay but also feature queer characters and more diverse identities than the white, hetero cis male dominated releases of the AAA industry.

Diversity is also represented in the *Equity* of these games. Rounding out the analysis, this section analyzes how the design, play, and story contribute to the game's striving for equity (simplicity or minimalism, broad playability, diverse characters/plot). In this section I look at how the narratives of these games provide more diverse representation, and how the game's design enables gameplay allowances and settings that provide an experience that is welcoming to players that are not habitualized to the complex controls, gameplay, and power fantasies of AAA gaming. In their striving for goodness and a better future, *Dy4ia*, *Undertale*, and *Celeste* set an example for gaming that can be welcoming to newcomers to games. Equity is also reflected in their hardware requirements. As the modern gaming industry pushes for higher graphics and hyperrealism, these games' pixel graphics allow

lower spec systems to run them. This short circuits the endless progression of capitalism by stepping back and leveling the playing field to allow games to be played everywhere. Capitalist realism is also challenged in the accessibility and availability of these games across a plethora of gaming marketplaces, consoles, and devices.

Finally, each analysis ends with a *Further Playing* section that highlights other post-retro games that are similarly hauntological. Games in this section were selected by their common themes and gameplay to the primary titles discussed. Those that follow *Dys4ia* were selected for their deemphasis and subversion of "winning" in games. Titles that join *Undertale* were chosen for their use of game mechanics to mount arguments about other games or culture in general. *Celeste* is partnered with a sole entry, *Dead Cells* (Motion Twin, 2018), for its coupling of challenging gameplay and accessibility settings, along with its push for better equity. Each game selected I have played in researching this project and shed light on the greater reach of hauntology in post-retro games. *Dy4ia*, *Undertale*, and *Celeste* are not sole examples of hauntological games but sit among and are in conversation with several others. From this point forward, heavy theoretical analysis will be set aside in favor of focusing on the content of the titles. As data, I will be using my own experience with each game supported by both scholarly, journalistic, and fan-created texts. The purpose of this chapter is to show how these hauntological games operate and demonstrate how the theories in previous chapters play out in the games under consideration.

***Dys4ia* (Anna Anthropy, 2012)**

Figure 3: Title screen for Dys4ia

Developer Anna Anthropy (AKA Auntie Pixelante) is a prolific gamemaker who creates games and educational tools primarily using accessible and free development tools, such as Adobe Flash, Twine, Bitsy, and ROM hacking tools, and releases them for free or through a pay-what-you-can (PWYC) model. She is also an outspoken critic of AAA games and an advocate for DIY games and game making. Reflecting her advocacy, she has published numerous books and zines promoting accessible gamemaking, gameplaying, and using game development for personal growth. Some examples include *Rise of the Video Game Zinesters* (2012), a manifesto, critical text, and key source for this dissertation; a series of books for youth on how to make games with a variety of accessible gamemaking software, such

as *Scratch*, *PuzzleScript*, and *Twine*; and *Invasive Games* (2023), a zine documenting a project where Anthropy attempted to make games based on her recurring intrusive thoughts.

Best described as a narrative puzzle game, *Dy4ia* stages Anna Anthropy's experience with hormone replacement therapy (or HRT), using gameplay and aesthetics that play on puzzle, action, and adventure games from the *Atari 2600* and its contemporary home consoles in the late 1970s to early 1980s. Released in 2012, *Dy4ia* is not the earliest entry in what I would consider to be the recent wave of post-retro hauntological games (that may go to *Passage* [Jason Rohrer, 2007], which will be discussed later), but it is paradigmatic. Its subversion of retro gaming tropes and aesthetics in order to tell a moving and personal story uncommon in Atari games (or gaming at all) make *Dys4ia* a fundamental hauntological game.

Design

Presented in a 1:1 aspect ratio, *Dys4ia*'s visuals are simple and abstract, recalling early 8-bit systems like the *Atari 2600*, but possessing some key differences. Rarely do screens in the game use more than two or three colours. Finer visual detailing is rare, but present, such as in the label on the pill bottle and the lips and tongue of the mouth in Figure 4 (top right). However, most objects are presented in a single colour and using approximate, cartoonish, and abstract shapes. For example, blobby shapes represent people (see Figure 6) and, as seen in Figure 4, top left, Anthropy represents her feelings about her body using a Tetris-like shape that the player tries to fit through an awkward opening in a brick wall. The stark shapes and aliasing (the jagged edges on curves) are no doubt pixel-based or made to look so, but they lack the detail of popular 8-bit and 16-bit consoles, such as the *NES* and *SNES*. The rudimentary, primitive visuals and bold, garish colours are far more akin to early 8-bit systems of the late 1970s, such as the Fairchild *Channel F* and the Magnavox *Odyssey*^{2}*,* and the early output of the *Atari 2600* and the *Intellivision* (see Figure 5). However, even *2600* and *Intellivision* games contained noticeably more detail in the early 1980s. Similar to *Dys4ia*, *Microsurgeon* (Figure 5, bottom-right), for example, represents the body in a striking yet crude and abstract way, but features noticeably more intricacy and colour on

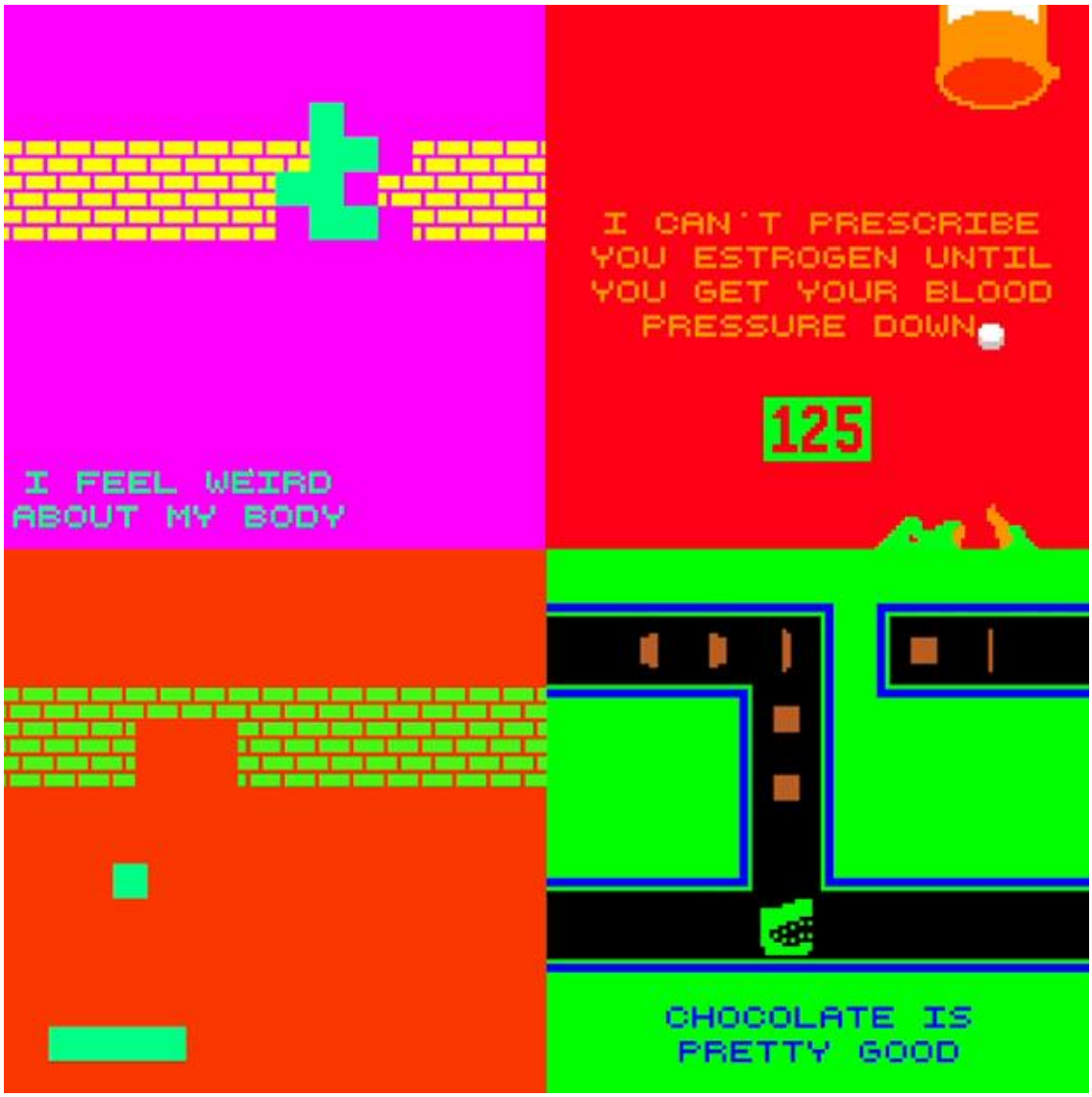

Figure 4: Scenes from Dys4ia (screenshots by author)

screen at once. When *Dys4ia* does opt for detail (as seen in the pill bottle and mouth in Figure 4) its shapes and curves are smoother than the *Intellivison*'s capabilities, betraying its ability for higher pixel resolution than the 8-bit limitations of its precursors. Its on-screen text similarly differs: text on screen in the 1970s was not as plentiful as it is in *Dys4ia*. Text was typically reserved for title screens and when it appeared during primary game play it was much blockier and cruder, representing scores or brief instructions (as seen in Figure 5). Whether intentional or not, *Dys4ia*'s inconsistency with its late 1970s and early 1980s influences work to the advantage of the game's narrative, as it would be much more challenging to tell the story Anthropy was telling without easily legible text.

Dys4ia similarly resembles early 8-bit home consoles in its controls that only require directional inputs. Controllers for the *Atari 2600* and the Magnavox *Odyssey*^{2} were far simpler than today's 13-input gamepads, featuring only a directional joystick and single button. The Fairchild *Channel F* is a standout which featured only a joystick without a base that could move in eight directions, and also be twisted, pushed in, and pulled. *Dy4ia* further strips down the controls to solely the directional ('arrow') buttons on a computer keyboard. Its keyboard input may seem to be more similar to early games on microcomputers like the *Apple][* or *Commodore 64*, but many of those games required text input and/or the use of inputs across the face of the keyboard beyond a single button and directional buttons.

Music and sounds are *Dys4ia*'s most noticeable departure from its referents. The inclusion of music itself was uncommon in early home consoles, as the limitations of the technology barely allowed for in-game sound effects. When music was present it was brief, simple, and typically punctuated a completed level or signaled game over, rather than underscoring gameplay. For example, *K.C. Munchkin!* (Ed Averett, 1981), pictured in the top-right of Figure 5, plays short, sharp bursts of tones when the player picks up a power-up and collects all items in a level. It also provides thumping blip sounds for the avatar's movement, providing a soundtrack of sorts. Atari's *Adventure* (Warren Robinett/Atari, 1980), pictured in the bottom-left of Figure 5, only provides sounds when the avatar (a tiny coloured square) collects items, when the dragon attacks, and a quick burst of tones when you finish the game. The music for *Dys4ia,* composed by Liz Ryerson (AKA ella guro), considerably departs from any soundtrack of the 8-bit or 16-bit era. Her music mixes electronic piano sounds and riffs with glitches and ambient sounds. In the soundtrack, the electronic piano sounds distant, almost overtaken by ambient noise and reverb-heavy speech that sounds like an announcement over speakers in a large space. The soundtrack emulates the sonic space of public places like a busy hospital waiting room, far beyond the capabilities of the aforementioned consoles.

The in-game sounds similarly depart from 8-bit chips and instead are made by voice. Instead of the harsh, sharp tones of low-end sound processors, we hear someone imitating and approximating cartoonish noises. To put it in onomatopoeic terms: the blips and bloops are replaced with zips and zoops. The sounds may not resemble old home consoles, but they do fall in line with the DIY Flash scene, which was filled with low-quality vocal music and sound effects.

Dys4ia wears its influences on its sleeve, but it is not afraid to reach beyond telling its story and highlight its contemporary DIY nature.

Figure 5: Top-left, Pinball Challenge (Fairchild, 1978) a Breakout clone on the Fairchild Channel F; Top-right, K.C. Munchkin! (Ed Averett, 1981) a Pac-Man clone on the Magnavox Odyssey2; Bottom-left, Adventure (Warren Robinett/Atari, 1980) on the Atari 2600; Bottom-right, Microsurgeon (Imagic, 1982) (Sources: videogamecritic.com, retrogamingloft.com, csanyk.com, retrogamer.net).

Play

Dys4ia plays out in short bursts of varied gameplay, each of which provide a segment of its narrative in a manner similar to microgame collections, like the *Wario Ware* series (Nintendo, 2013-

2021). The goal of *Wario Ware* games is to score high in gameplay snippets, typically with simple commands like mashing a button or moving an avatar, with only a few seconds to grasp the particular inputs of the segment and enact them for points. These games are often frantic and stressful, demanding quick thinking and even quicker button inputs to score. Made by Nintendo, these microgames often reference or reproduce gameplay from the company's older games. For example, in the first entry of the series, *Wario Ware: Mega Microgames* (Nintendo, 2003), one of the levels takes place in the house of a character called 9-Volt, which is introduced with a screen showing pixel renditions of older Nintendo consoles, such as the *NES*, *SNES*, *Virtual Boy*, and *Game Boy*, as well as the *Zapper* and *Super Scope* gun accessories for the home consoles. This is followed by a DJ set with 9-Volt that prominently features the Gameboy. Each microgame in this level features the aesthetics and gameplay of classic Nintendo games such as *Donkey Kong* (Nintendo, 1981), *Legend of Zelda* (Nintendo, 1986), and *Balloon Fight* (Nintendo/Hal Laboratory, 1987), it even features a segment that references the company's *Light Beam Gun SP* toy from 1970. Retro references like the ones mentioned above are peppered throughout the rest of the games and other *Wario Ware* entries. The release for the *WiiU*, *Game and Wario* (Nintendo/Intelligent Systems, 2013) is even named after Nintendo's early, pre-*NES* handheld games called *Game and Watch* and features references to the handheld throughout the game.

In its short bursts of gameplay and recreation of retro aesthetics, *Dys4ia* is no doubt influenced by *Wario Ware* games, even directly playing off it. For example, there is a segment where you are tasked with rubbing a swab over teeth to test for HIV that closely resembles a teeth-brushing microgame from *Wario Ware*. While Nintendo's title references the company's own properties, Anthropy opts for gameplay from non-Nintendo IPs such as *Tetris* (Alexi Pajitnov, 1984 [Figure 4, top-left]), *Breakout* (Atari, Inc., 1976 [Figure 4, bottom-left]), and *Pac-Man* (Namco, 1980 [Figure 4, bottom-right]). Furthermore, *Dys4ia* uses non-human and abstract shapes from action-puzzlers of the 70s and 80s that are typically impersonal, and focus on skills and scores, to instead recount her personal story. There is no score to

achieve and no obvious time limit, the gameplay is solely there to represent the affective experience of each step of Anthropy's journey and move on to the next. There is no beginning or end goal to the gameplay itself, often the task is simple and at times unachievable.

For example, in one of the first microgames, the player is tasked with moving a *Tetris*-style shape through an opening in a brick wall (as pictured in the upper-right of Figure 4, top-left). The dimensions of both the wall and avatar make this an impossible task, but the goal is not to be successful. Instead, it represents the awkwardness developer Anna Anthropy feels about her body. Other segments work similarly. In one instance, the player navigates an avatar through a women's bathroom to avoid open stall doors or another where the player simply needs to move their character onto a scale (pictured in Figure 6, top-left and bottom-right). Many of these segments need only limited input from the user, for example pushing in the right direction to move past people misgendering you or pushing down to pull on ill-fitting clothes (Figure 6, bottom-left and top-right). Controlling these segments, you are not supposed to "win" in this game, nor are you supposed to lose. Instead, these microgames only function to represent the affective experience of Anthropy's frustration, anxiety, and fear of societal disapproval.

Linzi Juliano (2012) praises *Dys4ia*'s stripped-down control scheme for keeping "the engagement" on the content of the game and away from a "mastery of a sophisticated controller system" (p. 598). Furthermore, the control scheme "forces the player to shift her focus from an idealization of command and conquer to one that is relational and possibly more 'feminine'" (ibid.). *Dys4ia* borrows the visuals mentioned above and their gameplay but subverts classic game conceptions by removing any score or point accumulation to illustrate a narrative uncommon in the games it imitates.

Story

Taking under ten minutes to play through, *Dy4ia* is a story told in snippets. Each of its four chapters follows Anthropy's experience from feelings of gender dysphoria ("Gender Bullshit") to initiating the process of HRT ("Medical Bullshit"), to dealing with the effects of the therapy ("Hormonal Bullshit"), to finally seeing results and feeling better ("It Gets Better?"). Her trajectory is not told in a straightforward narrative manner but through set pieces or scenes. As discussed in the *Play* section, her feelings are expressed through retro puzzle game aesthetics such as the Tetris-like block attempting to

Figure 6: Scenes in Dy4ia that do not directly reference retro gameplay (screenshots by author).

move through an opening in a brick wall (Figure 4, top left), or a minimalist stealth section to represent her discomfort in public bathrooms (Figure 6, top left). These snippets not only tell the player about feeling weird or uncomfortable but show it through gameplay.

Interspersed with the more gameplay-heavy segments are also segments that require less complicated input, often just needing the player to hold a single key. This can be seen in the segment where your avatar walks by people misgendering you or where you need to stand on a scale. In these instances, only the left or right direction needs to be held (Figure 6, bottom-left, and bottom-right). There are also moments where the player only needs to read a cell phone text or a medical form. While these moments are not input-intensive they still possess the retro-aesthetic and the brevity of the *Wario Ware* series.

In addition to the game's no-win and scoreless gameplay, its use of action-puzzle microgames to tell a coherent narrative is unique. *Tetris*, *Breakout*, and *Pac-Man* do possess narratives in a basic sense, and the *Wario Ware* games often wrap their gameplay in a metanarrative, but often its microgames are disconnected or only broadly related to its narrative thematically. *Dys4ia*'s narrative, however, is primarily told through its microgames. While its low-input moment provides the most informative elements of the narrative (i.e. text messages, scenes in waiting rooms, forms), its affective power comes from the gameplay-heavy segments. The oddly shaped tetromino (Figure 4, top-left), the voracious chocolate munching Pac Man-ish mouth (Figure 4, bottom-right), and the frustrating struggle to tap-tap-tap your clothes to fit (Figure 6, top-right) represent Anthropy's inner struggle, a key element of what makes the narrative effective. One of the most affective snippets is the *Breakout*-like segment from the last chapter of the game, "It Gets Better?" (Figure 4, bottom-left). This chapter of the game provides an optimistic end to Anthropy's journey and revisits versions of previous segments that are now easier to achieve. The Breakout segment in particular stands out as there are no words to explain the feeling associated with the gameplay. The player is solely meant to competently break blocks. After a

frustrating experience with microgames that you are meant to fail, this wordless moment of achievable block-breaking is an effective representation of Anthropy's growing confidence and comfort. The gameplay is not without challenge, but it is not associated with negative feelings, just silent, smooth gameplay.

Dys4ia disrupts common assumptions of score-based retro games and aesthetics for narrative purposes, mirroring developer Anthropy's clash of identity and form. This is a highly personal story that uses traditionally impersonal gameplay tropes to recount it in an affective way. In addition to its unique storytelling, *Dy4ia* also provides positive representation in games for trans people and does so in a space geared toward gameplay outside hegemonic paradigms. As discussed in previous chapters, representation beyond white, cisgendered, and heterosexual identities is rare in gaming, especially AAA gaming (although this is changing).

Equity

As pointed out above, this game uses simple inputs, namely the directional buttons on a computer keyboard. While a minor distinction, these inputs are even more simplified and straightforward than modern direction controls on PCs that are typically located at the W, A, S, and D buttons. Even in more input-heavy instances of the gameplay, mastery over controls is never required. Speed and precision of button pushes do nothing to advance the story, no matter how you perform on each minigame, the game moves forward. These inputs can also be easily mapped to various input devices beyond a computer keyboard and gamepad to more accessible devices like the Xbox Adaptive Controller or the QuadLife.

Made using Flash, this early entry in Anna Anthropy's interactive oeuvre reflects her advocacy for accessible game-making tools and call for more diverse voices in video games (Anthropy, 2012). While this title is a little illusive today, only available to play on unofficial sites like FreeGames.org, it was initially playable for free on Flash site Newgrounds and available as a downloadable .exe file for free

from itch.io. The computing requirements to play the game were very low, and on Newgrounds or FreeGames.org, you can play in your internet browser.

Before it was taken down from official venues, *Dys4ia* was the most accessible of the three games in this chapter, a shining example of Anthropy's own push for better access to games and game development. Made with Flash, *Dys4ia* stands as a shining example of what can be achieved with low-budget, consumer-grade, DIY gamemaking tools.

Further Playing

Developed by Mattie Brice, *Mainichi* (2012) is a walking simulator made using RPG Maker. It sports the aesthetics of 16-bit JRPGs and tells the slice-of-life story of its protagonist (a stand-in for Brice) going to meet her friend at a coffee shop. The gameplay consists of getting ready in your home where you have the option of showering, watching TV, putting on makeup, etc., but only have time for two. You then walk to the coffee shop and choose between two paths, one with a group of young men and another with only a single man (your choices result in either being misgendered or hit on, respectively). Finally, you meet your friend and order coffee, and either get misgendered or not. In this brief game, no matter what you choose before meeting your friend and no matter the result, you express feelings of depression to your friend. There is no combination of choices I found that ends with a positive ending. Like *Dys4ia* there is no way to "win," the game's purpose is to represent the affective experience of a day-in-the-life of Mattie Brice.

Jason Rhorer's *Passage* (2008) similarly prioritizes narrative over any notions of winning. The game follows the life of an unnamed protagonist from youth, through marriage, to death. There is no dialogue and no text (save for the title at the beginning and the end), the player only navigates the environment, opens treasure chests, and dies. There is graphical variation in the different settings the character traverses, while the blurry graphics ahead become clear and blurry graphics appear behind. The protagonist's hair slowly darkens, grays, and goes bald, until he eventually turns into a gravestone,

marking the end of his life. The playable area is 100x16 pixel resolution (including a 4-pixel scoreboard at the top) and the graphics are heavily pixelated. In the game you essentially walk in one direction, find a mate or do not, get old, and die. Simple, but profound. *Passage* is an early example of a hauntological game that resembles a drawn-out version of a single segment of *Dys4ia*.

In more of a puzzle vein, Witch Beam's *Unpacking* (2021) tells the story of one person's life through unpacking items. Using 16-bit style pixel aesthetics, the game's story is told across several moves, including beginning in a childhood room, to a first rental, to a shared family home of their own. There is no loss state and no twitch-style gameplay, the player is solely tasked with opening boxes and organizing the possessions of the main character, and later their partners' at their own pace. A narrative emerges in the unpacked items and homes moved into, such as plushies that reappear in each level, new items added and what kinds of buildings you unpack into and what items are already there. At the core of the narrative that unfolds in the game, is the story of a young woman discovering her bisexuality, which reflects the life of the co-developer Wren Brier (Nightingale, 2022). This is shown through different levels in the game, one where a character unpacks their belongings around what looks like those of a masculine partner, this is followed by one level where you move your stuff back into your old bedroom, then in your own place, and later unpack what appears to be a feminine partner's belongings around your own. *Unpacking* is seemingly influenced by *Dys4ia* in its use of a light puzzle aesthetic and gameplay to tell an affective story that rejects command-and-conquer gameplay while telling a story of queer identity.

Undertale (Toby Fox, 2015)

Figure 7: Header image used for the Undertale Kickstarter (Source: Kickstarter/Toby Fox).

Unlike *Dys4ia*, *Undertale* was released to a market primed for new pixel-graphic games. The success of games like *Terraria* (Re-Logic, 2011), *To the Moon* (Freebird Games, 2012), *Papers, Please* (Lucas Pope, 2013), and *Lisa: The Painful RPG* (Dingaling, 2014) had already paved the way for retro-style games in the new commercial indie space. According to Steam and SteamDB.info, in 2015, *Undertale*'s year of release, 363 other commercial, English-language, pixel graphic games also came out, 114 of those in the RPG genre. While *Dys4ia* can be credited as one of the pioneers of new pixel games, the 8-bit path was well trodden for the arrival of *Undertale*.

Despite its lack of novelty, however, *Undertale* was the first of its kind to garner near-universal critical and player praise. Review aggregator website Metacritic rates the game a 92 out of 100, earning it the "Must Play" accolade. On the same website, in the PC games category, it is the third highest rated of 2015 (falling behind AAA juggernauts *Grand Theft Auto 5* [Rockstar North] and *The Witcher 3* [CD

Projekt Red Studio]), the fourth most discussed, and the number one most shared game (Metacritic, n.d.). *Undertale* was featured on many best games of 2015 lists, won IGN's PC game of the year (Ingenito et al., 2016), and a "best game ever" poll on GameFAQs (Frank, 2015). It spawned a massive fandom that can be counted in the 431,000 members of the continually active r/Undertale subreddit (I make up one of those fans), as well as in the participants in the *Undertale* and Toby Fox Wikis on Fandom.com and in numerous other online forums. The title has also seen a slew of fan productions across many user-driven content sites for fan art, fan fiction, and fan games.[2]

Undertale is usually attributed primarily to one person, Toby Fox. While Fox is no doubt responsible for the core of the game, including developing the gameplay, visuals, story, and soundtrack, he was supported by a team that included artists (including Temmi Cheng, Kenju, and Everdread), programming support (Flashygoodness, Leon Arnott), non-English localization (such as 8-4 ltd. For Japan) in addition to others. Before *Undertale*, Toby Fox was known as a composer for *Homestuck* (Andrew Hussie, 2009-2016), an online series that combined elements of webcomics, flash animations, and adventure game-like interactivity to provide a unique narrative experience. The first evidence for Toby Fox's game development is rom hacks for *Earthbound* (Ape/HAL Laboratory, 1994/1995) (Toby Fox Wikia, n.d.). Released on the SNES, *Earthbound* was the second entry in Japanese RPG series *Mother* (Ape/HAL Laboratory/Brownie Brown, 1989-2003), and the first to come to North America. Featuring a group of kids on a journey to save the world, the game stood out for its mix of weird, cute, and dark content. In turn it was a cult hit that influenced many games and media after it, including *South Park* (Trey Parker and Matt Stone, 1997-ongoing) and its first RPG title, *The Stick of Truth* (South Park Digital Studios LLC/Obsidian Entertainment, 2014), *Costume Quest* (Double Fine, 2011), and *Undertale* (Nutt,

[2] As of writing, Deviant Art hosts 733.4k fan art contributions for the search term "Undertale," An Archive of Our Own (AO3) boasts 49,839 *Undertale* fan fiction entries, and 7,502 games pop-up when searching "Undertale" on GamingJolt, an online marketplace popular with fan games.

2010). Fox admits that the game had a significant influence on his life, “I played *Earthbound* when I was four,” he remembers, “I was so young that it helped me learn to read, and also transformed my brain forever” (Schilling, 2018, para. 5). Apart from the main character of *Undertale* being a kid in a striped shirt, Fox’s intention was not to directly imitate. He states, “I can definitely say that I wanted to make something that had as much emotional power, humour and wonder as the *Mother* games, while not necessarily taking the same paths to achieve it” (ibid. para. 4).

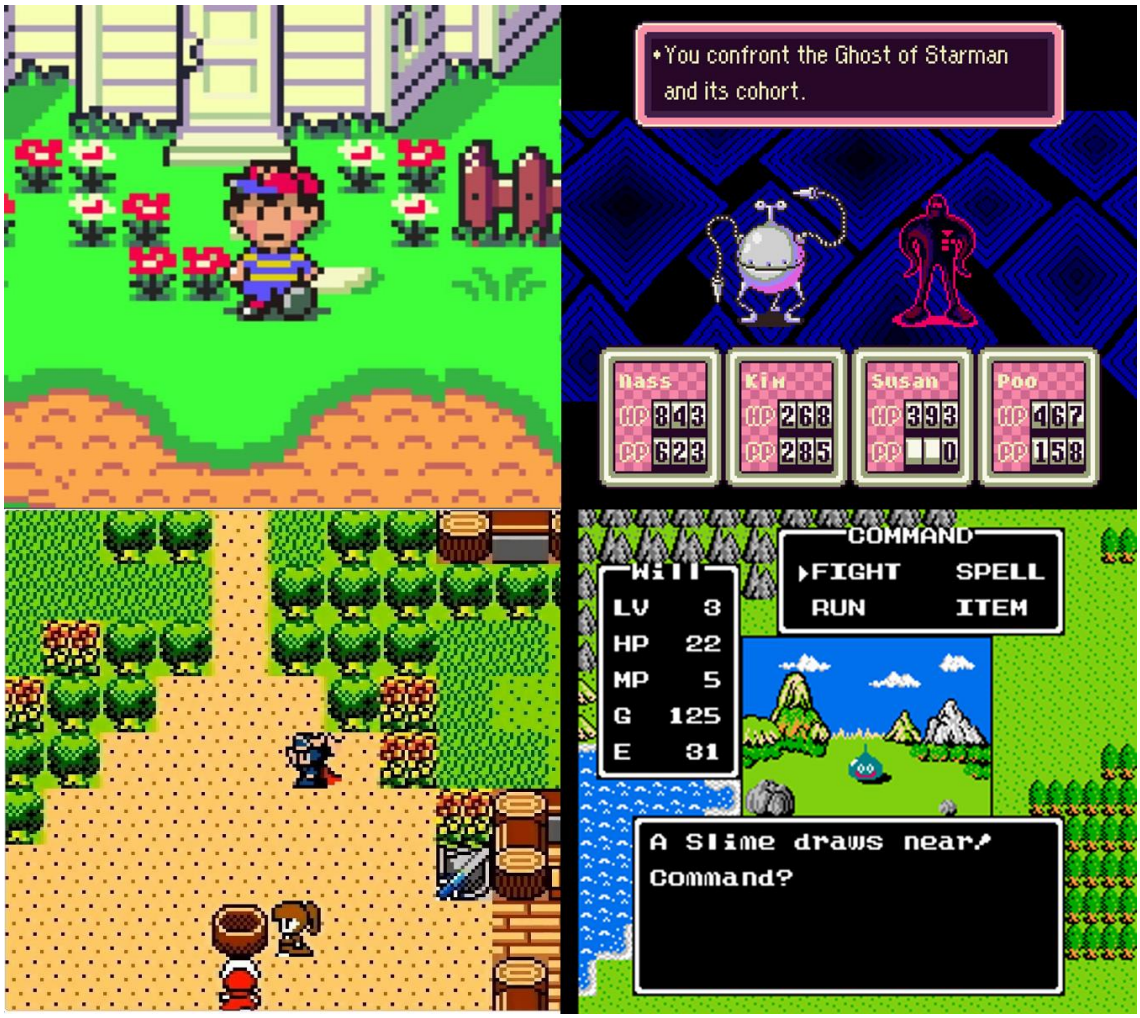

Figure 8: Top images: main character (left) and combat interface (right) for Earthbound (Ape/HAL Laboratory, 1994/1995). Bottom images: main character (left) and combat interface (right) for Dragon Quest (AKA Dragon Warrior, Chunsoft, 1986/1989/2000) on Gameboy Color (Left) and NES (right) (Sources: MobileSyrup.com, Iparchive.org, YouTube/RPG Limit Break, and Wikipedia).

One path that Fox took that sets it apart from *Earthbound* is forced combat. As the tagline for the *Undertale* Kickstarter reads: "A traditional role-playing game where no one has to get hurt" (Fox, 2017). The notion of "just like the old games, but…," carries through not just the combat but many other aspects of the game. As will be discussed below, the ability to *not* fight in combat encounters is a defining feature, yet the game's reflection of other traditional RPG elements like aesthetics and narrative with striking differences are key to the hauntological experience of *Undertale*.

Design

In its use of a two-dimensional, isometric top-down view and interface-heavy, turn-based encounters, the design of *Undertale* resembles *Earthbound* and other Japanese Role-Playing Games (JRPGs) such as *Dragon Quest* (Chunsoft, 1986) and *Final Fantasy* (Square, 1987) (see Figures 8 and 9). While first impressions suggest *Undertale*'s visual design is simply a throwback to these influences, the combination of replication of, and stark exceptions to, the 8-/16-bit aesthetic hint at more than just a simple graphical homage. *Undertale*'s visuals outside of combat encounters feature simple coloring, with pixels that are a little crude and unpolished, reflecting the palette and graphical style of the *Game Boy Color* and *NES*, with the detail and depth of 16-bit systems like the *SNES*. As seen in Figure 9, the number of pixels used for the characters is closer to the top images of Figure 8, showing *Earthbound* on the SNES, a 16-bit system, than to the lower images, showing *Dragon Quest* on the *Gameboy Color* and *NES*, both 8-bit systems.

Undertale's combat interface (pictured in the top-right and bottom-left of Figure 9), features a design similar to other JRPGs, giving the player menu options for actions along with a detailed view of the enemy. Many JRPGs, like *Dragon Quest*, try to represent the surroundings of the character within the combat interface, yet *Undertale* pulls the player out of their game world surrounding into a black environment with the enemy against a green grid, or no grid at all in some key boss encounters. Transporting the player from their surroundings into a starkly different space for a fight is also seen in

Earthbound's battle visuals, which feature detailed enemies with trippy backgrounds. While *Undertale*'s enemies are visually detailed, they are stripped down to white and black with coloured highlights. The most notably coloured figure in combat encounters is your avatar, represented by a little red heart (as seen in Figure 9).

The visual design of combat encounters differs from traditional JRPGs in some key respects. While JRPGs tend to view combat from the protagonist's point of view and not visually represent the PC (as seen in Figure 8), *Undertale* opts to represent the player as a heart. The heart acts as a cursor for selecting options in the interface and as an avatar when the player must dodge the enemies' attacks, in

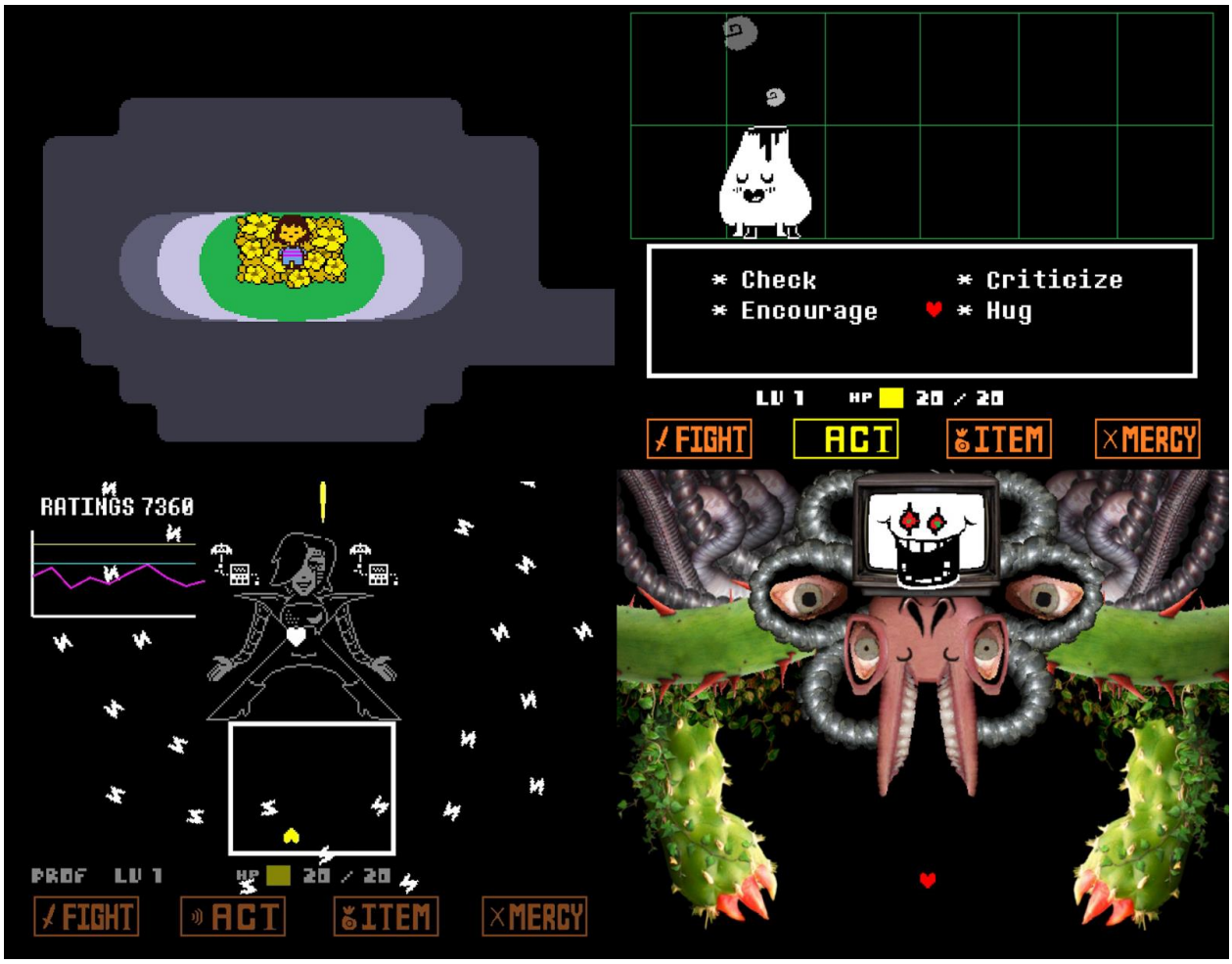

Figure 9: Top-left, Undertale's player character in the first scene of the game; Top-right, an example of a non-violent action menu in a combat encounter; Bottom-left, a combat encounter with Mettaton and an example of shoot-em-up gameplay; and Bottom-right, the final boss of the game (Sources: epiloquegaming.com, levelskip.com, lparchive.org, and author's screenshot).

a manner similar to bullet-hell style games—vertical or horizontal scrolling shoot-em-up games that fill the screen with bullets and emphasize defensive play—like The *Touhou Project* (Team Shanghai Alice, 1997-2022), whose characters' hitboxes (the portion of the avatar that is vulnerable to attacks) are represented by little circles or hearts. As seen in Figure 9, bottom-left, the heart (normally red) will at times flip upside down and change colour to signify different allowances, such as shooting. *Undertale*'s biggest departure in combat interface design from its pixelated predecessors is its final boss. As pictured in Figure 9 (lower-right), the final battle of the game strikingly departs from the strict pixel art style and features an enemy with rendered photorealistic elements that give it a stop-motion animation quality. This image provides, perhaps, the biggest shock of the game and reveals the pixel graphics are not a limitation of the developers but a deliberate stylistic choice.

While it may not have been a conscious choice, the overall appearance of the crisp pixel graphics in *Undertale* hauntologically points to emulators more so than playing retro games on original hardware. When raster imaging used for making pixel graphics was invented, televisions and monitors used cathode ray tubes (CRTs) to project images on the screen. CRT displays were the norm until the early to mid-2000s, when Liquid Crystal Display (LCD) televisions overtook them in the market (DeBoer, 2004; EETimes, 2004; Maslog-Levis, 2004). 8-bit and 16-bit games on the *NES* and *SNES* were projected primarily on CRTs at the time of their release and a good few years after. Therefore, the crisp, blocky textures of pixel art that we see in *Undertale,* and its many "throwback" contemporaries, would have been significantly blurrier and more vibrant through the phosphor glow of home televisions in the 1980s and 1990s (see Figure 10). Through emulating retro games for more modern screens, the perception of pixel graphics has shifted from an impressionist cartoony quality to jagged, semi-abstract blocks. Some modern pixel graphic games have applied, or give the option to add, video filters to imitate the CRT look, such as Minor Key Games' titles *You Have to Win the Game* (2012), *Super Win the Game* (2014), and *Gunmetal Arcadia* (2017), yet this is not the norm. Whether the choice to present unfiltered pixels was

an intentional subversion or not, the visual choices of *Undertale* and the edged visuals of its contemporaries ends up being a hauntological move. While subtle, instead of authentically reflecting the aesthetics of the AAA pixel predecessors, it is instead visually evoking the aesthetic experience of non-commercial play and production like emulation, rom hacking, and Flash games. In this way, it rejects the notion that it is a "throwback," dog-whistling its more modern influences to those in the know or those familiar with the aesthetics of the underground gaming scene.

Figure 10: Comparison of what pixel graphics look like on an emulator vs. a CRT screen (source: Dr_Spaghetii, 2016, January 1). Retro Gaming vs Indie Gaming [Reddit Post]. R/Gaming (www.reddit.com/r/gaming/comments/3z0w3w/retro_gaming_vs_indie_gaming/).

The soundtrack of *Undertale* follows the pattern of its visual aesthetics, adhering mostly to its 16-bit predecessors with some clever exceptions. In other words, the music sounds like the chiptunes of *SNES*, for the most part, but breaks out of those limitations for effect. The music was composed using FL Studio (Fox, 2019), a piece of software that has been around since 1997 (originally called Fruity Loops), with a reputation as cheap, consumer music software but nonetheless used by professionals. Like the visuals, Fox was inspired by *Earthbound* (MeleeItOnMe, 2015), the *Touhou Project* (Den Famitsu Gamer, 2018) and other games of the 1990s. One track in particular, titled "Megalovania" was inspired by music

for the JRPG *Live A Live* (Square, 1994), a game only available in Japanese until it was remade in 2022 (Gray, 2022). A version of "Megalovania" can be heard in Fox's *Halloween Hack* of *Earthbound* (2008) and it was reused for *Homestuck* before its most recent incarnation in *Undertale*. "Megalovania" is a heavy, pumping track that starts off with chunky compressed guitars building into fuller heavy metal instrumentation that breaks out of the soundscape of the *SNES*, while incorporating the chiptune sounds throughout.

Many other pieces of music in the soundtrack reflect the chiptune capabilities of the *SNES*, especially the game's early intro cinematic and start menu. These pieces have a buzzy, compressed sound, and stick to the beeps, boops, and drones of typical 16-bit systems. Departure from strict chip-based sounds, like in "Megalovania," however, appear early on in tracks "Home" and "Snowdin Town", heard in the intro tutorial sections and first level of the game, respectively. "Home" is played when the motherly character, Toriel, brings you to her home after guiding you through a tutorial gauntlet. The music here is predominantly crisp acoustic guitar instead of the chiptunes encountered in the first section, providing a comforting but uncanny feeling. "Snowdin Town," which provides the backdrop of the first level after your encounter with Toriel (more on this in the *Story* section), is driven by a synthesized piano and provides a much fuller orchestral sound than the capabilities of the SNES or other 16-bit systems. The titular area, Snowdin Town, is the first level proper after Toriel, and its calming, but eerie sounds evoke the feeling of relief after the tense encounter with Toriel and apprehension of what comes next. Like "Megalovania," the music of *Undertale* weaves in and out of strict adherence to chiptune sounds, showing off its influences while breaking out of their limitations and tropes.

Finally, *Undertale*'s control design, like its other aesthetics, follows the pattern of adherence and exception. As discussed earlier in the section, the controls are designed for interface-heavy gameplay, and cling (almost to a fault) to the traditional allowances of JRPGs. Apart from the four directional movements (using either a directional game pad, joystick, or the W, A, S, D buttons on a keyboard),

there are three other useable inputs: confirm (either the Enter and "z" keys or A button), cancel (the Shift and "x" or B button), and menu (the "c" or Control keys or the Start/+/Options button). The minimal input design simplifies the controls, but also limits your abilities. The menu is minimal, offering "Item," "Stat," and "Cell" and is text based as opposed to the graphical interfaces of menus in more modern RPGs. Like early JPRGs, the interface emulates the limited and at times tedious menu navigation needed to perform actions other than avatar movement in the 2-D isometric portions of the game. During combat, the controls are primarily menu based, with timed minigames for attacks, very similar to other JRPGs. Where the controls differ greatly from many JRPGs is in the enemy attack rounds of combat encounters.

Instead of just reading out enemy attacks and seeing abstract representations play out—such as a disembodied claw swiping in the center of the screen, and the interface shaking to indicate a hit—the player dodges the attacks in bullet-hell style controls. As pictured in Figure 9 (lower-left image) and Figure 11, the player's heart avatar must move around and avoid projectiles and other obstacles in varied waves and patterns to avoid damage. This gameplay element is a notable departure from turn-based JRPG combat, turning what would otherwise be a relatively passive turn-based encounter into a tense and exciting real-time challenge. As it does with its visual and aural aesthetics, *Undertale*'s control and combat design continues the trend of loving homage with big 'buts.'

Undertale is undeniably indebted to the games of the past, but it's not just a retro rehash. It is a conscious homage to JRPGs of the 16-bit era, especially *Earthbound,* but moves beyond being faithful to those games in order to become hauntological. Its hauntological character comes out in its glaring departures from its inspirations, whether those are its subtle and not-so-subtle (in the case of the final boss) refinements of the 16-bit graphics, its stark, emulator-like visual design, its chiptune soundtrack that sneaks in fuller instrumentation for effect, or its bullet-hell rounds in combat. The game is pointing

to the past, while directing us to new possibilities within these 16-bit aesthetics. This hauntological character is further elaborated through the subversive arguments mounted through its gameplay.

Play

The perception of *Undertale* as a traditional JRPG where no one must get hurt emerges primarily through its gameplay. The game subverts JRPG expectations through the player's choices within a combat encounter. In addition to attacking or using a combat item, common in JRPGs, the player is allowed to “act.” Selecting “act” over “fight” presents several non-violent actions, including compliment, pet, hug, and insult, depending on the enemy encountered (see Figure 9, top-right). The NPC will react in various, often amusing, ways to these actions. In this way the game becomes hauntological by

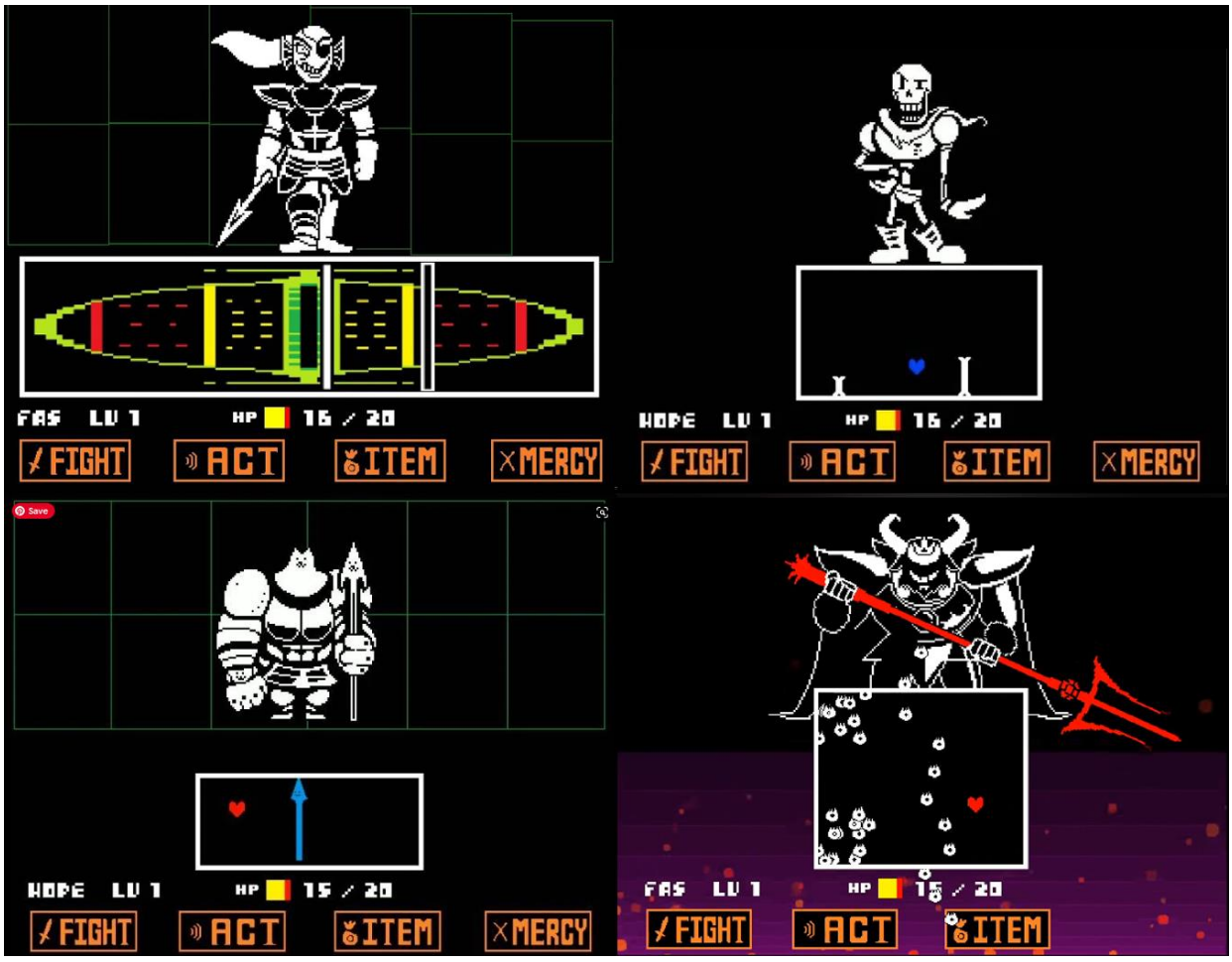

Figure 11: Examples of fighting and dodging in combat encounters in Undertale (sources: IGN.com, YouTube/Fasgort).

allowing the option for compassionate, non-aggressive actions in what would otherwise be a combat dominant traditional JRPG. Furthermore, the game does not instruct the player on which actions to take but the overall gaming experience changes depending on whether you “fight” or “act”.

Like “Act,” choosing “Fight” involves the player selecting an option from a menu. Fighting, however, presents the player with a time-based mini game to determine the effectiveness of the attack. These timed attacks require the player to stop one or several moving lines as close to the middle of bar as possible to enhance the effectiveness of the attack (Figure 11, upper left). While this kind of interactivity was not present in 8-bit JRPGs and most 16-bit ones, it did appear on the SNES in *Super Mario RPG: Legend of the Seven Stars* (Square, 1996) and has been adopted in many JRPGs since. Expanded interactivity beyond option selection has become common in the genre since the 1990s, and therefore does not particularly stand out in *Undertale*. A key innovation in *Undertale*, however, is the shoot-em-up mechanics in the defense round of combat.

As touched on in the above section, after the player fights or acts, they must defend from the opponent’s attacks. Within a small playfield (typically a square), the player must move their small heart-shaped avatar to dodge incoming attacks. The attacks can come in projectile form (see Figure 9, lower left and Figure 11, lower right) or in the form of obstacles, like spikes, to maneuver around or avoid by staying still (Figure 11, lower left). The primary motion in these attacks is freeform, but sometimes change to platforming-style movements where the player must jump over objects (Figure 11, upper right), or to four-way directional inputs to block incoming projectiles. In rare instances, the heart will flip upside down and have the capability to shoot at the enemy (see Figure 9, lower left). These attacks feature the most action-oriented gameplay, making defense rounds more active and potentially more engaging than fighting and acting.

While all allowances and actions remain available throughout the game, the player’s decisions to fight or act change the difficulty and overall experience of the game, including the narrative

experience (which will be discussed in the next section). From a meta-gaming perspective there are three primary ways to play through the game: the neutral route, the genocide route, and the true passivist route (*Undertale Wiki*, n.d.). The neutral route is the easiest to achieve as the player can fight or act as they choose, as long as they do not fulfill the requirements of the other two routes. This route provides challenge in combat encounters but, assuming the player is killing and leveling up their character and increasingly acquiring stronger weapons and armour, its difficulty lands in the middle of the two other routes. There are a variety of narrative outcomes for different choices in the neutral route (virtually all variations are given names, such as "the leaderless ending," "betrayed Undyne," "family ending"), but this does not affect encountered enemies or final bosses (*Neutral Route*, n.d.).

The genocide route requires the player to kill every character or creature they are able to. Not only does this involve slaying all opponents that you enter combat encounters with, but you must seek out and destroy all creatures to fulfill the requirements of this route. To achieve this, the player must grind out all areas of the game where encounters are possible, by repeatedly traversing the areas, over and over, until the population is depleted. Areas are safe to move on from when encounters are triggered but no monsters show up to fight, only the text "but nobody came" appears. For each area, the music also shifts to another track when your massacre is a success (*Genocide Route*, n.d.). The extensive grinding results in leveling up your player to be quite powerful. Like other JRPG games, the more you kill, the stronger you get, and the easier it becomes to kill more, but in *Undertale*, this becomes a boring and tedious experience. YouTube creator The Cursed Judge (2023) describes it well in his video *The games we forget.*:

> The genocide run, outside of the two major boss fights and ending, is really, really boring. Systematically murdering every single monster in an area is not an enjoyable experience. By the end of it, you one shot every single creature in the game and every battle only exists to waste your time at almost every turn. You're met with no resistance, no challenge, and it forces you to

reflect on yourself. You are subjecting yourself and the underground to a miserable experience. (The Cursed Judge, 8:52-9:20, 2023)

To aggressively grind through *Undertale,* as you may play through other JRPGs, becomes a tedious, challenge-less experience of your own making, rewarding you only with annoyance and a sad ending (discussed in the next section).

To achieve the true passivist route the player must spare all enemies (save for the final boss). While the player can fight enemies, they must never end an encounter by killing a monster (*True Pacifist Route*, n.d.).[3] This, somewhat paradoxically, is the hardest route to take as the player does not level up to become stronger and must rely on their gameplay skills in the defense rounds to survive and experiment with different acts to pacify the monsters. The challenge of this route can be greatly reduced by acquiring the "Temmie Armor,"[4] but this requires the player to pay 1000G (the currency in the game) for the bubbly dog-like shopkeeper Tem to go to college. Once Tem returns from college (which happens within a few seconds), the armour is available for 9999G. A steep price to pay, but the price drops every time the player character dies, bottoming out at 750G for 25 or more deaths.

Gameplay is hauntological in *Undertale* through its mechanical additions and how it subverts expectations of combat in JRPGs while also leaving the choice up to the player. Adding bullet-hell play segments to what is traditionally a turn-based genre, transforms a powerless round of reading attacks to one where you have agency and the ability to actively dodge and defend. Despite this addition, *Undertale* still stays true to its promise of providing a "traditional role-playing game where no one has to get hurt." Gameplay mostly adheres to the conventions of JRPGs. But, instead of forcing violent

[3] In addition to not killing monsters, players must also fulfill a few tasks for spared characters, such as delivering a letter, hanging out with them, or receiving a cooking lesson.

[4] This item grants you +20 to Defense, heals 1 health point every other turn, adds additional frames of invulnerability when hit in the defense round, and provides +10 to Attack. While the attack bonus sounds counter-intuitive, a higher rating in the category allows the player to spare some monsters without acting (as the monsters will immediately capitulate).

gameplay like others in the genre, or removing violence altogether, like the anti-RPG *Moon: Remix RPG Adventure* (Love-de-Lic, 1997), you can play it either way or a mix of the two. However, there are consequences to how you play. The neutral route offers an experience arguably similar to many JRPGs with the addition of bullet hell and sparing mechanics. The player can get stronger and level up and be rewarded with relatively standard JRPG gameplay and a mix of different endings. To fully grind *Undertale*, on the other hand, leveling up your character through rigorous violence does result in a powerful character, but turns the gameplay experience into a dull, mind-numbing, and laborious slog. For the fullest challenge, the player must show compassion. The "hard" difficulty that may attract those that may be tempted to grind games, is experienced solely through showing love and friendship in battles and play choices. The game flips genre conventions on their head, making the easy (and boring) way the violent path, and unlocking the true challenge (and "good" ending, discussed below) through showing tenderness. In turn, *Undertale* makes compassion the most rewarding path for gameplay, a theme reflected to full effect in its narrative.

Story

The arguments made in gameplay that compel the player toward passivity and compassion are further emphasized through the game's narrative that encourages the player to think critically about the actions they take. It does this by attempting to evoke guilt and regret through dialogue and character actions as well as changing the events during and at the end of the game to simulate the consequences of your actions. In doing this, *Undertale* is hauntologically subverting the hyper-violent command-and-conquer trope of JRPGs, instead asking the player to practice compassion and love for their monstrous counterparts. Furthermore, the game rejects typical representation in JRPGs, which usually feature heroic, hetero, human heroes, and similarly human NPCs, who oppose monstrous enemies. Instead, it queers typical representation, leaving out the heroic archetype and replacing it with a variety of bodies and identities.

Undertale opens with a cinematic providing the backstory of the game, told through text and still images. In the world of the game, humans and monsters lived together until a war broke out between them. The humans won and banished the monsters to live underground and sealed them there with a magic spell. Years later, in "201X," our main character, a human child, climbs Mount Ebott, a legendary mountain where people who go there are said to never return. The child falls in a hole and finds themselves in the underworld of the monsters.

After starting the game and naming the PC, you (the player) find yourself in a small flower patch surrounded by darkness (Figure 9, top-left). When you follow a path to the right, you meet Flowey, a living flower creature who explains some basic mechanics of the game. They tell you that you get strong by raising your "LV," which they say stands for "Love." Flowey then tries to trick you into getting hit by bullets they shoot, saying they are "Friendliness pellets" that raise your LV. If you avoid them, Flowey gets frustrated. If you get hit by the bullets, Flowey's face turns into an evil smile and they mock you for being an idiot and trusting them. In both instances, Flowey will surround you with bullets, but, before they hit, you are saved by Toriel, a motherly, anthropomorphic goat. Toriel leads you through the first section, called "the Ruins," which functions to develop the character of Toriel, a flawed caregiver, and provide a more extensive tutorial of the game mechanics.

Already in the first couple minutes of gameplay, *Undertale* manipulates you, tricks you, shames you, and breaks your trust. As Frederic Seraphine (2017) states, the game "uses negative emotions like guilt or regret to create an uncanny aesthetic that makes the player ripe for thinking critically about the game, its genre, society, and more importantly themselves" (Abstract). For example, many encounters in the game explicitly evoke moral questions. After being guided through the tutorial gauntlet in the Ruins, Toriel brings you to her home in the hopes that you will stay with her forever. To venture further, Toriel demands you fight her to prove you are strong enough to brave the dangers of the outside world. If you decide not to attack and eventually spare her, she hugs you and sends you on your way. Shortly after

leaving, however, you encounter Flowey who scolds and ridicules you for your choice, with a horrifying smile on their face (Figure 12, top-right). If you decide to fight Toriel, you defeat her in one hit. Visibly shocked, Toriel utters (through shaky letters in a dialogue bubble), “You really hate me that much?” (Figure 12, top-left), followed by further heart-wrenching dialogue, after which she deteriorates into an upside-down white heart. Whether you spare or defeat Toriel, you are shown dialogue to evoke negative emotions and question your actions.

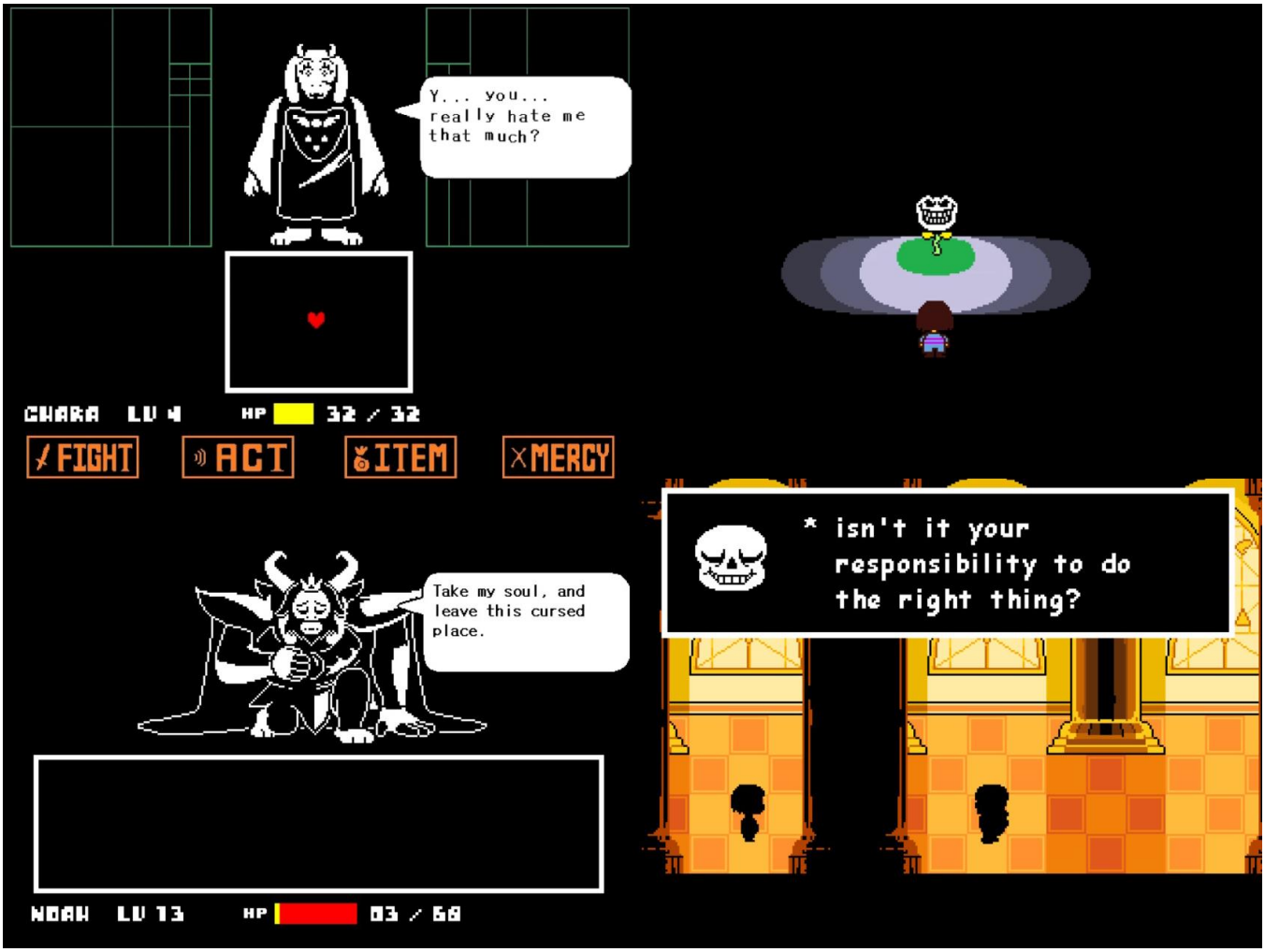

Figure 12: Top-left, Toriel shocked at player’s aggression when attacked; Top-right, Flowey making a scary face after shaming player if they spare Toriel; Bottom-left, penultimate boss Asgore turns sympathetic after defeat; Bottom-right, Sans shaming and questioning player’s actions before the final confrontation with the final boss (Sources: YouTube/Full Gameplays, YouTube/RabidRetrospectGames, and author’s screenshots).

The rest of the game is split into five more sections, each presenting an opportunity to make significant, plot-altering choices in battle. Depending on your actions throughout the game, elements of the game's narrative change, such as item availability and spared characters reappearing. Some dialogue that does not change based on your actions is in the "Hotland" section, where you meet Dr. Alphys, who has a crush on Undyne, a previous boss. Regardless of whether you spare or kill Undyne, Alphys talks about their plans to ask her out throughout the section. If Undyne is spared this dialogue is cute and playful and leads to them getting together later in the game. If you kill Undyne, this dialogue hangs heavy in the air. There are no direct punishments if you choose to kill Undyne: in my neutral run of the game, this plotline is simply not resolved. The punishment instead is that you must witness Alphys' pining knowing her hopes will soon be devastatingly dashed.

Near the end of the game, you are encouraged to reflect on your actions throughout your playthrough, when you are greeted by a silhouette Sans (a character you meet in the second section of the game, "Snowdin Town") in a cathedral-like area. Here Sans explains that the "EXP" you have (or have not) been building up stands for "execution points," not "experience." These points are gained only through killing monsters. As he explains, gaining EXP builds up your "LV," an element wrongly explained by Flowey at the beginning of the game as "Love." In fact, LV is an acronym for "level of violence." If it was not made obvious through gameplay and dialogue up to this point, Sans makes it clear here that the unthinking brutality of typical JRPGs is treated differently in this game. Sans further questions the morality of your actions throughout the game, asking "isn't it your responsibility to do the right thing?" (see Figure 12, bottom-right), and follows the statement with "then why'd you kill my brother?" (if you did in fact kill his brother, Papyrus, in Snowdin Town). In the neutral route, Sans questions your choices but lets you go; in the genocide route he fights you. This sequence is perhaps the most on-the-nose the game gets: in a single scene it recontextualizes typical JRPG actions and level gains from character

building as a form of mindless brutality. It does not necessarily say your brutality was wrong, it just presents your actions to you in a different light.

As discussed above, *Undertale*'s endings change depending on whether you kill everyone (referred to as a genocide route), do not kill anyone (the true passivist route), or mix it up (the many neutral routes). In the genocide route, the underworld is destroyed. The true passivist route ends with only the barrier blocking the underworld from the overworld being destroyed, allowing both you and the monsters to leave. Finally, the neutral run allows only you to leave the underworld, leaving the surviving monsters behind (*Endings*, n.d.). While Seraphine argues that the game incentivizes a pacifist approach, the game does not overtly favour any play style. It instead plants seeds of doubt and encourages critical thinking about all narrative choices. In doing so, the game hauntologically deconstructs the violent hegemonic gameplay of typical 8-bit and 16-bit JRPGs, allowing traditional command-and-conquer play but showing the consequences of your choices. Subjectively, there are "good" and "bad" endings (many players refer to the true passivist route as the good ending, and the genocide route as the bad one), but the game allows you to make your choices within the game's allowances and draw your moral conclusions. This technique reflects the idea of the true intolerable image theorized by Jacques Rancière (2011) when art is displayed with no obvious, in-your-face message, but meaning emerges through interaction.

The hauntological character of the game is also present in its queer representation. This representation is not just through characters and symbols that are LGBTQ2IA+ but also through monstrous bodies that do not adhere to a typical heroic trim, muscular, white human archetype seen in other JRPGs. First and foremost, the player character is non-binary. As shown in Figure 13, the player's avatar possesses no discernibly gendered traits. In addition, they are never referred to by gendered pronouns, and beyond naming, the player has no visual customization options. In this way *Undertale* opens representation through subtraction: by simply leaving out gendered options or visual markers, it

Figure 13: Undertale's cast of main characters. From left to right: Papyrus, Toriel, Sans, Mettaton, the player character (named Frisk by the fandom), Asgore, Alphys, Muffet, Undyne, and Monster Kid. Front and centre: Flowey, with initial innocent look (Source: edited version of image from Idea Wiki by Gigan7211).

allows users to imagine the protagonist's gender on their own. Furthermore, as Bo Ruberg (2018) observes, the game world is full of queer-coded elements, "such as a poster for a gay bar hung in the background of an otherwise seemingly straight area" (section 2.2). Unlike "superficial" queer representation in AAA games, "*Undertale* partially performs the creation of its own universe by integrating coded references that signal the game's engagement with queerness" (section 2.5). Ruberg uses the encounter with Mettaton (pictured in Figure 9, bottom left, and in Figure 13) as an example. They point to the use of high-heeled boots and a disco ball in the encounter, "calling to mind a nightclub scene or a drag performance" (ibid.), spaces that are predominantly coded as queer. Additionally, there is a subplot in the pacifist route where the PC facilitates a romantic pairing with Dr. Alphys and Undyne (both pictured in Figure 13). This romance between two female characters is naturalized in the plot: the fact that they are queer is not highlighted or overtly pointed out. Both characters also subvert tropes for

women in video games. Undyne is introduced as a powerful, armour-clad enemy, and later revealed to be tall and slim, while Alphys is a squat, anime-obsessed nerd.

Beyond Undyne and Alphys, the bodies of main characters in *Undertale* are diverse. While the visuals are cartoonish, it is still noteworthy that few characters possess the traditional heroic white male or sexualized white female bodies of typical RPGs, like the many characters in the *Final Fantasy* series of games (Square/Square Enix, 1987-2023). As pictured in Figure 13, key characters are not only different shapes and sizes, but also monsters. Whereas games like *Dragon Quest* restrict interaction with monstrous characters to violence, thereby eliminating any identification or narrative empathy for them, *Undertale* does the opposite. With the human PC being a silent and ambiguous protagonist, empathy is built solely for the lives and concerns of the diverse array of monstrous characters. While applauding the diversity of representation of cartoony monsters may seem absurd, women, BIPOC, disabled people, those who are neurodivergent, or those who do not fit into an idealized body type are often portrayed as monstrous or Othered in video games (Brock, 2011; Jansen, 2018; Shapiro & Rotter, 2016; Stang, 2018, 2021; Waldie, 2021). Therefore, by fleshing out the monsters and embracing them as a diverse set of characters, Toby Fox is subverting tropes of JRPGs using their language. He is not trying to change the monsters' identities; he is instead accepting them as is and appreciating them as they are. While they may be monstrous in form and some may perform monstrous deeds, they are far more than one-dimensional enemies. Fox is not implying marginalized groups are monstrous; instead, he is working within the representational conventions of JRPGs, namely the cultural coding of monsters, to extend empathy to different identities often othered in games. In other words, Fox is queering representation by embracing a diversity of bodies and identities without disparaging innocent monsters.

The narrative of *Undertale* is hauntological in its clever subversion of JRPG plots. It is up to you whether you want to play a typical, violent and genocidal JRPG; the game itself does not try to force your hand. However, it does play with your expectations and encourages you to question your actions.

In doing so it denaturalizes JRPG tropes through narrative consequences, not punishing you through typical gameplay mechanics like game overs or fail states, but through narrative consequences. Furthermore, in rejecting the heroic archetypes of traditional JRPGs *Undertale* queers representation, embracing the diversity of identities typically coded as monstrous.

Equity

Undertale is highly accessible in its platforms and control design, but its gameplay can present some challenges for some players. The game is available for purchase on virtually all current gaming consoles (even the discontinued Sony handheld, PS VITA) as well as many digital marketplaces for PC (such as GOG.com, Steam, and Humble, but sadly not itch.io). *Undertale* also makes very low demands on computing hardware, with Steam listing the minimum requirements as 2GB of RAM, 128MB of graphical processing memory, and 200MB of hard drive space. It can also be played on Windows operating systems dating back to Windows XP, released in 2001. For comparison, *Witcher 3* (CD Projekt Red, 2015) released the same year, requires at least Windows 7 or 8, 6GB of RAM, dedicated gaming graphics cards with at least 2GB of memory, and at least 50GB of hard drive space. While *Witcher 3*'s base needs are easily met by many systems on the market today, it still needs significantly more power than *Undertale*, three times the RAM, almost 16 times the graphical processing power, and 250 times the hard drive space. With its high availability and low requirements, *Undertale* mostly meets gamers wherever they are.

As discussed in *Design*, controls are limited and simple. For most of the game, dexterity and mastery of controls is not required. The PC movement, single button interaction, and menu navigation are straightforward and undemanding, proper timing or mastery of controls is not needed. The limited inputs can also be mapped onto several different input devices. In this sense, again, *Undertale* meets you where you are.

The most glaring issue with accessibility, however, is the game's difficulty. The challenge is only present in the combat encounters, but these require a fairly high degree of dexterity (whether killing or sparing opponents) to progress. As explained in *Play*, combat has two phases, attack/act and defense. Attacking efficiently in the game requires players to complete time-based challenges, and defense rounds require the player to avoid enemy projectiles in a variety of ways. Because of this, combat can be very hard. You need to gain a certain mastery of controls and perform them dexterously to complete the game. There are ways of mitigating difficulty. Grinding in a Genocide or Neutral run of the game allows the player to build up their LV and get stronger and more resilient, but in a passivist run, a player must rely on the Temmie armour (discussed in *Play*) for an easier experience. Because of the challenge, gameplay may not be very accessible for some players.

Like aesthetics and gameplay, accessibility has a big 'but.' For the most part, *Undertale* meets players where they are. No matter the input device or the power of the computer or modern console, players can access the game with ease. Sadly, its difficulty leaves little customization for those whose playing abilities may not be very agile.

Toby Fox is currently developing a sequel to *Undertale* called *Deltarune* (2021/2022), which is being released in chapter form. This title expands on the original's gameplay with team-based tactics and more overt passivist arguments. Equity is also emphasized in its first two chapters, available to play for free. As of writing this, chapters three to five are in development and will be a paid release.

Further Playing

Made using RPG Maker VX Ace, *Lisa: The Painful* (Dingaling, 2014) is the second in a trilogy of games made by Austin Jorgensen exploring the cycle of abuse and violence. *The Painful* stands out as the longest and most popular of the trilogy, taking place in a post-apocalyptic wasteland that seems to be occupied solely by men. The game centers on Brad Armstrong, a middle-aged, former wrestler who finds a baby, names her buddy, and raises her in secret. One day she disappears, seemingly kidnapped,

and Brad sets out on a violent journey to find her. Unlike *Undertale*, the only option to progress is violence. *Lisa: The Painful* adheres to the command-and-conquer tropes set up by JRPGs like *Dragon Quest* but does so to an absurd level. The world is brutal and violent and the game reveals that even Brad himself has participated in violence and brutality before the player enters the game. Beyond typical JRPG encounters, there is an instance where the player must also play Russian roulette to progress and another where they must choose a party member to die. Where the game differs from traditional RPGs is in its enemies. The only monsters in this game are human men. The protagonist Brad himself ultimately becomes monstrous as he lays waste to everyone in his way on his path to his find buddy. In the finale, we find out that buddy's kidnapper may be the better caregiver to her, but Brad rejects the notion, even killing his adventuring party who try to stop him. As Brad fights through the final gauntlet of opponents, he gets severely wounded and begins to mutate. His appearance turns monstrous on the outside as the player discovers his, and by extension their own, inner monstrosity. *Lisa: The Painful* is retro-style in pixel graphic aesthetics and JRPG mechanics but becomes hauntological through its ugly and disturbing depiction of violence and brutality common in games of the genre.

Stardew Valley (ConcernedApe, 2016) is a pixel graphic life sim/farming game that uses its mechanics to mount arguments for slow, peaceful (for the most part) gameplay that emphasizes nurturing and community over commanding and conquering. The game centers around a PC who quits the hustle and bustle of their city job and moves to a rural town to restore their grandfather's long abandoned farm. Primary gameplay involves clearing out weeds, rocks, and wood stumps from the farm; tilling the land and planting fruits and vegetables to sell; and building up a menagerie for cows, chickens, and sheep. The player also has the option to mine for gems (and fight some subterranean creatures) and fish. The gameplay loop of *Stardew Valley* is broken up into days, and while it is first and foremost a farming game, a stamina meter forces the player to limit their physical labour. To fill out the rest of the day, the player is encouraged to visit townsfolk, build up relationships with them, help them

with tasks, and participate in occasional festivities. In limiting combat gameplay and emphasizing farm upkeep and relationship building, the solo developer, Eric Barone (ConcernedApe), is arguing for gameplay that is not about "getting good" or grinding out a character, but slowly building up and maintaining a member of a community. While not the first of its kind, the success of *Stardew Valley* has in part spearheaded a "cozy game" genre that emphasizes slow life, maintenance, and cooperation over the aggression and mastery of other games.

According to a disclaimer that appears when you start up the title, *Beat Cop* (Pixel Crow, 2017) is game made as an homage to 80s cop shows and should not be taken seriously. Yet, despite its supposed love for its subject, it offers a strong critique of the futility, uselessness, and corruptibility of police work through its gameplay. The game centers around a former detective, Jack Kelly, who, after being suspected of murder (it is unclear if he is wrongfully accused or not), is demoted to beat work. The main gameplay loop is separated into the working hours of each day on a single city block. Your primary task is to monitor the area for crimes and assign tickets for parking violations, without making mistakes. This basic gameplay is complicated by your need to make money to pay bills. You make a measly wage, and any mistake is deducted from your paycheck. You are also given arbitrary quotas by your boss, encouraging you to be strict and at times overzealous with your ticketing practices. Your duties are interrupted by shady characters that offer you money to do shady things, like delivering packages, turning a blind eye to questionable goings-on, and bribes to get out of parking penalties. As a beat cop, you are supposedly working your block to protect the community, but the game mechanics encourage you instead to focus on ticketing and making questionable choices for money instead of performing your duty to serve and protect the community. An overarching plot unravels across the days, but the majority of the gameplay sees your player character participating in actions that are mundane, sketchy, corrupt, and inefficient. In this way, the game argues the same about police work in general. Whether intentional

or not, *Beat Cop* becomes hauntological in its homage to the 80s in aesthetic and theme while critiquing real world policing in its gameplay, as well as the valourization of policing in 1980s cop shows.

***Celeste* (Maddy Makes Games, 2018)**

Figure 14: Promotional art for Celeste by Amora Bettany

Celeste is a 2-D side-scrolling, puzzle-platformer that adopts a pixel aesthetic. The game's narrative follows Madeline, a young woman who is climbing the eponymous mountain in an attempt to conquer personal struggles, primarily to work through her depression and anxiety. While the game stands out for its accessibility options and trans representation, its biggest impact has been for its compassionate portrayal of mental health.

In the wake of *Celeste*'s release, many pieces have been written not only about the game's portrayal of mental health but also how it helped individual players with their own depression or anxiety. There are myriad accounts of the game's power in this regard, but some standouts include Nathan Grayson's (2018) "*Celeste* Taught Fans And Its Own Creator To Take Better Care Of Themselves"

for *Kotaku*, Nicole Clark's (2018) "My Biggest Revelations of 2018 Came from an Indie Video Game" for *Vice*, and Leadhead's (2021) "*Celeste* Might've Changed My Life" on *YouTube*. The reason for this outpouring of love and praise for the title is in part due to a greater awareness of mental health issues in society, but also due to the horrible treatment of mental illness in earlier video games.

In their qualitative content analysis, "Graphic Depictions: Portrayals of Mental Illness in Video Games," Samuel Shapiro and Merrill Rotter (2016) show that in mainstream AAA games from 2011 to 2013, characters with mental illness were primarily secondary characters and othered, relegated to tropes such as "zoo specimen," "narcissistic parasite," "dysfunctional invalid," and "comic eccentrics" (p. 1593). Most characters with mental illnesses were portrayed as violent, and 69% displayed character traits of the "homicidal maniac" archetype (p. 1594). Shapiro and Rotter are not alone in their findings: other scholars have also found that depictions of mental health in video games tend to rely on negative stereotypes (Buday et al., 2022; Ferrari et al., 2019). While their findings are thorough and paint a depressing picture of mental health representation in games, these studies focus on AAA games. In doing so, they ignore the number of independent video games that tell personal stories addressing mental health. For example, Sky LaRell Anderson (2020) examines indie games *What Remains of Edith Finch* (Giant Sparrow, 2017), *Doki Doki Literature Club!* (Team Salvato, 2017), and the more mainstream *Hellblade: Senua's Sacrifice* (Ninja Theory, 2017) for the "[g]ames' ability to invite players to empathize with characters, even to act in a virtual world as if they were these characters" (p. 30). Anderson points out that these exemplary games are not without their limits, falling victim to negative tropes and essentializing their depictions. Yet, they show a way forward.

Sadly, the bar for good mental health representation in video games is low, but it is rising. Jennifer Hazel (2018) of *CheckPoint*, a website devoted to mental health resources for gamers, sets out

Figure 15: LAPSES chart (Hazel, 2018) (Source: checkpointorg.com).

guidelines for good mental health representation in games under the acronym LAPSES (Language, Accuracy, Purpose, Stereotype, Empathy, Support). *Language* used by the game must be "respectful" and "avoid stigma," and depictions much be *accurate* to real life. *Purpose* refers to the character's mental illness driving the plot and/or affecting the game mechanics. Hazel demands that games challenge and do not perpetuate *stereotypes* and show *empathy* to the characters. Finally, she asks that for *support*, games model help-seeking behaviour and "signpost to relevant resources" (Hazel, 2008, see Figure 15). Among the games that Hazel categorizes as representing mental health well are *Hellblade*, *Depression Quest* (Zoë Quinn, 2013), *Actual Sunlight* (WZOGI, 2014), *Night in the Woods* (Infinite Fall, 2017), and *Celeste*.

In praise of *Celeste*, Hazel states "[t]he very mechanic and goals upon which this game is based could be interpreted as a frank analogy for the journey of mental illness" (2018, section 1). Not only

does *Celeste* tackle mental health responsibly and affirmatively, but it enhances its depiction through play mechanics, and stands out among other games praised by Hazel for its intense gameplay, accessibility options, and trans representation. It is a difficult game with a heartfelt story that wants players to experience it, not lock them out through overly-difficult challenges. As will be discussed in the following sections, *Celeste* is hauntological through its aesthetics that point to both its influences, DIY roots, and other modern puzzle platformers, and also its gameplay and accessibility, which subverts the difficulty of other challenging contemporaries, and a narrative that provides representation for those who are neurodivergent and trans.

Design

Unlike *Dys4ia* and *Undertale*, pinpointing the era of video games that *Celeste*'s aesthetics pay homage to is difficult: it seems to reflect more its contemporaries and its origin on the PICO-8 than retro systems.

Visually, the game uses chunky pixel graphics that lack the fine detail of the SNES or even the NES. They instead resemble the graphics of the PICO-8. The PICO-8 is a fantasy console, a term used to describe many game-making platforms that possess their own "machine specifications and display format, development tools, design culture, distribution platform, community and playership" (*PICO-8 Fantasy Console*, n.d.). It uses a simple, easier to learn coding language called Lua and allows for editing games made on the platform to help users learn through altering, remixing, and playing with other users' games. All games produced on the engine are also hosted through the software for free, although they can be published as downloadable executables or played in a browser. The platform only allows for a display of 128x128 pixels and 16 colours and limits its games (or cartridges, as it calls them) to 32 kilobytes. The system enforces "harsh limitations […] to be fun to work with, to encourage small but expressive designs, and to give cartridges their own particular look and feel" (ibid.). As a result, games made on the fantasy console are recognizable for their blocky pixels, often bright and striking colours,

and square display window. They look like retro games but also unlike any games for actual retro consoles. *Celeste* began life as a prototype on PICO-8 and its bold and boxy pixels followed it to the final game. In its visual likeness to its fantasy console routes, *Celeste* hauntologically departs from the retro homages of the other two titles in this chapter, pointing instead to DIY gamemaking as its visual inspiration.

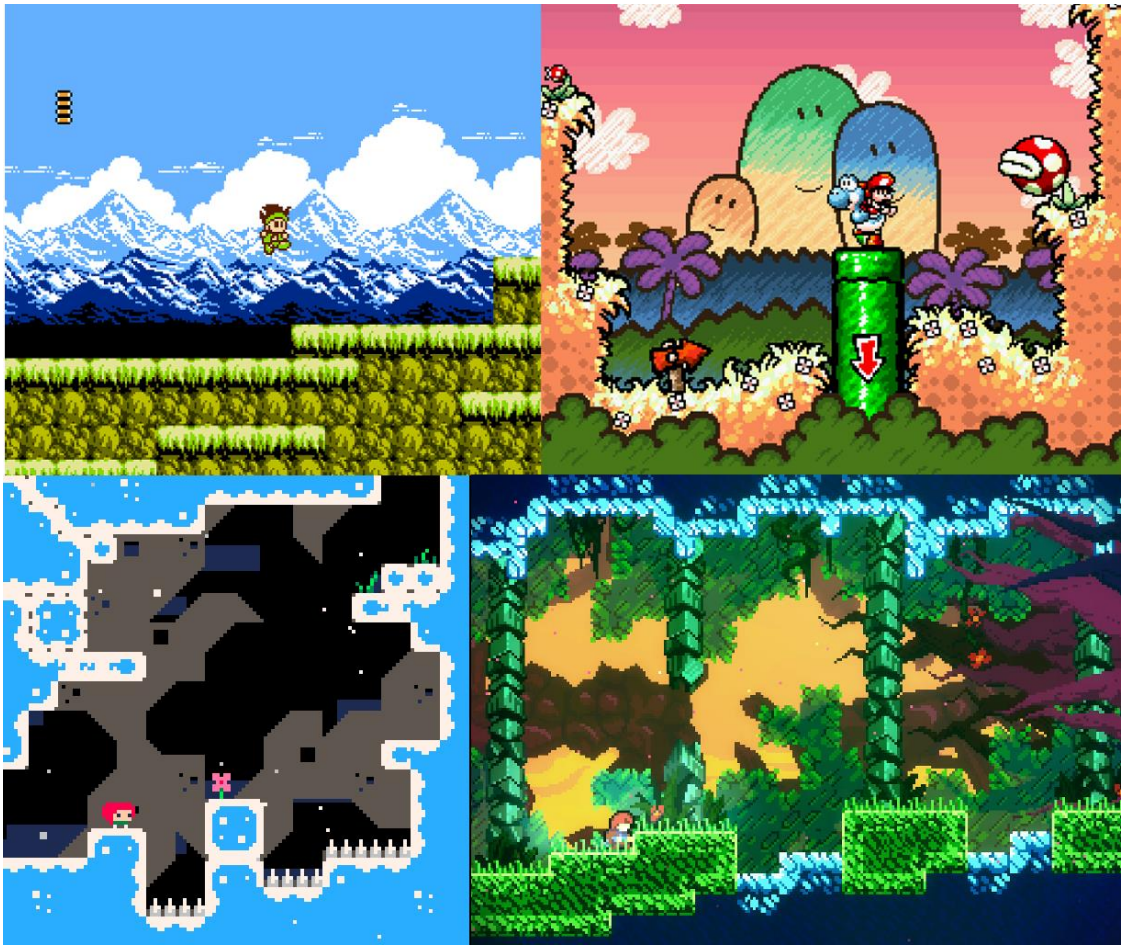

Figure 16: Examples of 8-bit and 16-bit platformers: Top-left, Little Samson (Takeru, 1992) on the NES; Top-right, Super Mario World 2: Yoshi's Island (Nintendo, 1995) on the SNES. Bottom-left and Bottom-right, Celeste prototype on the PICO-8 and Celeste in its full release form (sources: giantbomb.com, nintendobound.files.wordpress.com, Twitter/Pico8Console, author's screenshot).

Outside of the limitations of the PICO-8, *Celeste* makes use of screen effects, cartoon-like images, and a much larger surface area to show its environments. In addition to pixel graphics, *Celeste* uses hand-drawn, cartoonish images to show the faces of characters when in dialogue and fully illustrated scenes to end chapters. As a story rich game, this allows the title to flesh out the appearance

of characters and show their expressions, but also stretches the game beyond the capabilities of 32-bit systems like the Sega Saturn, Sony PlayStation, and Game Boy Advance and, of course, the PICO-8. Reflection, bloom, blur, and chromatic aberration effects are also used that stretch beyond the aforementioned consoles. *Celeste*'s expanded video effects and hand drawn art reflect more modern pixel graphic games like *Fez* (Polytron Corporation, 2013), *Even the Ocean* (Analgesic Productions, 2016), and Maddy Makes Games' previous title *TowerFall* (2013). Its visual design also resembles more cartoony platformers like *Super Meat Boy* (Team Meat, 2010) and *Geometry Dash* (RobTop Games, 2014).

Furthermore, *Celeste*'s music is much more reminiscent of modern retro-style games than actual retro games. Composed by Lena Raine, *Celeste*'s music is a wistful, melancholy, and at times pumping electronic score, driven by piano that is often bolstered by lush and eerie synth sounds. While some sounds resemble retro synthesizers, it rarely sounds much like retro games. Its techno sound instead fits in with the music of its contemporaries like *Geometry Dash* and *Super Meat Boy*'s electronic soundtracks, and its yearning piano sounds resemble the music in *Even the Ocean*.

Finally, *Celeste*'s controls expand beyond the previous two games discussed in this chapter, utilizing directional pad, directional keyboard keys, or a joystick, two controller face buttons or three keyboard buttons, and, if using a gamepad, one shoulder button. The directional inputs are for movement and while the game works fine with digital inputs like a pad or keyboard, using an analogue stick for movement allows for the ability to direct the avatar move accurately. The default gamepad face buttons are both A or Y (bottom or top button) to jump and X or B (left or right button) to dash or interact, and the default keyboard controls use C and X respectively for these actions. The shoulder button, primarily the right trigger, on the gamepad is used to grab certain objects, while the keyboard allows (by default) the use of the Z, V, and Shift key for this action. While more complex than *Dys4ia* or *Undertale*, *Celeste*'s controls do not go beyond the capabilities of 16-bit systems like the SNES and

Genesis, and its use of only two face buttons and the shoulder match the controls of the Game Boy Advance. The controls are similarly reminiscent of *Celeste*'s contemporaries that eschew the expanded inputs of modern controllers to just the essentials, such as *Even the Ocean*, which uses direction inputs and three buttons, or *Super Meat Boy,* which, apart from movement, only uses two buttons. The limited controls are also reminiscent of the PICO-8, which only allows for movement and two action inputs.

Figure 17: Contemporary influences on Celeste. Top-left: Fez; Top-right: Even the Ocean; Bottom-left: Super Meat Boy; Bottom-right: Geometry Dash (sources: toledoblade.com, eventheocean.com, supermeatboy.fandom.com, steam.com).

*Celeste'*s aesthetics, which lack a clear locus of inspiration in retro games, and appear more informed by the development of a 'post-retro aesthetic' enabled by newer technological affordances, add to its hauntology. Its pixel graphics point to the past, but its blocky, low-detailed visuals and modern visual effects point to more recent retro-style games. Its techno-like score fits in better with its contemporaries than anything from the 16-bit era, and its limited inputs match both retro controls and modern retro-style games. *Celeste*'s aesthetics are hauntological in their meta character. Coming out at a time when pixel graphics were established as a viable visual style, the game's graphics evoke the

limitations not of older consoles, but more contemporary DIY game making platforms, namely the PICO-8 and other game platforms with similar aesthetics. In this way it draws attention not primarily to games of the past, but so-called retro-style games of the present. Aesthetically then, *Celeste* is hauntological in a meta way, referencing references, but in doing so it comments on these modern games and opens the door to newer more accessible ways to play.

Play

Celeste is a difficult and challenging platformer that becomes hauntological through how it uses its gameplay to be an engaging "masocore" experience while representing tactics for coping with anxiety and depression. Derived from the words masochism and hardcore, masocore refers to a subgenre of games whose gameplay appeal is tied to their difficulty. Often this term is associated with 2-D platformers that require significant precision and dexterity to complete their levels. These games aim to recreate "Nintendo hard" experiences (*Nintendo Hard*, n.d.), another term that refers to the high difficulty of NES games. Examples of masocore games include *Super Meat Boy* (Team Meat, 2010) and *1001 Spikes* (Nicalis, 2014).

Celeste and other masocore games take inspiration from Nintendo's 2-D Mario games, perhaps the most popular and widely recognized platformers, but more specifically borrow their difficulty from the Kaizo Mario ROM hacking scene. *Kaizo Mario World* (2007) was an extremely punishing and unfair rom hack of *Super Mario World* (Nintendo, 1990) made by T. Takemoto for his friend (GlitchCat7, 2021; Kaizo Mario World, n.d.) and gained popularity in the romhacking scene for its ludicrous difficulty. Kaizo, meaning "rearranged" or "modded" (GlitchCat7), became the name of the sub-genre of rom hacks that were inspired by Takemoto's game and devoted to making borderline cruel hacks for *Mario World* with elaborate and nearly impossible challenges. *Celeste* developer Maddy Thorson has stated she was influenced by the Mario games and the Kaizo Mario rom hacks (Suttner et al., n.d.) and has even created some herself under the user name YMM, available on SMW central ("your primary SMW hacking

resources") and has also created some extremely difficult custom levels for *Super Mario Maker 2* (Nintendo, 2019).

Like *Celeste*'s aesthetics, the primary influences for its gameplay, masocore and Kaizo Mario, fall into both modern retro-style games and DIY gamemaking. Iterating on "Nintendo hard," these games promise outrageous difficulty and typically appeal to players looking for a punishing experience with repeated failure. The high difficulty of these games often become, intentionally or not, parodic in their ludicrous challenge and build fan interest through it. *Celeste* certainly is fitting of the label masocore but decides to do more with the formula.

As will be discussed further below, *Celeste* follows a character, Madeline, who is suffering from what seems to be depression and anxiety, and who is determined to climb Mount Celeste. The game is split into eight chapters with distinct environments, including an abandoned city, a neglected hotel, and a "the Mirror Temple." Each chapter requires you to traverse a series of connected platforming boards (a single screen or scrolling environment with one or several platforming problems or puzzles) that require a combination of jumping, dashing, and climbing to traverse. As shown in Figure 18, these boards present a mix of hazards like pits to fall into and spikes to fall on as well as traversal aids like moving platforms, spring pads, blobs that consume and shoot you out, and green diamonds that reset your dash ability. Madeline is only afforded one dash per jump, and limited stamina for climbing, so you must strategically rely on these aids to avoid hazards and reach higher ground. The game often requires a kind of juggling of Madeline through each board, relying on traversal aids to keep her away from danger until you can touch solid ground. The result is a lot of death and failure. Thankfully, the game bounces you back to the beginning of the board very quickly, softening your defeat with a speedy reset. Boards are often short, single screen tableaus, but do scroll to be larger on occasion to test your mettle.

On the surface, *Celeste* is a highly engaging and challenging masocore game, but uses its gameplay to represent the character's mental struggles and even some coping techniques. In a straightforward way, the difficulty and repeated failure needed to complete each chapter resembles the practice of overcoming intrusive thoughts or addiction. While it stays true to its masocore and Kaizo roots, *Celeste* creates a safe space for this failure. One way it creates this safe space is through its loading screens, which give affirming messages and encourage you to see your death count (the game prominently displays how many times players died in a stage) as a badge of honour, as evidence of how much you learned and how hard you worked in each stage. This perspective on failure is a fundamental technique for mental health therapy. When those who have mental illness experience setbacks, they are encouraged to focus on how much they achieved and the ways they have succeeded instead of focusing solely on their failure.

Figure 18: Top-left and Top-right: examples of hazard-filled boards in Celeste. Bottom-left: still from the Badeline boss pursuit. Bottom-right: still from the feather breathing mini-game (Sources: celestegame.com and author's screenshot).

The second chapter of the game, The Old Site, is a crucial example of how *Celeste* represents mental health and teaches coping techniques through gameplay. The Old Site begins with many pathways blocked by an unknown substance, preventing Madeline's traversal through the level. After finding a mirror that allows the character to see differently, the substance turns into a sort of goo that propels Madeline forward. While this substance initially prevents Madeline from crossing the stage, when looked at differently, it becomes a way to help her. This change in perspective is similar to mental health techniques that get someone to look at situations in different ways, such as rewording negative self-talk.

Furthermore, the boss of this stage is Madeline herself, or rather a distorted caricature of Madeline's own insecurities named Badeline. The boss fight (more of a boss pursuit) has the player running away from Badeline and a trail of copying clones while traversing increasingly complicated platforming puzzles. Cleverly, Badeline and her entourage imitate the player's movements in the chase (see Figure 18). For example, if a player takes an upper pathway and jumps at a particular point, Badeline will do the same milliseconds after. This simple evasion is complicated by puzzles that have the player hit switches to move to another area. In doing so, the player must return to pathways previously traversed to gain footing and hit all switches. To avoid Badeline, the player must judge their movements, and not land on the exact place they were before running into the enemy. This section of the game requires thoughtful movement and timing to complete. This mechanic reproduces the technique of being critical about one's thoughts and actions, being mindful of one's habits and tendencies.

As the first boss encounter of the game, this chapter has the potential to cause high anxiety. Knowing this, the game gives the user time to breathe. After successfully evading Badeline, a phone call informs the player and Madeline that they have just been in a dream and that their encounter with their "shadow" self was not real. Madeline wakes up, and the game calms the player by allowing them to explore the defeated stage without enemies or obstacles, in a relaxed state. The player also encounters

a recurring NPC, Theo, who is a centering presence in the story, and Madeline also reaches out to her mom over the phone, who encourages Madeline, and by extension the player, to breathe.

Beyond telling the player to breathe and allowing them space within levels to relax, chapter four introduces a minigame that emulates a breathing practice. As the level concludes, Madeline rides a gondola with Theo that stalls once Badeline appears. Madeline begins to experience a panic attack, and Theo teaches her a visualization exercise where one imagines a feather floating up and down with the motion of deep breaths. This turns into a mini game where the player must hold the jump button to float the feather up and release the button to let it fall, in the rhythm of slow, deep breaths (see Figure 18). Whether or not the player breathes along with the feather, they still experience the visualization exercise and must focus on the relaxed flow of the minigame, breaking up the high tension of the majority of the game.

There is no doubt that *Celeste*'s difficulty makes it a shining example of masocore platformers. However, hauntology peeks in when the game uses the mechanical tropes of the genre to represent mental health struggles. Its embrace of failure and use of therapeutic techniques in its game mechanics represent the struggle with mental illness through gameplay often used by gamers who pride themselves on a kind of macho difficulty or "getting good." However, in *Celeste*, it is the journey, the effort, and self-care that takes precedence over getting good. This notion is carried through the game's assist mode, which will be discussed in the *Equity* section, and its narrative, which tells the story of Madeline's journey.

Story

Celeste centers on Madeline, a woman who suffers from what seems to be primarily anxiety and depression, who is determined to climb the titular mountain. The exact reasons for her journey are unclear, but do not really matter as the mountain functions as a metaphor. What matters most in the plot is Madeline's personal journey and how she works through and works with her mental illness to

successfully climb the mountain. While it was not widely acknowledged at the time of its release, it has since been revealed that Madeline is a trans woman. Where the narrative of *Celeste* becomes hauntological is in its responsible and empathetic portrayal of mental health as well as trans representation.

Celeste is clear that Madeline suffers from anxiety and depression but does not introduce it initially as a defining feature. Mental health is instead addressed in the narrative gradually and her interactions with non-player characters infer it. For example, Madeline's anxiety disorder is revealed during a phone call with her mom at the end of Chapter 2. Madeline is flustered and anxious, and her mother calmly and concernedly asks "[o]h no, are you having another panic attack?" Followed by "[f]ocus on your breathing honey, I'm here." Instead of stigmatizing Madeline's mental state, the conversation with her mom normalizes her anxiety as she attempts to calm her. Madeline suffers from a panic attack again at the end of Chapter 4, when she and fellow climber Theo get stuck on a stalled gondola. Madeline is overcome by anxiety and Theo, again calmly and matter-of-factly, states "[y]ou're having a panic attack." He then guides her through the feather breathing exercise described in the *Play* section.

In a conversation with Theo at the end of Chapter 5, after saving him from capture in the mirror temple, Madeline has a frank talk with him about her mental health, revealing she suffers from rumination or repetitive negative thinking. Madeline admits she does not know why she is driven to climb the mountain but adds: "I just had to get it out of my head. I'm stuck in a cycle." She goes on to say she cannot stop thinking of "dumb things" and that her brain "fixates on these stupid things that happened forever ago." She also reveals that to cope she drinks and "gets mad at people on the internet." According to the American Psychiatric Association (or APA), "[r]umination involves repetitive thinking or dwelling on negative feelings and distress" (*Rumination*, 2020). According to the APA, rumination can lead to and worsen depression and anxiety and in turn depression and anxiety can

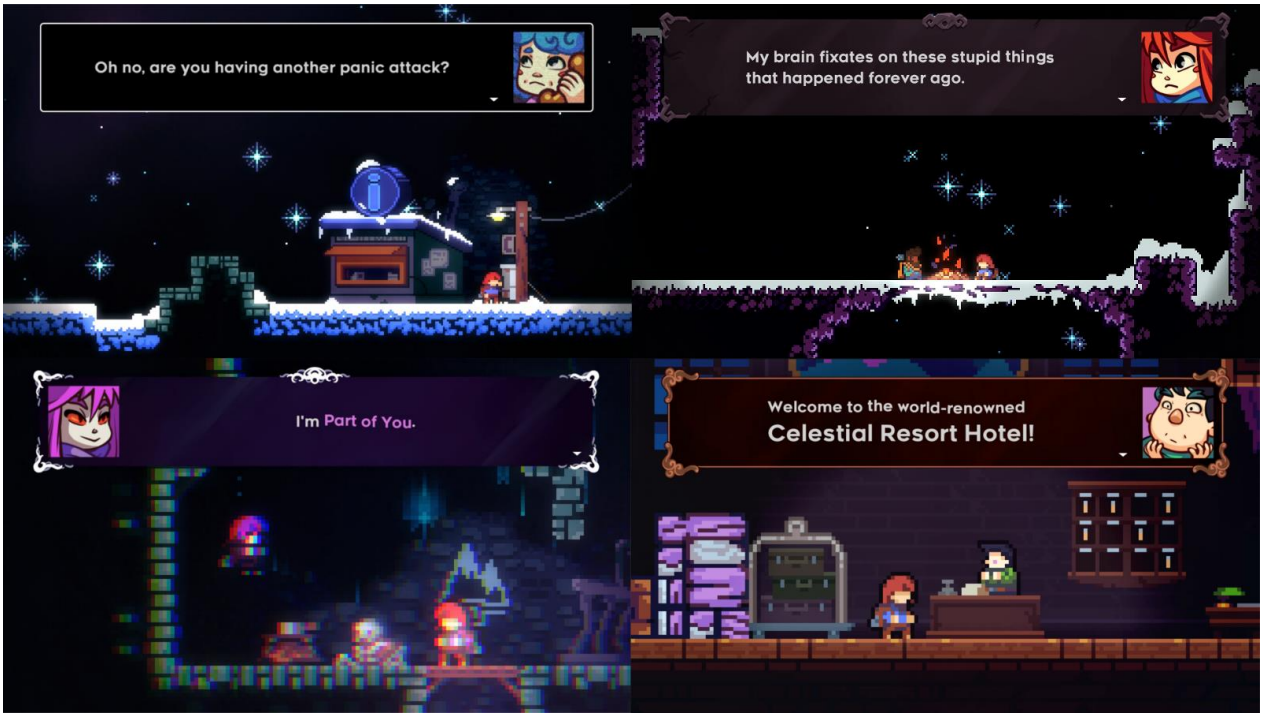

Figure 19: Stills from Celeste's story. Top-left: Madeline calls her mom after her nightmare in Chapter 2; Top-right: Madeline and Theo's heart-to-heart at the end of Chapter 5; Bottom-left: first confrontation with Badeline in Chapter 2; Bottom-right: the player and Madeline's introduction to Mr. Oshiro in Chapter 3 (Sources: author's screenshots and YouTube/Encrypted Duck).

exacerbate rumination. In fact, rumination, or repetitive negative thinking, is a predictor and symptom of those with both anxiety and depression (Drost et al., 2014; Spinhoven et al., 2015, 2018).

We see Madeline's depression not only through her rumination but in her behavior throughout the game. She exhibits several symptoms the National Institute of Mental Health (2023) associate with the illness. For example, her talk with Theo reveals "increased use of alcohol and drugs," and her choice to climb the secluded mountain shows "increased engagement in high-risk activities," "greater impulsivity," and her "isolating from family and friends" (*Depression*, section 3). Further signs of depression are seen in Madeline's muted emotions. In the first few chapters, she rarely emotes anything beyond irritability or anxiety when interacting with NPCs, showing signs of a "[p]ersistent sad, anxious, or 'empty' mood" (ibid.). Her emotions begin to be more expressive in chapter 4 and 5, when she is calmed by Theo on the gondola and then rescues him from the mirror temple, followed by their heart-to-heart.

While on the nose, it is very fitting that the main villain of the game is Madeline herself, or rather a version of herself. Badeline appears in chapter 2, The Old Site, and works as a manifestation of repetitive negative thinking. When encountered, both characters engage in dialogue, and Badeline explains that she is part of Madeline: when asked, "[a]re you the weak part of me, or the lazy part?" Badeline answers, "I'm the pragmatic part." Badeline then proceeds to discourage Madeline from climbing the mountain. Not only is Badeline a personification of Madeline's doubt and fear, but Madeline engages in her own negative self-talk by using terms like "weak" and "lazy" to refer to Badeline. In calling herself "pragmatic," Badeline is conflating pessimism with reality, a common practice for those with depression called cognitive distortions (Dozois & Beck, 2008; Rnic et al., 2016).

As explained by Rnic, Dozois, and Martion (2016), "[c]ognitive distortions are negatively biased errors in thinking" (para. 1) that interpret events in a negative way due to a person's negative core beliefs. In this way, cognitive distortions mold reality to adhere to a depressed individual's worldview. This distortion is represented in how Badeline changes things in the real world of the game. Badeline begins as a figment of Madeline's panic-laden dream but as her anxiety and doubt build, Badeline's strength grows and she is able to manipulate the environment. For example, Badeline stops the gondola at the end of chapter 4 and kidnaps Theo in chapter 5.

In the conclusion of the game Madeline discovers, with the help of NPCs, that the root of Badeline's negativity is fear. After confronting her with this knowledge and showing her compassion, both Madeline and Badeline work together to climb the mountain, and gain the ability to dash twice in the air, instead of just once. This plot point reflects therapeutic practices that use self-compassion to alleviate symptoms of depression and anxiety, practices that have been shown to be effective (Han & Kim, 2023), and are used widely in therapy. Beyond accurate representation of those with anxiety and depression, Madeline's display of self-compassion models help-seeking behavior (something urged in Hazel's LAPSES chart in Figure 15) and indirectly instructs its players on this practice. While Madeline

does display character traits of someone with depression and anxiety, her personality is fully fleshed out, she drives the plot, and does not fit into any stereotypes, such as those identified by Shapiro and Rotter.

There is one other character in *Celeste* who exhibits obvious signs of mental illness in the game: Mr. Oshiro, a reclusive hoarder from Chapter 3 – Celestial Hotel. While Mr. Oshiro could be labelled a "comic eccentric" (p. 1593), a character whose mental health is portrayed as quirky and used for comic effect, he is given agency in several instances throughout the game and his character is ultimately portrayed as sad. For example, he tells Madeline how people stopped visiting his hotel, which led him to withdraw further and further from contact with others. While he is a bit of a silly character, refusing to acknowledge the disrepair the hotel has fallen into, his backstory betrays this singular dimension. The level consists of Madeline helping Oshiro clean up the hotel, and after he lashes out at her and becomes the end of level boss, Oshiro accepts the state of his hotel, saying he will close it for repairs. He asks to be left alone, isolating himself, but showing signs of seeking help. This portrayal avoids tropes through its compassionate depiction of Mr. Oshiro as a troubled, fleshed-out character, not a shorthanded plot device or source of humor.

Celeste represents mental health and the struggles of those with depression and anxiety with empathy and compassion. Madeline's actions and expressed feelings provide an accurate portrayal of someone struggling with mental illness that matches up with psychological studies of said experiences. As someone who suffers from both anxiety and depression, I also found Madeline's portrayal very accurate. While not stated outright in the game, Madeline is canonically a trans woman (Thorson, 2023). While I cannot speak to the experience, this revelation was a big vindication for those who identified with her while playing (Bailey, 2023). As a game that has gained widespread attention, *Celeste* stands as a game that not only does mental health right, but also provides mainstream-level representation for the mental health struggles of trans women.

Equity

In step with the focus on mental health through its clever platforming gameplay and empathetic narrative, *Celeste*'s "assist mode" subverts expectations involving the challenge of masocore platformers and creates a safe space to experience the story.

Many masocore games, like *Super Meat Boy* and *VVVVVV* forgo difficulty settings entirely, requiring players to conquer their challenge to experience the titles in full. The only option to fully play through these games is to "git gud," a slang version of "get good" meant to chastise and demean those who ask for help with a hard game or request easier settings ("Git Gud," 2023; "Git Gud Meaning & Origin," 2018). The "git gud" notion came to prominence in the 2010s and has been criticized as coming from an ableist perspective (E, 2020; Green, 2017; Sterling, 2022). With the assist mode, *Celeste* subverts "git gud" gatekeeping by allowing users to customize their difficulty.

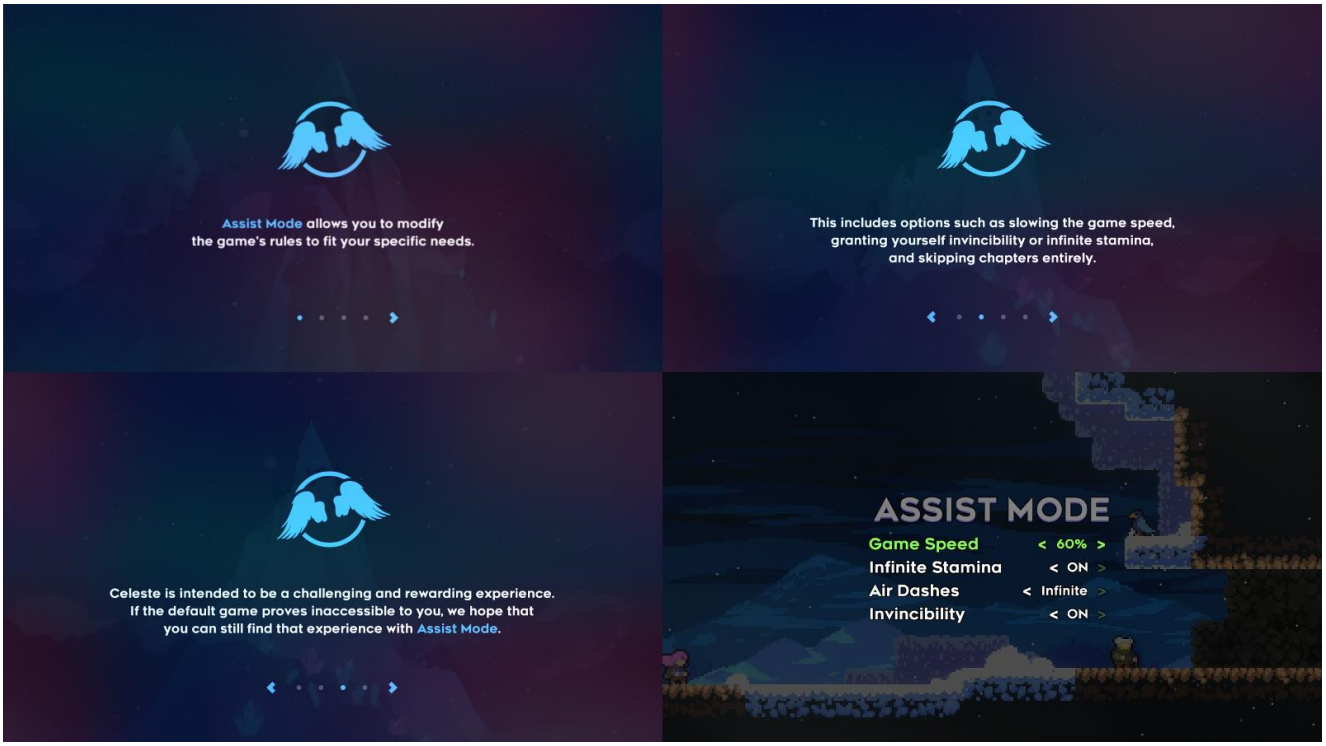

Figure 20: Titles that precede the activation of assist mode and its menu in Celeste (Sources: X (Twitter)/halfcoordinated and meeplelikeus.co.uk).

The assist mode functions like a trainer (a fan-made program used to apply cheats to games) that is built into the game. When assist mode is turned on, it gives users the option in menu to have invincibility, infinite stamina, increase the number of mid-air dashes, and slow down motion. While *Celeste* encourages the player to try playing without it first, it does not shame them for using it and allows users who are turned off by masocore games the choice to play through *Celeste* without as much friction. Users can turn any element of assist mode on and off at any time during gameplay, allowing players to get help when, and how, they want. By giving players the option to tweak the difficulty to their comfort, *Celeste* allows players to experience the full narrative of the story without forcing them to "git gud."

Even with assist mode on, the game is not necessarily easy: you must still traverse the hazard-laden board, but they get to do so without repeated deaths. For example, in Chapter 4, The Golden Ridge, many of the platforming puzzles require you to fight against changing wind direction. When the wind is blowing at you, jump distance is shorter, requiring you to use your dash to move further, and when it is blowing away from you, your jump carries you further, and you must do your best to aim Madeline to land. With assist mode and invincibility turned on, for example, you will not fall to your death or die on hazards if you miss a safe landing area. Instead, you will bounce along the edge of the screen—if you would otherwise fall—or land unharmed if on a hazard (such as spikes). While this does not kill you, you still must compete with the wind and find another foothold in order to continue. No matter what option you have turned on, the game does not cross the boards for you: you still must scale the mountain, whether you have infinite dashes to essentially fly through level, or infinite stamina to climb around to your heart's content. Assist mode does not eliminate the struggle of the game, but potentially eliminates the frustration and allows those without the dexterity and literacy of the hegemony of play to experience the game.

Like *Undertale* and *Dys4ia*, *Celeste* too has low technical requirements to play. Its minimum requirements are Windows 7 or newer, 2GB of RAM, 1.2GB of hard drive space, and at least an Intel i3 M380 processor and an Intel HD 4000 graphics card (that has about 1007MB of video memory), both low-end components manufactured in the early 2010s. In other words, *Celeste* can be easily played on lower powered laptops from roughly ten years ago. Its specs pale in comparison to even *Undertale'*s triple-A contemporary, *The Witcher 3*, that requires about twice the video memory, three times the RAM, and over 41 times the hard drive space. Again, like *Undertale*, *Celeste* is widely available on virtually all current video game marketplaces, such as Nintendo Switch, PlayStation, and Xbox stores, as well as ones for PC platforms like Steam, Epic Games, and Itch.io.

Moreso than the other two titles in this chapter, *Celeste* truly meets players where they are. Whether it is through its assist mode, low specs, and wide availability, this title wants players to experience it, and makes efforts to remove the barriers that may prevent this. While it may not have been the first game with an assist mode, the game is has sparked discussions over greater accessibility in games (see Hughes, 2021; Klepek, 2018; Saylor, 2021; Swift_Gamer, 2020) and inspired games to follow its example, as can be seen in titles like *Control* (Remedy Entertainment, 2019), *The Last of Us Part II* (Naughty Dog, 2020), and *Steelrising* (Spiders, 2022). While not as astronomically successful or influential as *Undertale*, *Celeste*'s accessibility options and emphasis on mental health has seen tangible changes in the industry.

Further Playing

There is a healthy selection of games that deal with mental health in a responsible and empathetic way, including *Depression Quest* (Zoë Quinn, 2013), *Actual Sunlight* (WZOGI, 2014), *Night in the Woods* (Infinite Fall/Secret Lab, 2017), and *Gris* (Nomada Studio, 2018). There are even recent ones that use pixel graphics such as *Ikenfell* (Happy Ray Games, 2020), *An Outcry* (Quinn K., 2023), and the upcoming *She Dreams Elsewhere* (Studio Severe). As stated above, there are also a slew of games with assist modes and expanded accessibility settings. Yet, none quite match up to the particular

hauntological character of *Celeste* whose assist mode aligns thematically with its content. The closest I have found is *Dead Cells* (Motion Twin, 2018), another difficult 2-D pixel graphic, action-platformer whose assist mode aligns not so much with the themes of the game but the development studio's anarchist philosophy.

Released in the same year as *Celeste*, *Dead Cells* is a gated exploration game, inspired by the *Castlevania* (Konami, 1986-2021) and *Metroid* series (Nintendo, 1986-2023), a sub-genre often referred to as a metroidvania game. It is also a roguelite, a genre where levels are procedurally generated and change every time the player character dies (which is often), but your character can level up in some consistent way throughout these repeated plays. The plot is light, the player character, known as the prisoner, must fight their way through different dark and decrepit levels to finally defeat an evil king. Unlike *Celeste,* gameplay is very much focused on command and conquer, encouraging the player to hone their skills to dispatch enemies quickly and efficiently. However, like *Celeste* this game features an assist mode, called custom mode in this case, which was added to the game in 2022 as part of the *Breaking Barriers* patch. These options allow the player a range of options for making the game more accessible, such as giving the player extra lives (in the original game when you die you restart from the beginning), an auto-hit mode (where the PC will automatically target and attack nearby enemies), and sliders to adjust enemy and player weakness and resilience. Custom mode does not disable achievements or trophies (gameplay challenge awards for specific feats) and the community seems overall accepting of it (Max0607, 2022; Scootersmugskirt, 2022; StarDerp70, 2022). With a plethora of options to choose from, *Dead Cells*' custom mode allows players a say in how they would like to experience the game. This opening up of accessibility mirrors the development studio's own philosophy on work.

Resisting toxic gaming culture on the industry level, developers Motion Twin are an anarchist company. As their website states "WE DON'T HAVE A BOSS. WE ARE ALL EQUAL […] Everyone has a say

and we all take home the same salary" (Motion Twin, n.d.). Elsewhere the website also states, "WE MAKE GAMES TO FULFIL OURSELVES AND BE HAPPY" (ibid.). The focus on satisfaction and equality without the exploitation and crunch common in other commercial studios mirrors the philosophy of an assist mode, i.e. allowing everyone to experience the fun of their game, without the need to grind and git gud.

Through their aesthetics and anarchist set-up alone, *Dead Cells* is a hauntological title, but this character is further boosted with the expanded accessibility of their custom mode. Like Maddy Makes Games (the makers of *Celeste*), Motion Twin stands as a shining example that a game can be produced, accessible, and be very successful outside of the current exploitative practices of AAA studios.

Conclusion

Dys4ia, *Undertale*, and *Celeste* are all hauntological. Their aesthetics and gameplay are rooted in the past, but their use of them show us a way to greater equity in games. Whether it's the use of early 8-bit gameplay tropes to tell a moving and personal story in *Dys4ia*, an old-school JRPG that questions violence and embraces compassion in *Undertale*, or a Nintendo-hard, yet accessible puzzle platformer that uses its gameplay as a metaphor for mental health and healing in *Celeste*, we can see that the ghosts of gaming's past can be used to further goodness, in W.E.B. Dubois sense of the word. While all three use retro-style aesthetics and gameplay, they are not simple throwbacks. They instead use their seemingly superseded elements to provide better accessibility (i.e. stripped down controls, lower technical requirements), comment on and subvert command-and-conquer gameplay tropes (such as *Dys4ia*'s score-less mini games, *Undertale*'s allowance to not kill anyone, and *Celeste'*s undercutting of its own difficulty), and even cleverly point to DIY gamemaking communities (for example *Dys4ia* being a product of the Flash game scene, *Undertale'*s aesthetic similarity to emulation and its developer's roots in rom hacking, and *Celeste'*s visual nod to Pico-8 and gameplay that reflects Kaizo Mario rom hacks).

These titles stand as strong examples that the endless progression of the AAA industry may give us more advanced graphics and more intricate gameplay, but the way to better stories, representation, and equity may lay in the ghosts of the past.

As the Further Playing section reveals, these games are not alone in their hauntology: many other games espouse a similar hauntological good. Yet, this is not the case for all retro-styled games. As Jesper Juul (2019) claims, in recent years pixel graphics have become more markers of a supposed gaming "authenticity" than indicators of more ethical and equitable games. Jon Vanderhoef (2016) also points out that many commercial indie publishers and developers that produce pixel graphic games, like Devolver Digital, are just as profit-driven as the big AAA publishers and continue to perpetuate toxic masculinity in their games, even if this is done in a winking, self-conscious way. *Katana Zero* (Askiisoft, 2019), for example, cleverly uses neon pixel visuals, coupled with a pumping retrowave soundtrack, 80s VHS aesthetics, and rewind mechanic to explore the PC's struggle with trauma and memory. However, the gameplay is mainly dependent on the player deftly executing well-timed button presses to murder enemies acrobatically. *Olija* (Skeleton Crew Studio, 2021) features an elastic band animation style in its pixel art but tells a colonial story with orientalist elements of a white explorer saving natives from a monstrous threat.

There is nothing inherently wrong with pixel graphic games that are not specifically hauntological. The problem arises when post-retro aesthetics are co-opted to perpetuate hegemonic ideologies, especially those rampant in the gaming industry already. While I still maintain that commercial indie games with post-retro aesthetics can be hauntological—*Ikenfell* (Happy Ray Games, 2020), *Get in the Car, Loser!* (Love Conquers All Games, 2021) the upcoming *She Dreams Elsewhere* (Studio Zevere, TBA), and the plethora of titles mentioned in Further Playing are all good examples—I cannot ignore how the market has jumped on this style in the hope of increasing profits. To get outside

this, we need to get outside dominant gaming markets and for-profit production entirely. Fortunately, the hauntological spirit is still alive in DIY production.

In the concluding chapter of my dissertation, I will revisit theories on affect and aesthetics that inform hauntological thinking and how post-retro games become hauntological, as well as propose a recontextualization of the journey of post-retro aesthetics from their 80s roots, to DIY gamemaking, to AAA industry opposers. Finally, I will draw this project to a close by pointing to the future of hauntological games that have moved underground in the wake of toxic commercial indies. While commercial indie games begin to mirror the negative aspects of AAA titles their hauntology has found a home in DIY games making platforms and their collaborative gamemaking communities, like Bitsy and the Haunted PS1 Collective. Though their collaborative and anti-capitalist approach to gamemaking their two groups are aesthetically stuck in the past, but point to a more equitable and accessible future in gaming.

Conclusion – 8-bit futures

Dys4ia (2012), *Undertale* (2015), and *Celeste* (2018), along with their post-retro contemporaries, use pixel graphics and simplified controls to show us a future of games that bucks the increasingly hyperrealistic and complicated game mechanics of AAA titles. As post-retro games, they implement aesthetics (both visual and felt) of the past for affects beyond straightforward nostalgia. These post-retro games in particular pull elements of the past into the present, in order to see what alternate futures can be imagined for games. In this way, these post-retro games are hauntological. While the titles analyzed in chapter 3 have shown a way to create compelling and equitable games, the emergency has managed to get its claws into this aesthetic in recent years and has imperiled this hope for the future in the commercial indie space. The main argument of this concluding chapter is that commercially-produced indie games will inevitably replicate the problems of the AAA industry. Yet, one area that escapes this is hobbyist gaming, whose hauntological character is enabled by free, open access, easy to use game making tools like Bitsy.

The emergency in video games is the capitalist demand for ever-higher profits in the AAA industry to the detriment of the labour force and gaming audience. This culminates in aesthetics, in the hyperreal resource-heavy graphics of AAA games and their infinite drive toward making them more detailed. According to Santiago Zabala (2017), it is an emergency aesthetics that can break us out of this emergency. I have argued that this aesthetic force in video games is pixel graphics, an aesthetic which incorporates more accessible gameplay and more diversity in the characters and situations games depict. As we saw with the analysis of *Dys4ia*, *Undertale*, and *Celeste*, and the other games touched on in the third chapter, post-retro games (titles that use elements of the past without the sole intention of nostalgia or post-modern reference) use their aesthetic (both visual and gameplay) to break out of the hegemony of play and endless progression and provide games with wider representation in both

narrative, for gameplay preference and ability, and technological accessibility. These games are hauntological as they use elements of the past, namely pixel graphics, to create games in the present that point to a future of greater equity in games. However, as will be discussed in the next section, after post-retro titles saw success in the mainstream as a seemingly new meta-genre, "the indie game", capital-driven companies were quick to pounce on the trend.

The Indie Emergency

All the games discussed in Chapter 3 are commonly categorized as indie games. As I describe in Chapter 1, the term "indie game," typically refers to an explosion of games made outside the AAA studio system that exploded in popularity starting in the late-2000s to early-mid-2010s. This output was widely seen as an oppositional force against the AAA that played on the nostalgia of gamers. Both parts of this reputation, that indies are inherently oppositional and nostalgic, require some important qualifications. As discussed in Chapter 1, the use of pixel graphics and gameplay common in contemporary retro games was not a novel return to the past, but arose from an underground and hobbyist game-making, emulation, and rom hacking culture that continued throughout the 1990s and 2000s when mainstream gaming moved largely to 3D graphics.

Furthermore, the label of 'indie game' does not inherently designate games that oppose the capitalist logics or the often-regressive politics of the mainstream game industry. As Jon Vanderhoef (2016) argues, "the overwhelming majority of indie developers are not coming from a place of opposition, but rather an alternative mode of practice, one still inline, importantly, with the tenets of capitalism and the neoliberal marketplace" (p. 204). He further notes that the label 'indie' only gained popularity through support from mainstream gaming platforms, such as games hosted on Xbox's 360 Live Arcade marketplace. Wide acknowledgement of and attention to indies came only after the critical and player acclaim and successful sales of Jonathan Blow's *Braid* (Number None, 2008), which was released on the Xbox 360 Live Arcade service, opening the door for similar types of games to be

distributed on major online storefronts, like Steam, Nintendo's E-shop, and the PlayStation Store, and receive significant commercial success. Vanderhoef points out that this "commercial success brought 'blockbuster' status to the genre of independently produced video games and inspired thousands of developers, amateur and professional, to start indie development studios" (p. 6). While many indie games such as those discussed in Chapter 3 promise a more equitable future for games, many others still "reproduce, rather than repudiate, toxic forms of masculinity present in dominant circles of gaming cultures—albeit this reproduction manifests as an alternative, ironic masculinity" (Vanderhoef, in Clark and Wang, 2020, location 697). Examples of popular retro indie games containing this toxic masculinity and power fantasies can be seen in three pixel graphic titles: *Hotline Miami* (Dennaton Games, 2012), *Katana Zero* (Askiisoft, 2019), and *Olija* (Skeleton Crew Studio, 2021).

Hotline Miami is a brightly coloured, bloody, top-down shooter. In it, you play a masked hitman tasked with fulfilling a series of contract kills. The ultra-violent gameplay is frantic as the player must quickly dispatch rooms of enemies. Opponents are easily bested, but the player character (PC) is just as vulnerable, leading to levels that must be repeated a few times to memorize enemy placement and patterns to succeed. The game is very difficult, requiring precise, twitchy actions, and features a noisy, glitchy techno soundtrack and garish visuals to make a purposely unpleasant, assaulting experience. While the over-the-top brutality of the title is tongue-in-cheek and borderline satirical, it fully plays into its harsh gameplay and male-centric power fantasy. Its pixel graphics add a unique style, but primarily work toward giving the game a primitive look.

Often compared to *Hotline Miami* (Harris, 2019; Makedonski, 2019; Mejia, 2019; Morton, 2019; Smith, 2019), *Katana Zero* features a similar plot, where an assassin, this time donning a kimono instead of a mask, is tasked with eliminating rooms of humans speedily and efficiently. This time the perspective is shifted to a side view and the garish visuals are replaced with a cool, neon, 80s aesthetic, complimented by a synthwave soundtrack. The gameplay is similarly difficult, requiring precision and

Figure 21: Top, A bloody scene from Hotline Miami; Bottom-left, The Asian aesthetics of Olija; Bottom-right, the retro-tinged level select screen from Katana Zero (Source: Steam).

quick movements and repeating levels several times. In *Katana Zero* the PC is given a drug that allows them to rewind time if they die, providing an in-fiction conceit for the multiple tries needed for each level. The time rewinding apes the visual effect of rewinding a VHS, and each mission begins with inserting a cassette into a TV/VCR combination unit. The pixel graphics here add to the retro aesthetic of the game, but also play into the plot where the PC deals with trauma of a past war and loss of memory. Instead of dealing with mental health in any responsible way, however, the game seems to use trauma to add edginess to its narrative, giving the player special powers like rewinding, or mixed-up memories and amnesia leading to the white American veteran PC possessing the skills of a master samurai. The

psychotherapist character (the only sign of help seeking behaviour in the game) is the distributor of contracts and the one feeding drugs to the PC to keep control over him. *Katana Zero* ups the ante on toxicity from *Hotline Miami*, as it too revels in its male power fantasy and challenging command-and-conquer gameplay an also manages to stigmatize mental health.

While *Olijah* avoids negative representation of mental illness, it manages to pack in orientalism and blatant colonial elements into its pixel aesthetics. Reminiscent of early 90s Delphine Software adventures like *Another World* (1991) and *Flashback* (1992) with pixelized, rotoscoped graphics, *Olija* takes the man-in-a-foreign-land approach to what looks like the 17th century. The game tells the story of Faraday, a white lord of a fishing village, who is shipwrecked on the mysterious the island of Terraphage and proceeds to defeat an imposing threat and return home. While fictional, the island is home to Asian-looking inhabitants, such as an old man in a wide, circular-brimmed kasa hat, and a woman with visual markers of a geisha. The enemies on the island are tribal-looking with bows and arrows, curved blades, skeletal and fanged masks, and bone-like accoutrements. Its tale of a rich white dude, crashing into a foreign land, single handedly conquering tribal-looking enemies, and falling for a Japanese-looking beauty, feels incredibly old fashioned and unbelievably colonial. Its uncareful depiction of Asian stereotypes emulates an orientalism more in common with mid-century Fu Manchu movies than anything released recently. To be fair, while *Olija*'s gameplay is primarily based around violent encounters like the other two titles, it is more concerned with telling a story than creating a difficult experience and is a much more approachable game. Yet, that does little to excuse the shocking, racially insensitive narrative.

When looking at *Hotline Miami*, *Katana Zero*, and *Olijah*, there seems to be little difference in gameplay and narrative from the games made by AAA studios, apart from pixel graphics. These three are not exceptions: many pixelized power fantasies can be found to play, such as *Tormentor X Punisher* (E-Studio, 2017), a tough, gory, heavy-metal-drenched, top-down shooter, and *Star Renegades* (Massive

Damage, Inc., 2020) a neon pink-tinged strategic roguelike battler, with robots. There is a slew of pixelized gated exploration games (or metroidvanias), as well, such as *Blasphemous* 1 and 2 (The Game Kitchen, 2019) and *Momodora: Reverie Under the Moonlight* and its sequel, subtitled *Moonlit Farewell* (Bombservice, 2016/2023). Both pairs are known for their high level of difficulty; the former also features dark religious themes and high gore, and the latter sports titillating depictions of busty women. As evidenced in the selections in Chapter 3, offerings such as these are to an extent counterbalanced by hauntological games produced in the same period: *Get in the Car, Loser* (Love Conquers All Games, 2021), a "lesbian road trip RPG" (*Get In The Car, Loser! On Steam*, 2021), and *Coffee Talk* and its sequel, *Episode 2: Hibiscus and Butterfly* (Toge Productions, 2020 and 2023), both of which are "coffee brewing and heart-to-heart talking simulator[s]" (*Coffee Talk on Steam*, 2020). These and other titles could not be included in this study due to length considerations. Sadly, games that perpetuate the tropes of AAA are plentiful in the indie commercial space. Even a game like *Ikenfell* (Happy Ray Games, 2020), a turn-based tactical RPG about magic school children which has great LGBTQ+ representation and gives players to option to skip mentally triggering parts of the narrative, still possesses a high challenge and command and conquer gameplay, with little to no self-reflexiveness about this gameplay mechanics. Recently, the only contrasting elements of commercial indie games and AAA titles are aesthetics, and, according to Vanderhoef, better working conditions. While hauntology in post-retro games has dwindled in the commercial market, like pixel graphics in the 1990s, hope has moved underground to DIY game-making communities and the platforms they surround. One engine in particular, *Bitsy*, has captured the spirit of equity that the for-profit industry has left behind.

The DIY Alternative

> What videogames need right now is to grow up. The videogame industry has spent millions upon millions of dollars to develop more visually impressive ways for a space marine to kill a monster. What they've invested almost nothing in is finding better ways to tell a story, and in

> exploring different stories to tell. That's for us to do: the people who don't have to sell thousands of copies of a game to break even, who aren't obliged to fill their games with eighty hours of content, who are beholden to no one, who are free to be silly and weird and creative and personal. Hobbyists and zinesters. You and me. (Anthropy, p. 157-158)

As the above quote from *Rise of the Videogame Zinesters* shows, I am far from the first person to see the hobbyist gamemaker space as a hopeful way forward in the fight for a more equitable games culture. Anna Anthropy has long been a champion of 'zinester' or hobbyist developers. I primarily use the term DIY (Do-it-Yourself) to describe these games that follow the tradition of other DIY practices, like zines and crafts, made primarily by one person or a small group of hobbyist developers. Many DIY games are available online at no or low cost[5] and are often created within supportive online and in-person communities devoted to DIY games or to particular game making platforms. A lot of DIY activity can be found on Itch.io, an online, independent video game marketplace that, in addition to distributing video games, also hosts forums and game jams—organized challenges or contests to make games based on a theme, a game-making platform, or both, within a certain amount of time. Due to their non-commercial or at least non/anti-capitalist production, these games tend to be small, personal, and/or experimental games, and, therefore often political. The DIY game-making community is also a space where individuals who have traditionally been marginalized by the AAA industry, such as people who do not identify as cis males, BIPOC and LGBTQ+ people, people with disabilities, and those who are

[5] While beyond this study's scope, it is worth pointing out that while making cheap or free games is great for the player and for hobbyist game-makers, it does make it difficult to devote a majority of one's time to, and make a living as, a game maker. Anna Anthropy, for instance, is lauded for pushing the medium forward, but everything she has produced has done little to support her monetarily (Juul, 2018). As Leigh Alexander (2013) points out in her article on Anthropy, "more traditional independent developers are celebrated for bootstrapping and become 'success stories' when they raise money, while others face criticism, a presumption they're 'seeking handouts' when they dare to ask for some small amount of money for their work (para. 1). Unfortunately, developers like Lucas Pope remain an exception rather than the rule for independent game makers who can make a living making games.

neurodivergent, are able to create and play games that represent their experiences (Keogh, 2015; Young, 2018; Vanderheof, 2016).

A great deal of DIY game making is facilitated by easy-to-use development tools like *Twine*, *Ren'Py*, *PICO-8*, and *Bitsy*. Hauntological retro visual game making is particularly facilitated by *Bitsy*, but the other tools also make game development more accessible. *Twine* is primarily a text-based platform used to make hypertext or hypermedia fiction, *Ren'Py*, as its website states, is a "a visual novel engine" (*The Ren'Py Visual Novel Engine*, n.d.), and *PICO-8* is a fantasy console (a console based entirely in

Figure 22: Top, both coding and visual design interface for the PICO-8; Bottom, working environment of Ren'Py (left) and Twine (right) (Sources: gamesfromscratch.com, renpy.org, and archeogaming.com).

software, not hardware) where people can make, play, and remix 8-bit games made specifically for it. These game making platforms feature extensive user-created online documentation on how to use them and numerous forums devoted to discussion and teaching. *Ren'Py* and *Twine* are free to use, while *PICO-8* has a modest one-time cost for its suite of tools. *Twine* probably offers the lowest barrier for game making as its development interface resembles sticky notes on a board connected by lines. *Ren'Py* and *PICO-8*, on the other hand, require coding, the languages of Python and Lua, respectively. I have limited knowledge and experience with coding, but Python and Lua have the reputation of being among the most approachable coding languages and there are, of course, plenty of tutorials on how to use them. Of the three mentioned above, I find *PICO-8* the most compelling for its all-in-one software and 8-bit graphics, and its deliberate constraints. As the website states: "The harsh limitations of PICO-8 are carefully chosen to be fun to work with, to encourage small but expressive designs, and to give cartridges made with PICO-8 their own particular look and feel" (*PICO-8 Fantasy Console*, n.d.). *PICO-8* is undoubtedly hauntological, purposely limiting its technical capabilities in favour of an aesthetic style steeped in the past and an approachable development interface, but its price tag (admittedly very reasonable) and use of Lua fall short of the accessibility that *Bitsy* provides.

Developed by Adam Le Doux and published on Itch.io in 2017, *Bitsy* is "a little engine for little games, worlds, and stories" (*Bitsy*, n.d.). While the platform itself does not map neatly onto the categories of *design*, *play*, *story*, and *equity* as do the games analyzed in Chapter 3, analyzing it using these categories reveal its hauntological character. From a *design* perspective, *Bitsy* works similarly to *Twine* in that it does most of the heavy lifting code-wise and presents the user with an aesthetic and design-focused editing interface (often referred to as a GUI) for game making. *Bitsy* greets the user with five tool windows: "about," containing links and documentation to help the user make their game; "room," displaying the gamespace (by default it is a blue area with walls, the player avatar and a sprite in the form of a cat with preloaded dialogue ["I'm a cat"]); "paint," where the user can create and edit

the avatar, sprites, tiles, and items; “colors,” for changing the colours of elements; and finally “game,” for downloading and uploading your game. You can also open other tools to easily edit game elements like “dialogue,” for adding text that appears when the user interacts with sprites, “exits and endings” between your rooms, and the modify the “inventory” of the player character or avatar. The tools menu also provides options such as “tune,” which opens a minimal but very capable midi sequencer for making music for your game, and “blip-o-matic,” for making various short beeps and boops to add sound effects to actions and interactions. One can even click on the “data” option in the “game window to manipulate the game on a (very simple) code level. The engine allows for simple and rudimentary pixel graphic visuals, often called 1-bit (an 8-bit aesthetic with limited colour, often looking flat), and low-fi chiptune sounds. Its technical capabilities and interface are reminiscent of early GUI (graphical user interface) computers, like the Apple Macintosh, released in 1984. Its 1-bit graphics, chiptune sounds, and plain, blocky design interface are the primary hauntological elements of the engine.

Bitsy’s initial set up at once suggests its *play* capabilities through the toolboxes that are open and their labels, especially “room,” which does a lot of work suggesting the kind of game space the user will design for *play*. *Bitsy*’s development interface and allowances are designed to create games that feature an avatar moving around a space and interacting with sprites or items (which can be ‘taken’ by the avatar) through dialogue boxes. From a *story* perspective, *Bitsy*’s design, or ‘grain,’ encourages the making of narrative-based spatial games. I use the term grain in the same way as Benjamin Nicoll and Brendan Keogh (2019), to refer to “the design methodologies that cultural software orient their users towards” (p. 15). While *Bitsy* supports the creation of many rooms, sprites, items, and points of interactivity, its menus are simple to a fault, requiring the user to click through their various creations (rooms, objects, dialogue, etc.) one at a time using arrow icons to edit and use them in the game space, instead of choosing from a drop-down list or menu. This would render the making of bigger games unwieldy and tedious, so *Bitsy* games are meant to be small and short in duration.

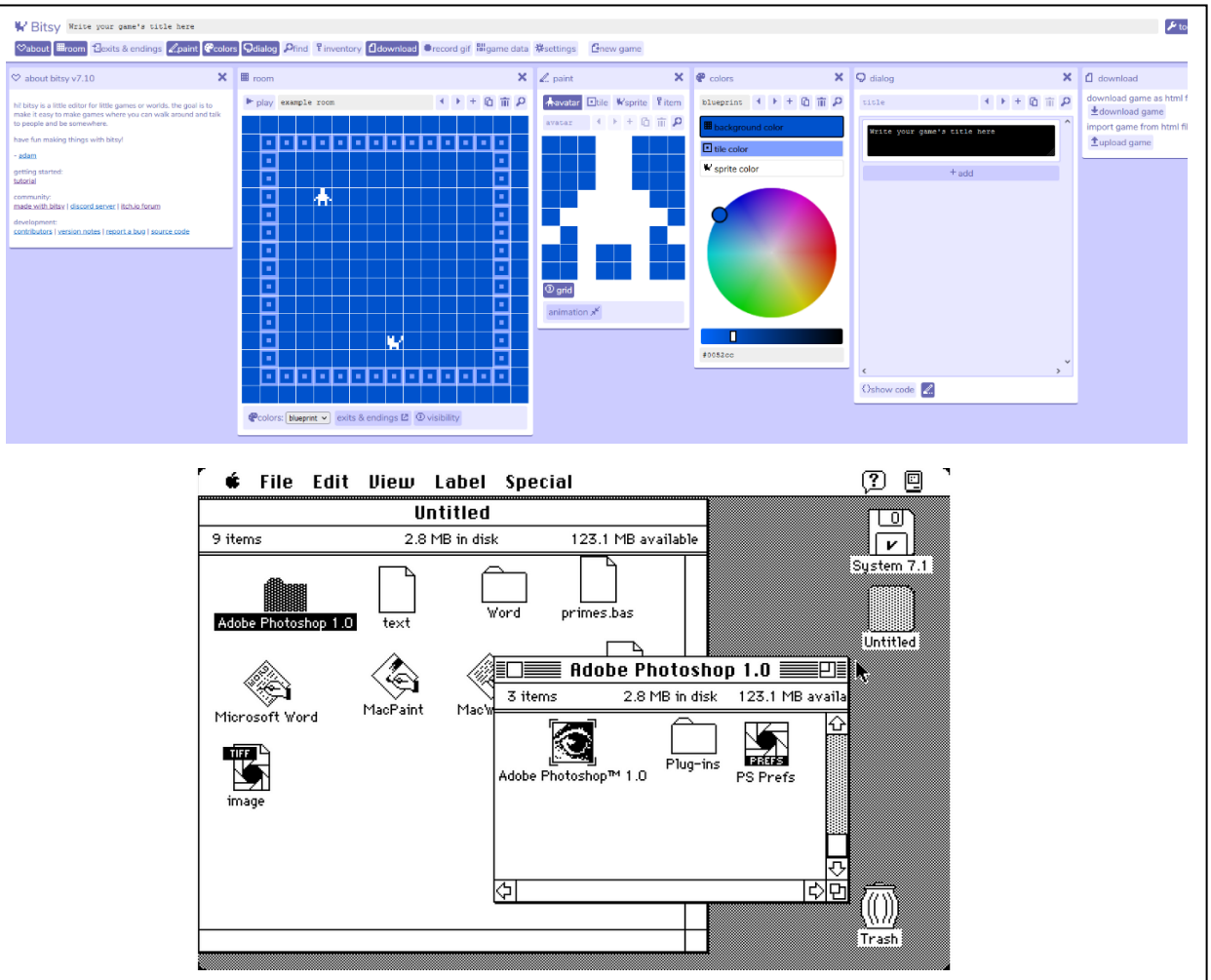

Figure 23: Top, development interface of Bitsy; Bottom, interface of the Apple Macintosh. (Sources: author's own capture, medium.com).

Bitsy's *equity* lies in its limitations, aiming to keep work created using it simple and small. Like *Ren'Py* and *Twine*, it is completely free to use, and, like all the platforms mentioned above, has a community of gamemakers that surround the engine, mostly found on Itch.io (*Bitsy Community*, n.d.). The engine runs in a web browser and further graphical interface options or gameplay allowances would hurt the lightweight nature of the platform (although there is a robust library of user-created *Bitsy* extensions). As Emily Reed (2020) has pointed out, "all *Bitsy* games are reducible to text files that can be interpreted by the *Bitsy* web app, they are extremely easy to remix, modify, and host online" (Locations 2636-2637). In its shareability, approachability, accessibility, and aesthetics, *Bitsy* is political in that it is a tool for the non-developer game maker. Locked into these highly-constrained allowances and with a grain toward a 1-bit aesthetic and low action-high narrative, *Bitsy* works outside dominant modes of

game development, reaching to elements of the past to create a more equitable game making environment. Therefore, *Bitsy* as a platform is hauntological, rendering the games made with the engine are inherently hauntological as well.

Figure 24: From Left to Right: My Face (AshG, 2019), Under a Star Called Sun (Cecile Richard, 2020), Starlight Motel (cwcdarling, 2021)

As a *further playing* section, I would like to point to some of the games creators have made with *Bitsy*. Whether intentionally or not, much of the extensive output of *Bitsy* features gameplay and narrative that deviate from the hegemony of play. Instead, you find games that are personal, experimental, political, and moving. *Starlight Motel* (cwcdarling, 2021) is based on the titular establishment in downtown Wareham, Massachusetts, owned by Phil Clemens, who has opened the property to be used as a home for unhoused individuals and families. This title is what I would call a basic *Bitsy* game, and I use the term affectionately. Gameplay solely consists of the PC, Phil Clemens, moving around the Starlight Motel, speaking with its inhabitants, and finding items to pick up and return to people or unlock doors. *Starlight Motel* is a straightforward and touching, monochromatic game that explores the lives of those living in the building, shining a light on societal issues, without any overt political messages. It's a highly political game simply by its compassionate treatment of those often ignored or maligned.

My Face (AshG, 2019) uses a tool called *Pixsy* (ruin, 2018), to transfer an image file of the developer's face into *Bitsy*. Instead of exploring a room, the player explores the face of the developer,

AshG. The avatar here is not an approximation of a body, but a small magnifying glass. As described on its itch.io page: “This isn’t a game […] It’s a piece of self-obsession – about my face and the face underneath it without the makeup.” Highly personal, *My Face* lays bare the insecurities of AshG, a “gender non-conforming person,” using the specificity of their experience to comment on attitudes of society in general, especially in terms of the perception of trans people. While the game screen is clearly a face, the abstract character of the 1-bit graphics leaves out many details that work to let the player fill in the blanks, perhaps with their own features.

Finally, Cecile Richard has made several affective narrative games in *Bitsy*, such as *Under a Star Called Sun* (2020). This is a science fiction game where the player controls the lone crew member of a spaceship with a mission that seemingly involves preserving plants of earth in order that they can be transferred to another planet. What is essentially a walkthrough of a routine day’s duties on the spaceship becomes a story of the avatar's memory of earth. It is very touching and sad, with great use of music. Unlike the two games discussed above, this title expands the single space exploration of Bitsy’s grain, to transition into memories that act as cut scenes, and closeups of items, such as a coffee cup. Richard is able to build on the initial capabilities of the engine through the community’s wide adoption and development of *Bits*y hacks and extensions.

In addition to using *Pixsy* (discussed above), *Under a Star Called Sun* employs *Add Bitsy Audio*, (candle) which allows a user to add external audio files to their game, and *Exit-from-Dialog* (@mildmojo), that lets you exit a room via a dialog box. Richard also employs a number of *Bitsy* hacks created by Sean S. LeBlanc, including *Avatar by Room* (which allows the user to change the appearance of their avatar’s sprite when changing rooms), *Dialog Choices* (which allows the user to add choices in dialog boxes), and *Transparent Sprites* (which allows sprites to have transparent backgrounds). LeBlanc has created and compiled a number of “hacks” for *Bitsy* that are freely available on Github.com or linked through itch.io, essentially JavaScript code, that one can add to their *Bitsy* projects. To complement

these scripts, Ayolland has created a program called *Borksy* that allows users to use hacks and extensions without having to cut, paste, and edit html files themselves. Tutorials for using LeBlanc's scripts and even LeBlanc himself recommend using *Borksy*. Like the games themselves, *Bitsy* extensions, tools, and hacks are freely shared among the community, with tutorials on how to use them, and, like *Borksy*, even tools that build on other tools and scripts. These extensions have reached such a saturation in the community that the use of some tool or hack is expected in more recent games.

Cecile Richard's other projects also use *Bitsy* extensions, such as *Hope* (2020) which uses *Bitsymuse* (David Mowatt) enabling extended audio controls, coupled with candle's *User Interface* tool for the hack, as well as a series of hacks by Sean S. LeBlanc, like *Opaque Tiles* and *Dialog Pause*. *I am still here* (2021), in addition to using *Bitsymuse* and its UI tool, is made with *Bitsy 3D* (aloelazoe, 2020), a tool that allows users to create 3D environments in Bitsy. Beyond Richard's output, we see the adoption of extensions; for example, *The Midnight Bakery* (dreamingamaris, 2019) and *Catching the Train* (cottonsprout, 2021) use the *Bitsy HD* hack (Fred Bednarski, 2018) which changes the tile resolution from 8x8 to 16x16 and *Three Lesbians in a Winter Special* (Digital Poppy, 2021) uses the *Long Dialog* (for bigger dialog boxes) and *Character Portrait* (for adding high quality jpegs to the games) hacks by Sean S. Leblanc.

While these hacks and tools may seem counterproductive to what I argue is one of the strengths of *Bitsy* (keeping it simple), the base platform remains untouched. These extensions are not implemented into *Bitsy* proper, but instead lay on the periphery as options for developers that do not complicate the core experience of the engine's game making grain. These add-ons instead encourage community exchange and community building. These hacks and tools are not made by commercial companies and distributed to users but made by users for other users. To access them and learn to use them, developers need to participate in the community, researching, conversing, and sharing. Many, if not all, of these extensions are available for free, like the games made with *Bitsy*. When using the hacks,

common practice is to credit the creators on their Itch.io project's page, although some developers credit help from forums as well, such as the *Bitsy* Discord. While a relatively small community, *Bitsy* is growing, there are over 5,000 titles tagged *Bitsy* on Itch.io and LeDoux is regularly at work on the engine, having released four updates in 2024 as of May 3rd.

Bitsy has truly picked up the hauntological torch that has dimmed recently in the commercial indie space. It has even added a layer of anti-capitalism and community through the free hack, tools, and games produced for and with *Bitsy*. Through its accessibility, grain locked in simple mechanics and 1-bit visuals, its communal methods for expanding its allowances, and output that features a vast array of voices, *Bitsy* is deeply connected to hauntology and resistance to the commercial pressures of capitalist realism and AAA games.

Many other scholars are also taking notice of this little engine and its possibilities. Brendan Keogh and Benjamin Nicoll (2019) praise the platform in their book *The Unity Game Engine and the Circuits of Cultural Software* for its highly political grassroots approach to game making. As mentioned above, Emily Reed, in her chapter in *Indie Games in the Digital Age* (Clark and Wang, 2020), highlights the shareability of *Bitsy* games. Jason Boyd has brought *Bitsy* into the classroom in his course Narrative in a Digital Age at Toronto Metropolitan University, to teach gamemaking and the power of small story-centric games. He has also created a 'living' *Guide to Bitsy* that is freely accessible online. Sandra Danilovic and her team at the University of Toronto are also working with DIY game making engines like *Bitsy*, *Scratch*, and *Twine* for the Recovery Game Café (recoverygamecafe.com) which looks at how "participants make sense of their lived experiences with opioid addiction through autobiographical game design and game jamming" (Danilovic et al., 2022). While study of *Bitsy* is still in its preliminary stages, these early mentions, analyses, and uses provide a glimpse into its power as a hauntological force outside the emergency.

Recently in the DIY game making space, we are also seeing hauntological game making focused on 3D graphics of the mid- to late 1990s, associated with or similar to Haunted PS1 (or HPS1). As I have explored elsewhere with Andrew Bailey (Dolan and Bailey, 2023), HPS1 are a collective of gamemakers devoted to creating scary, surreal, unsettling, or strange games that ape the aesthetics of the Sony Playstation 1 and Nintendo 64 systems. Unlike the pixel art games, HPS1 gamemakers "deliberately [engage] with video game aesthetics that many perceive as ugly, obsolete, and unpleasant" (para. 3). HPS1 devotees, like *Bitsy* devotees, are a strong community who share tools and methods of creating these games, not necessarily tied to a specific game making engine, though they often use *Unity*, and more recently a tool for the platform called the "Haunted PSX Render Pipeline" (Nicholas Brancaccio AKA pastasfuture, 2021). Like *Bitsy*, *Unity* is free to use and third-party tools like the Haunted PSX Render Pipeline are also no cost; there is even a how-to guide for it put together by another community member leafthieff (2021) on Itch.io. While *Unity* is less accessible than the straightforward and simple set up of *Bitsy*, HPS1's community of gamemakers mirrors the non-capitalist exchange of the engine and provides an example of hauntological games made from elements of the more recent past.

Furthermore, as Oma Keeling (2022) reveals in their *Tech Radar* article, "Queer retro horror games are the genre to watch right now": the retro-style horror game-making space is highly queer-friendly. Keeling quotes Fannon Valentine, one of Haunted PS1's communications directors, who says of the Haunted PS1 community:

> I feel like because the community is largely run by queer developers a lot of the priorities that are made in terms of creating a safe social space for the people running the space, the runoff of that is that it becomes a very safe space for queer folks to express themselves. (para. 12)

As someone who is an outsider to indie game development communities, I cannot speak to whether these comments hold true for everyone's experience, but it is evidence that underground games are carrying better equity forward into future hauntological projects.

While pixelized commercial indie games are being pulled into the emergency of capitalist realism through their adoption of command and conquer gameplay and appeal to toxic masculine tropes, we see the opposite occurring in the DIY gamemaking. *Bitsy*, with its inherent hauntology, is leading the way to a more equitable path forward in gaming paved with goodness, and other communities, like the Haunted PS1 collective are following in their wake with a different kind of hauntological force. While things seem dire in the commercial and AAA game space, there is still hope for a better 8-bit future.

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