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Repairing Games: Affect, Psychosocial Disability, and Game Creation

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By

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ABSTRACT
Repairing Games: Affect, Psychosocial Disability, and Game Creation
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This dissertation proposes a speculative design framework called Reparative Game Creation, a process of creating interactive media focused on healing, emotional acceptance, and accessibility for the psychosocially disabled. The goal of this work is to recognize the current massification of psychosocial disability, mental illness, and debility and to orient the design and use of interactive media towards healing and care, rather than towards a slow debilitation as is the current convention. This dissertation deviates from previous research on videogames and mental illness that align with medical institutions and medicalized models of health, instead coming from personal experience, process-based art, and critical disability studies. In this mode, videogames are less a tool for systematically decreasing anxiety and depression, as if the goal is to overcome psychosocial disability and shed all negative feelings, but instead positions game design as a potential avenue for interactive practices that build towards creating a more livable life through providing moments of self-reflexivity, connection, bodily sensation, and acceptance. The creative project portion of this dissertation, *UnearthU,* is a videogame about wellness culture, perfectionism, and healing. The written portion lays out the principles of Reparative Game Creation, theories key to them, and explores examples from other game designers making art about and with psychosocial disability. These principles include not only how a reparative game could operate, but consider the process of making

reparatively as equally, if not more, important. Reparative Game Creation is part practical design, part analysis, and part utopian dreaming of an alternate media landscape, one that helps sustain life rather than drain it.

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THE REPARATIVE GAME CREATION PRINCIPLES

REPAIR

Games are no more healing than any other art form.

Games will never cure anyone. Cure is not the goal. Make work that changes the media landscape, adding to a culture oriented towards making life more livable for those with psychosocial disability.

Do not only represent psychosocial disability but design for it.

No score, no winning, no losing, no good paths, no bad paths, no one right way to play, no punishment, no reward.

Do not make anything that requires people to purchase new or use any non-compostable materials. Use only what I and the players already have.

Be emotionally challenging, not mechanically challenging.

I am not making games for everyone. They are not universal.

Make games about something other than games.

A good game is not determined by a game one wants to play all the time. Meaningful experiences last beyond the playtime.

CARE

Recognize not only the labour of the time spent working, but also the preparation and recovery.

Do not expect to work like a machine (consistent, always productive, not emotionally affected by mood, physical experience, environment, food, weather, past experiences, brain fog, pain, injustice, neurochemicals, microbiome, our partner's mood, noise, etc.). I am not a machine. Neoliberal capitalism has set up unrealistic and unattainable

work expectations. Not only can I not live up to those expectations, they actively damage and drain me. Resist wanting to and trying to live up to them.

Making games should not come at the expense of my physical and mental health, relationships, hobbies. (Remind myself that my hobbies are not checking twitter, checking instagram, checking facebook, constantly consuming screen-based media, checking twitter again. Happily let art come at the expense of that.)
Know my cycles of work. Know that some is in my control, and some is out of my control. Do not wait for the "perfect" time to work, but recognize when it is unlikely. Do not wait for hypomania or tunnel vision. Use it when possible but create boundaries around it too (see above). Allow recovery time when this is the case.

Rest without guilt.

I do not need to suffer to make art.

Affect cannot be quantified. Foster emotional self-reflection rather than aiming to funnel the players into a specific emotion .

Do not overwork and do not ask players to overplay.

Be cautious—and grateful—of how much time I ask players for.

Set up a ritual for making art. Brew specifically blended tea, adorn my desk, light a candle, play specific music, or run aromatherapy. It can help get "in the zone" but also create a clear boundary between work and not work.

Remember that I can make art as a ritual, but I do not need the ritual to make art.

Perfection does not exist. Nothing is ever perfect, only an expression of that moment in time's preferences, desires, expectations, conditions, and experience.

Everything is an experiment and exploration.

No manipulative design techniques used to extract money from players.

Remind myself and players that there is life beyond the screen.

Make space for self reflection in the game. Emotional choices, but also potentially diary entries, mood trackers, pauses, time outs, direct questions, surveys.

SHARE

Be solo, a collective, or a co-op.

Be free with my ideas. Do not feel constrained to make art that fits into other game scholars, game makers, and gamers' view of good games, or even of games themselves.

Be vulnerable. Be radically open during the creation stage. Edit after it is already created if necessary.

Ask others for help. There is beauty in dependence.

The process of making is about coming to understanding, not demonstrating my understanding.

Describing some feelings as "good" and some feelings as "bad" are judgements. They might ease classification but are not inherent or true.

"Bad" feelings are a political resource.

"Bad" feelings are powerful and should not be avoided, but think through how they may affect potential players. Will it make the game inaccessible to people I want to play it?

Imagine the audience as someone like myself; experiencing psychosocial disability and many forms of debilitation, not an audience I am explaining my experience to.

INTRODUCTION:
On Psychosocial Disability

Are apps, videogames, and other interactive digital media addictive, anxiety-provoking, and manipulative or are they calming, connecting, and healing? In what ways do technology and technological art enable or disable healing? Popular culture and game studies are divided on the subject, the former arguing that videogames cause antisocial behaviours, mood disorders, and violence; the latter that videogames increase sociability, release negative emotions, and foster positive change in the world. Interactive technological media has become embedded in our daily lives, and it's growing more interactive, more individualized, and more user focused. It comes in the form of apps, therapy bots, gamified work training, digital gambling, websites, Fitbits, and those buttons in bathrooms with the declining levels of smiley faces for rating one's bathroom experience. We have a lot to learn from both the common pitfalls and the potentiality of game creation. In this dissertation, I aim to reconcile the dichotomy of digital media being the cause of or cure for mental illness by finding an alternate approach to understanding emotion and game creation. I de-medicalize psychosocial disability by using queer feminist affect theory, an approach that takes the cultural aspects of mental illness into account, moving beyond individual bodies and minds, and using videogames as a medium of emotional communication. My research largely focuses on videogames but with the knowledge that these interactive design practices affect are affecting much beyond the games industry and culture. This dissertation evaluates the complex relationship between videogames and

psychosocial disability to find ways to use creative technologies to help us move towards healing and care.

This research combines disability studies, affect theory, environmental theory, and queer feminist theory and uses a methodology of research creation in which I explore these theories through creative practice, a method I call Reparative Game Creation. I use the term "creation" to describe the work of this dissertation rather than "design," the norm within the fields of game studies and industry. This is because I view my creative practice as art practice, embedded in the political stakes of art, part of the continued history of art, and inspired by art creators and theorists, not design practices and its history. Although I am invested in art, I use 'creation' more due to its broadness, allowing it to expand out to game designers, makers, and other forms of creators.

The dissertation contains a few different elements: the game *UnearthU,* the Principles of Reparative Game Creation, theory exploring a potential reparative relationship between videogames and psychosocial disability, and reflection on the process of creation. It is part practical creation, part analysis, and part "utopian dreaming" of an alternate media landscape that helps sustain life rather than drain it.[1] This dissertation starts with the principles of reparative game creation to set up some of the key ideas I work through and to show the speculative basis I work from. I write these principles to challenge myself to uphold affective, anti-capitalist,

[1] 'Utopian dreaming' is a phrase from Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012), 2

psychosocially disabled, environmentalist ethics while making videogames. They are an experiment. In this way, the principles are performative; I am performing these tenets while making art. I have been resistant to following game design methods others have laid out due to their constraining rules of what a videogame is or how it should operate. Why then create my own? To me, the principles are more like mantras than rules; they are an ethic that I am trying to manifest by listing out, repeating to myself, checking in on, and trying to live out. Though they are written for me, as in I use words like "I" and "myself," they are not only for me to use. I wrote them this way in order to not be prescriptive to the reader, to you, but that if one wishes, they can make the principles or any part of them their own. I do not consider these principles to be rules. I will allow these principles to change and transform—in fact, that is a key part of this work. I have made this list and will try to make a game according to these principles but as I create the project I will modify, change, skip, replace, and delete them, then reflect on them at the end of the dissertation. It is in hopes that they will always be changeable and never prescriptive orders; no one system works all the time, for all people, for all occasions. One needs to be strategic about what system works when.

The dissertation exists in two forms: the written portion here and the playable form of a videogame, *UnearthU.* It is a seven-day experience following an Artificial Intelligence named KARE who was designed by a silicon valley start up to coach the players through various self-care activities. It is a bit bizarre and surreal, existing

between a self-help app, a dystopian world, and a personal story of a journey towards healing. I first wrote the principles, then wrote the bulk of the dissertation, then created *UnearthU* as a sort of test of the theories I put forth here, then returned to writing and game creation simultaneously. Before more closely detailing the contents of each of the chapters, the next sections of this introduction will provide brief overviews of ideas integral to this dissertation: the reparative, mental illness, disability, affect theory, and queer theory.

THE REPARATIVE POSITION

The term 'reparative' is inspired by Eve Kosofsky Sedgwick's theorizing of paranoid and reparative positions.[2] The word itself means something similar to tending to repair, amelioration, making amends, healing, and/or restoration. In an essay entitled "Paranoid Reading and Reparative Reading, or, You're so Paranoid, You Probably Think This Essay is About You," published later in her final book, *Touching Feeling*, alongside conceptualizations of non-dualism, affect, and sensation, Sedgwick details paranoid reading, the most common form of critique in academia, in which there is a "tracing-and-exposure project": a mode of searching for and then revealing hidden violence, oppression, and/or incorrect ideas. Paranoid reading generates constant anticipation of these shrouded attributes in order to ward off surprise, an affect seen as negative due to its association with naivete.[3] Sedgwick

[2] Sedgwick, Eve Kosofsky, *Touching Feeling: Affect, Pedagogy, Performativity*. (Durham & London: Duke University Press, 2003)
[3] Ibid. 124

argues that the paranoid position has become so commonplace that it is "widely understood as a mandatory injunction rather than a possibility among other possibilities," and "to theorize out of anything *but* a paranoid critical stance has come to seem naive, pious, or complaisant."[4] In attempting to theorize outside the expected and commonplace, Sedgewick introduces the possibility of a reparative position in academic contexts. Reparative reading is a form of academic creation where the emphasis is on finding forms of repair, love, openness—although the essay is much more focused on describing the paranoid than detailing the exacts of how a reparative position might operate like in practice. This may be, in part, because of the difficulty in holding a reparative position:

> The monopolistic program of paranoid knowing systematically disallows any explicit recourse to reparative motives, no sooner to be articulated than subject to methodical uprooting. Reparative motives, once they become explicit, are inadmissible in paranoid theory both because they are about pleasure ("merely aesthetic") and because they are frankly ameliorative ("merely reformist").[5]

A paranoid reading can be applied to anything, including the reparative position. Whereas the paranoid position forecloses certain affective possibilities, the reparative makes room for hope and surprise:

> to read from a reparative position is to surrender the knowing, anxious, paranoid determination that no horror, however apparently unthinkable, shall ever come to the reader *as new;* to a reparatively positioned reader, it can seem realistic and necessary to experience surprise. Because there can be terrible surprises, however, there can also be good ones. Hope, often a fracturing, even a traumatic thing to experience, is among the energies by which the reparatively positioned reader tries to organize the fragments and part-objects she encounters or creates."[6]

Surprise, hope, pleasure, love, and care come up in descriptions of the reparative, and

[4] Ibid.125, 126

[5] Ibid. 144

[6] Ibid. 146

paranoid reading is described as a mode of "forestalling pain."[7] Although this may seem that the reparative is less serious, or less dedicated to "truth," Sedewick argues that the reparative position is just as committed to justice as the paranoid readers are:

> No less acute than a paranoid position, no less realistic, no less attached to a project of survival, and neither less nor more delusional or fantastic, the reparative rating position undertakes a different range of affects, ambitions, and risks. What we can best learn from such practices are, perhaps, the many ways selves and communities succeed in extracting sustenance from the objects of a culture—even of a culture whose avowed desire has often been not to sustain them."[8]

Although the details of a reparative practice are blurry, the above quote offers many parts from where this dissertation derives its inspirations: a project of survival, affect, ambition, risks, and sustenance.

Sedgwick's own inspiration for her theorization came from Sigmund Freud, Silvan Tomkins, and Melanie Klein, all psychanalysists. The paranoid/reparative dichotomy is akin to Klein's paranoid-schizoid/depressive positions. In Klein's point of view, the way to achieve the reparative is only possible through the depressive position: it moves towards a "sustained seeking of pleasure" and allows one to achieve "a guilty, empathetic view of the other as at once good, damaged, integral, and requiring and eliciting love and care."[9] As this dissertation is focused on psychosocial disability and debilitation, psychoanalysis may seem like a natural foundation for its theories. However, I pointedly avoid the psychoanalytic in favour of disability studies and affect theory, modes of theoretical practice that question the categorizations of emotion into mental illness. This choice will be made more clear in

[7] Ibid. 137
[8] Ibid. 150-151
[9] Ibid. 138, 137

the next section on my usage of the term 'psychosocial disability' and its history, but in short: I am invested in looking to alternate understandings of emotion, debilitation, and they way they affect massive populations rather than the individualistic and outdated classifications, compartmentalizations and subjugations within psychoanalysis and psychiatry. Furthermore, this dissertation is focused on imagining what the reparative might look like, not the meanings of paranoid, depressive, or schizoid positions. I do not consider the paranoid and reparative as oppositional; in fact, this dissertation begins in what might be interpretted as paranoid in its critique of game studies. This is done in order to take the reader towards the reparative—offering critique in order to move forward and beyond. This dissertation is committed to the speculative imagining of what research creation may look like when it is dedicated to survival, love, risk, openness, and sustaining life.

Reparative Game Creation builds off of queer feminist affect theory and disability studies and applies these conceptual frameworks to videogames, reforming common beliefs about how the medium operates and what the reparative can look like. I argue that the necessity of repair and healing extends beyond what most would classify as disability to include other states that deteriorate lives, such as socioeconomic status, queerphobia, gendered violence, racism, transphobia and more. For most states, healing is an ongoing, never-ending process. The so-called negative feelings of psychosocial disability—lethargy, depression, panic, paranoia—can be utilized as a site of political change rather than swept under the rug. Affect is a

particularly useful concept to think through experiences of psychosocial disability, most of which are defined by what is medicalized then categorized as excessive, incorrect, or a limited capacity for emotions and emotional behaviour. Rather than thinking of psychosocial disability as a personal state, I question the ways culture defines "normal," puts pressure on people to be constantly happy, and how biopharmaceutical companies reap the rewards of the massification of debility. With this in mind, how can videogames, a time-based medium in which a single piece often takes over 40 hours to play fully, be incorporated into our lives in a way that fosters healing and emotional wellness, rather than deters it? How can videogames be a tool in working against personal and mass debilitation? Is it possible to make games that heal? Using my theory of Reparative Game Creation, I create and analyze experimental videogames as a form of research creation on the topics of psychosocial disability, gender and sexuality, as well as connecting the debilitation of humans to the degradation of the planet.[10] Games function not as the standalone media that will revolutionize care, or cure anyone of bad feelings once and for all, but may be able to offer a short relief —one that moves towards sustaining life, rather than depleting it. They can offer a moment outside the forward motion of life that slowly over time contributes to habits that help us continue the ongoing process of healing through the use of technologies already embedded into our daily lives like phones, tablets, and computers.

[10] I use the term research creation, a term common in Canada. It has a similar meaning to critical practice, arts-based research, research as practice, and others more common in the US, Britain, and Australia.

THE HISTORY OF PSYCHOSOCIAL DISABILITY

This section outlines a history of psychosocial disability and the theoretical influences that led me to choosing this particular term. In the early 1960s, "madness" as a mental and physical state was starting to be seen as a cultural phenomenon connected to state power, not an inherent biology, moral pitfall, or spiritual experience. In *Madness and Civilization*, Foucault wrote on the continuous development of the conceptualization of mental illness. His work charted the shift from the Renaissance in which he argued madness was portrayed as possessing a sort of wisdom, to the 17th and 18th centuries where the mad were totally separated from society, creating a distinguishing line between madness and rationality. Foucault theorized that at the end of the 18th century, the current understanding and treatment of madness began, which construed it as something to be confined to the medical institution. This work shows that the medical model of understanding madness is not as ubiquitous as it may seem now. In the same year that Foucault published *Madness and Civilization*, psychiatrist and activist Thomas Szasz wrote *The Myth of Mental Illness,* which became a massive influence on the Mad Pride movement. Szasz posited that mental illness is a myth as it cannot be objectively observed and argued that there should be complete separation between psychiatry and the state, writing that "involuntary mental hospitalization is imprisonment under the guise of treatment."[11] Due to pushback against asylums and violence done against the mentally

[11] Quoted in Lewis, Bradley, "A Mad Fight: Psychiatry and Disability Activism", The Disability

ill, the Mad Pride movement picked up steam. The label, Mad Pride, is used affectionately. Proponents of it argue that "mainstream psychiatry over-exaggerates psychic pathology and over-enforced psychic conformity in the guise of diagnostic labeling and treatment which all too often comes in the form of forced or manipulated hospitalizations, restraints, seclusions, and medications."[12] Many of the activists involved in Mad Pride had shared common experiences of being treated with discrimination within the psychiatric system and were abused by doctors, psychiatrists, and staff.[13] They were also most often left out of their treatment planning. Mad Pride advocates opposed the pathologization and medicalization of mental illness and the ways in which the government exercised coercion and isolation over people, while also taking on madness as an identity to love and embrace.

The early stages of Mad Pride set up an oppositional relationship between psychiatry and anti-psychiatry activists, with people taking on the terms "survivor" and "ex-patient." As the movement continued and changes in medical institutions were made, many members stopped taking such a hard-line approach, identifying more as "consumers," those who are critical of psychiatry but were willing to agentically participate in some parts of the medical and psychiatric industrial complex. These three are put together in the shorthand term *c/s/x*: consumer, survivor, and ex-patient. The relationship between Mad Pride and c/s/x continues to be a

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Studies Reader, 4th ed. Ed. Lennard J. Davis. (New York/London: Routledge, 2013), 121
[12] Lewis, Bradley, "A Mad Fight: Psychiatry and Disability Activism", The Disability Studies Reader, 4th ed. Ed. Lennard J. Davis. (New York/London: Routledge, 2013), 115-116
[13] Ibid. 118

tumultuous one, as the medicalization of mental illness and the subjugation it often produces remains in our present moment. I agree with Anna Mollow who states she is neither for nor against the DSM (the Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatry Association), the medical model, or psychiatric diagnoses, but is against diagnoses that are held from those who want them and when they are forced on those who do not.[14] Mollow states that "for many African American women with depression, lack of access to health care, rather than involuntary administration of it, is the most oppressive aspect of the contemporary politics of mental illness."[15] Institutionalized care here is configured as constantly and quickly moving between oppressive and privileged.

Rather than using the terms c/s/x or mental illness, I will be using *psychosocial disability*. This term connects the inner psychological with the outer social, while also relating it to disability. In the 2000s, theorists began to create overlap between mental illness and disability, though these categories clash in important ways. Margaret Price explores the different definitions and terms used to denote "impairments of the mind" and their respective social histories.[16] c/s/x is inherently connected to the psychiatric medical system, whereas mental illness is slightly broader though carries the dichotomy of mental *wellness*. This well/unwell paradigm has implications of

[14] Mollow, Anna. 2013. "Mad Feminism" Social Text. https://socialtextjournal.org/periscope_article/mad-feminism/
[15] Mollow, Anna, "When Black Women Start Going on Prozac": Race, Gender, and Mental Illness in Meri Nana-Ama Danquah's "Willow Weep for Me." *MELUS* Vol. 31, No. 3, (Fall, 2006): 67-99, 68
[16] Price, Margaret. "Defining Mental Disability." The Disability Studies Reader, 4th ed. Ed. Lennard J. Davis. (New York/London: Routledge, 2013), 298

needing a cure, or at the very least, the patient must always be moving towards "wellness." Neuroatypical and neurodiverse is most often connected to persons on the autism spectrum or those with traumatic brain injuries, but Price is critical of the idea of "normal" or typical minds, its opposite. This term also locates this experience solely within the brain. Mental disability, though also located solely within the mind, unites those with psychiatric illness and cognitive disabilities. Price settles on the term mental disability even though some c/s/x, mad, and mentally ill people are resistant to the term disability for fear of being labeled as damaged, limited, or incapable. Price likes the link to disability because of the community and coalition she has found in disability studies and activism. All of the terms have different backgrounds and connotations; none are right or wrong. I have chosen psychosocial disability for this dissertation because I find it best describes the theories I write on: affect and the emotional, social and cultural, and disability.

COMBINING THE PSYCHOSOCIAL WITH DISABILITY

Though there is potential generative thought and advocacy in the union between theorizing mental illness and disability studies, they have a fragile and uncertain relationship. Despite similarities between Mad Pride and disability activism, such as critiquing the binary between normal and abnormal, the two movements have had trouble forming a sustained coalition. This is in part because of the different histories, but also because "some disability advocates continue to harbor sanist style

associations toward mental difference and do not wish to be associated or 'tarnished' by Mad Pride. Likewise, many in Mad Pride (similar to the Deaf community) express discomfort with the 'disability' label." They do not see their "mental difference as a disability, but rather as a valued capacity."[17] Many in Mad Pride also feel that disability struggles are separate from their concerns because they see physical disability as not involving the same level of state coercion in the form of involuntary hospitalization and forced medication. Lewis, however, chooses to foreground the similarities and dual efforts needed to reduce state control, medicalization, and ableism. When asked if depression 'counts' as a disability, Mollow says the short answer is yes but the "longer answer would have involved a discussion of the ways in which truly 'counting' the experiences of people with mental illness might necessitate revising some of disability studies' most frequently cited claims."[18] Opening up and changing the Social Model of Disability allows for a wider understanding of disability and its experiences.

While those involved in Mad Pride, c/s/x, or mental illness have been hesitant to identify with disability, disability activists and theorists have also been hesitant to identify with mental illness, sickness, and chronic illness. The Social Model of Disability, a common understanding of disability and its related activism) separates impairments from disability, with the former being the physical experience and the

[17] Lewis, Bradley, "A Mad Fight: Psychiatry and Disability Activism", The Disability Studies Reader, 4th ed. Ed. Lennard J. Davis. (New York/London: Routledge, 2013), 116
[18] Mollow, Anna, "When Black Women Start Going on Prozac": Race, Gender, and Mental Illness in Meri Nana-Ama Danquah's "Willow Weep for Me." MELUS Vol. 31, No. 3 (Fall, 2006): 67-99, 70

latter being the socially produced barriers to access. As Tom Shakespeare points out, this model started in the UK by white, heterosexual men, most of whom had spinal injuries.[19] This led to a narrow understanding of disability. It also greatly risks implying that impairment is not a problem for anyone; that if all barriers were removed, disabled people would not suffer. Mollow writes that this binary has "led to de-politicization of impairments," and thus the need to illuminate "both the suffering that impairments can cause and the role of politics in producing them."[20] The social model of disability distances itself from the unhealthy, sick, and in pain. Susan Wendell illustrates the ways chronic illness both opens up and demands changes to the dominant conceptualizations of disability, proponents of which have fought the tying together of disability with illness or decapacitation. Socioculturally, health is treated as an inherent positive.[21] Wendell categorizes the differences as the 'healthy disabled,' those whose conditions are physically stable and do not expect to die any sooner than healthy people their age, and 'unhealthy disabled', those whose illnesses will not kill them immediately, but gradually wear down their health and create severe episodes of illness. Wendell recognizes that these categories are not ultimate or stable, that people move in and out of them, which brings up the question if it 'counts' as disability if one is intermittently sick, experiencing bouts of sickness and health. For Wendall, it makes sense why disability scholars would show disability as

[19] Shakespeare, Tom. "The Social Model of Disability" The Disability Reader, 4th ed. Ed. Lennard J. Davis. (New York/London:Routledge, 2013)
[20] Mollow, Anna, "When Black Women Start Going on Prozac": Race, Gender, and Mental Illness in Meri Nana-Ama Danquah's "Willow Weep for Me." *MELUS* Vol. 31, No. 3 (Fall, 2006): 67-99, 68
[21] Wendell, Susan. "Unhealthy Disabled: Treating Chronic Illnesses as Disabilities" *The Disability Reader: Fourth Edition*. Ed. Lennard J. Davis. (New York/London: Routledge, 2013), 30

valuable and desirable, and something people should be proud of, a common thread in the field. But the suffering that the unhealthy disabled experience is real; some could be eliminated by social justice, but not all of it. Conflicting with the popular stance of disability studies, Wendall says she would joyfully accept a cure for her illness if there was one. Though psychosocial disability has a strained place in disability studies, as does disability in forms of activism around mental illness, in combination they have generative conflict and information, pushing against common understandings of illness, disability, and the normal.

Disability and mental illness theories and activism offer critiques of the assumptions around normality and the demand to be considered "normal." Lennard Davis charts the history of the notion of 'normal' which did not appear in Western society until the 1800s.[22] With the emergence of the concept of the norm came *deviations from the norm*, as well as the notion of extremes. He argues that the construction of normalcy is the problem, not disability. Though generally more concerned with physical disability, Davis states that psychoanalysis and normalcy are connected, calling psychoanalysis the "eugenics of the mind—creating the concepts of normal sexuality, normal function, and then contrasting them with the perverse, abnormal, pathological, and even criminal."[23] Some common psychiatry and psychology practices configure the normal (a way many people are or should be) and if that normal is deviated from, treat it with an orientation towards the normal. This is

[22] Davis, Lennard. "Normality, Power, and Culture" The Disability Reader, Fourth Edition. Ed. Lennard J. Davis. (New York/London: Routledge, 2013)
[23] Ibid. 8

not something that happens once but over and over again; the hegemony of normalcy must be constantly reinforced to retain its power. Notions such as this have made me question the common queer theory term "non-normative": does the normal even exist? Disability and debilitation is so widespread that it is certainly commonly experienced and commonplace, especially considering psychosocial disability includes depression and anxiety disorders. Non-normative may be better described as non-expected, non-desired, or non-idealized.

AFFECT

Alongside disability studies, affect theory plays a major role in informing Reparative Game Creation. Affect theory sits awkwardly next to psychoanalysis with theorists like Ahmed and Berlant making purposeful moves away from the psychoanalytical, and others like José Esteban Muñoz arguing that instead of listing differences between affect and psychoanalysis, one should write from an "inbetween-ness."[24] Freud had a specific usage of 'affect', as "undifferentiated energy or feeling."[25] Current affect theorists are primarily influenced by one of two camps: Gilles Deleuze or Silvan Tomkins. Tomkins posits nine separate affects, such as distress, shame, and surprise, and was vital for Eve Sedgwick's understanding of affect in *Touching Feeling*. This form of understanding affect is interested in

[24] Muñoz, José Esteban. "From surface to depth, between psychoanalysis and affect, Women & Performance: a journal of feminist theory, 19:2, (2009): 123-129
[25] Quoted in Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012), 4

classification and hierarchizing complex affects. More common to the fields of disability, queer theory, and feminist theory, and more prevlanet in this dissertation, is the Deleuzian understanding of emotion and affect. Ann Cvetkovich described the 'affective turn' in scholarship as "signifying a body of scholarship inspired by Deleuzian theories of affect as force, intensity, or the capacity to move and be moved."[26] Many, but not all, affect theorists distinguish between emotion and affect, where affect signals "precognitive sensory experience and relations to surroundings" and the term 'emotion' factors in "cultural constructs and conscious processes that emerge from them, such as anger, fear, or joy."[27] Neel Ahuja defines affect as "the capacity of machines and bodies to affect and be affected, to sense, interact, connect, differentiate, move, and transition in a lifeworld…"[28] and as beyond the much theorized nervous system to include the immune and digestive systems. Mel Chen defines affect without focusing on restrictions: " I include the notion that affect is something not necessarily corporeal and that it potentially engages many bodies at once, rather than (only) being contained as an emotion within a single body. Affect inheres in the capacity to affect and be affected."[29] Continuing with broader definitions against strict boundaries, Cvetkovich is interested in the term "feeling", saying:

> I tend to use *affect* in a generic sense, rather than in the more specific Deleuzian

[26] Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012), 4
[27] Ibid.
[28] Ahuja, Neel. *Bioinsecurities: Disease Interventions, Empire, and the Government of Species*. (Durham: Duke University Press, 2016), 16
[29] Chen, Mel. *Animacies: Biopolitics, racial mattering, and queer affect*. (Durham: Duke University Press, 2012), 11

> sense, as a category that encompasses affect, emotion, and feeling, and that includes impulses, desires, and feelings… I favor *feeling* in part because it is intentionally imprecise, retaining the ambiguity between feelings as embodied sensations and feelings as psychic or cognitive experiences.[30]

Taking a page from Cvetkovich, I do not strictly follow just one of these definitions but aim to include and move between them, acknowledging their different histories and meanings but finding generative meaning in their juxtapositions.

Affect is not often connected to psychosocial disability even though affect, emotion, and feelings are fundamental defining features of experiences that become categorised as mental disorders. Cvetkovich's book *Depression: A Public Feeling* is one of the few pieces of scholarship to use affect theory to specifically study the experience of mental illness. She writes on depression, looking for alternatives to the medical model and finding affect theory to be a particularly useful one. Like Foucault, she looks to history to find other conceptualizations of the feelings that construct depression such as *acedia*, spiritual despair, then moves to the current formulation of mental illness as disease. Contemporary understandings of mental illness simultaneously relieve society of responsibility ("mental disorders are biochemical imbalances") and force individual agency over one's feelings ("you could just take medication"). She states that depression can be seen as a categorization, medicalization, and management of affect associated with "keeping up with corporate culture and the market economy, or being completely neglected by it."[31] Feelings are political matters. The goal of her book is to "depathologize negative

[30] Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012), 4
[31] Ibid. 12

feelings so they can be seen as a possible resource for political action rather than its antithesis."[32] For Cvetkovich, the epidemic of depression is related to the everyday impacts of prolonged histories of violence. She asks if depression in the United States could be traced to "colonialism, genocide, slavery, legal exclusion, and every segregation that haunt all of our lives, rather than to biochemical imbalances?"[33] Cvetkovich finds affect theory particularly enlightening for work around feelings and politics because of the limits of normative political analysis: "Saying that capitalism (or colonialism or racism) is the problem does not help me get up in the morning."[34] In addition to revolution advocated by political analysis, she states that what is necessary is "the slow steady work of resilient survival, utopian dreaming, and other affective tools for transformation."[35] To Cvetkovich, that means finding creative practices, community, and body movement practices—what she perceives to be the antidote to the stuckness of depression. Cvetkovich's work does not aim to dissolve depression, make people happy, or find the "good" in "feeling bad," but lets depression remain as difficult, suffering, and sometimes unlivable, and from there, use it as a generative political resource.

Even when not dealing specifically with mental illness, affect theory can shed light on the ways in which people feel and can be made to feel. Sara Ahmed's work on emotions and how they stick to certain bodies is particularly insightful here. In her

[32] Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012), 4
[33] Ibid. 114
[34] Ibid. 15
[35] Ibid. 2

paper "Affective Economies" Ahmed departs from psychoanalysis and proposes that emotions are not "within bodies but actually create the effect of the surfaces or boundaries of bodies and worlds."[36] She looks closely at white nationalists' utilization of fear and hate, and how those become a shared communal experience that works economically, circulating between "signifiers in relationships of difference and displacement"[37] rather than existing in the black or brown body and then transferred to the white body. She writes:

> In such affective economies, emotions do things, and they align individuals with communities—or bodily space with social space—through the very intensity of their attachments. Rather than seeing emotions as psychological dispositions, we need to consider how they work, in concrete and particular ways, to mediate the relationship between the psychic and the social, and between the individual and the collective.[38]

Ahmed theorizes that emotions work by being sticky and creating the effect of a coherent collective, binding subjects together: Emotions are not properties one possesses. She states "affect does not reside positively in the sign or commodity, but is produced only as an effect of its circulation."[39] Affect and emotion may appear as if they are *in* objects, but that conceals the ways in which they are "shaped by histories, including histories of production (labor and labor time), as well as circulation or exchange."[40] She argues that affective economies should be seen as social, material, and psychic. This work helps to understand feelings as not just an individual's responsibility but as connected to society, refuting the idea that psychosocial

[36] Ahmed, Sara. "Affective Economies," Social Text, 79 Vol. 22, No. 2 (Summer 2004): 117- 139, 117
[37] Ibid. 119
[38] Ahmed, Sara. "Affective Economies," Social Text, 79 Vol. 22, No. 2 (Summer 2004): 117- 139, 119
[39] Ibid. 120
[40] Ibid. 121

disability is solely located in the individual nor is solely the individual's responsibility.

Another useful text of Ahmed's is her book *The Promise of Happiness* which analyzes the neoliberal imperative to be happy. Happiness has become an individual responsibility and cultural disciplinary technique. This imperative to be happy, feel "good," or other emotions thought to be positive is profitable to capitalism—or rather, first being unhappy then wanting to be happy is profitable to capitalism. There is much incentive for those in power to keep marginalized groups debilitated yet desiring to be otherwise. Ahmed cites a quote from Barbara Gunnell: "the search for happiness is certainly enriching a lot of people. The feel-good industry is flourishing. Sales of self-help books and CDs that promise a more fulfilling life have never been higher."[41] The self-help industry relies on positive psychology and the societal pressure to feel good. Ahmed illustrates the ways in which the neoliberal directive to be happy orients one towards certain paths that are supposed to make them happy, such as heterosexuality or being able bodied, and away from others that are thought to make them unhappy, such as queerness and disability. At the same time, feeling good when one should feel bad—according to predominant social ideologies—is a sign of mental unwellness. This work shows the ways in which so-called negative feelings are seen as unwanted and then pathologized.

These affect theorists showcase the political ecology of affect, interfacing particularly with psychosocial disability related to what the DSM categorizes as mood

[41] Ahmed, Sara. *The Promise of Happiness. (*Durham: Duke University Press, 2010), 3

disorders such as depression, premenstrual dysphoric disorder, bipolar disorders, as well as personality disorders based on expressions of emotion such as histrionic personality disorder, borderline personality disorder, and antisocial personality disorder. Affect theory questions the basis of these constructed categories while not ignoring the very real and emotional experiences of people diagnosed with these disorders. In conjunction with disability studies, affect theory offer insight to the construction of the ideal and the normal, cultural pressures, and personal experiences of mental illness and psychosocial disability.

Affect theory has recently been permeating game studies. Though there is work broadly on feelings and videogames such as Katherine Isbister's *How Games Move Us: Emotion by Design*, Bo Ruberg's "Empathy and Its Alternatives," and Teddy Pozo's "Queer Games After Empathy," emotion is either not understood in the way the above affect theorists propose or is not the lens or focus. Photography scholar Eugenie Shinkle has published a few generative essays on the affective experience of games such as "Videogames, Emotion, and the Six Senses" and "Feel It, Don't Think: The Significance of Affect in the Study of Digital Games," primarily using Brian Massumi's Deleuzian concept of affect. Most notably is Aubrey Anable's *Playing with Feelings: Video Games and Affect*, the first game studies book using affect theory. Anable takes up Silvan Tomkins's work on affect (as Eve Kosofsky Sedgwick did) to analyze videogames in terms of touch screens, rhythm of work and play, and failure. Communicating certain feelings through videogames is are not as

simple as representing a feeling that the player then feels. In discussing merritt k's *Empathy Machine* (2016) Anable argues that "a computer program may not fully capture the complexity of what gender feels like, but that does not mean that it cannot create a circuit of feeling across screens, language, code, and bodies."[42] Affect is not deep and inaccessible; it is on the surface. Games are a haptic medium, where touch is as important as the visual and aural, and greatly connects to the player's affective experience. For Anable, videogames are ordinary; their ordinariness mixed with the 24/7 rhythm of labour make causal games a particularly interesting media to study. *Playing with Feelings* does the foundational work of theorizing videogame's affective capacity. Reparative Game Creation follows suit; agreeing that videogames are an affective medium, and moving towards how affect, as connected to psychosocial disability, is communicated and circulated through a game's design.

DEBILITY

The concept of debility, a term related to deterioration and incapacitation, aids in expanding the meaning of psychosocial disability away from an individual's identity towards a mass experience. As of August 2018, the CDC (Centers for Disease Control and Prevention) estimate that 1 in 4 adult Americans, 61 million people, have a disability that impacts major life activities.[43] Disability here is defined

[42] Anable, Aubrey, *Playing with Feelings: Video Games and Affect*. (Minneapolis: University of Minnesota Press, 2018), 56
[43] 'CDC: 1 in 4 US Adults Live with a Disability | CDC Online Newsroom | CDC', 10 April 2019. https://www.cdc.gov/media/releases/2018/p0816-disability.html

as: “Mobility (serious difficulty walking or climbing stairs), Cognition (serious difficulty concentrating, remembering, or making decisions), Hearing (serious difficulty hearing), Vision (serious difficulty seeing), Independent living (difficulty doing errands alone), Self-care (difficulty dressing or bathing).” They also note that the data shows “disability is more common among women, non-Hispanic American Indians/Alaska Natives, adults with lower income, and adults living in the South Census region of the United States,” indicating the intersectional ways in which oppression breeds debility. It is important to note that the CDC lists inability to self-care as one mode of measuring disability; however this refers to the capacity for the labour of taking care of oneself, not the way in which self-care has been commonly understood now: something more akin to self-soothing or self-love. I cite the CDC’s statistics and categorizations not to encourage the dichotomy between disabled and non-disabled, but the opposite: to see ways in which debility is pervasive. I follow Jasbir K. Puar’s practice of “critical deployment of the concepts of debility and capacity to rethink disability through, against, and across the disabled/non-disabled binary” and to “explore the potential of affective tendencies to inform these assemblages of debility, capacity, and disability…”[44] The concept of debility aids in thinking through the ways in which certain experiences associated with disability are pervasive and insidious to the global north, as well as articulates the ways global capitalist, white nationalist structures debilitate some more than others, while identifying who benefits from that debilitation. These experiences and affects

[44] Puar, Jasbir. *The Right to Maim.* (Durham & London: Duke University Press), 2

circulate through bodies without necessarily attaching an identity category such as disabled onto them, or acting as a binary yes/no box to checkmark.

In *The Right to Maim: Debility, Capacity, Disability*, Puar criticizes liberal disability activism that has modeled itself after the American Civil Rights Movement which has focused on pride, accommodation, and identity. Disability liberalism is apparent in scholarship such as Garland-Thompson's analysis of photos of disabled people. She uses the category "realistic" to describe a US government official photo of Judy Heumann, a white disability activist who uses a wheelchair. In effect, the naming of this photo as "realistic" normalizes disabled people as white, American, and in support of the state. Another example would be Davis' statement "we're all disabled by injustice and oppression of various kinds,"[45] a common lumping together of all forms of injustice and oppression under white, liberal, disabled identity. Puar argues against the fixed-state identity category of disability, stating it instead "exists in relation to assemblages of capacity and debility, modulated across historical time, geological space, institutional mandates, and discursive regimes."[46] Disability studies as a field has been largely white and situated in the global north, not taking into account that four-fifths of disabled people in the world live in the global south, and that "the production of most of the world's disability happened through colonial violence, developmentalism, war, occupation, and the disparity of resources."[47]

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[45] Davis, Lennard J. "The End of Identity Politics: On Disability as an Unstable Category," *The Disability Reader: Fourth Edition*. Ed. Lennard J. Davis. (New York/London: Routledge, 2013), 276
[46] Puar, Jasbir. *The Right to Maim.* (Durham & London: Duke University Press), xiv
[47] Ibid. xix

Disability studies needs to take into account the neoliberal imperatives and colonialist violence that can create disability. Puar does this through the concept of debility which complicates neoliberal rights rhetoric: "debility addresses injury and bodily exclusion that are endemic rather than epidemic or exceptional, and reflects a need for rethinking overarching structures of working, schooling, and living rather than relying on rights frames to provide accommodationist solutions."[48] Disability liberalism has long relied on State rights and accommodations, which has been integral to making disabled people's lives more liveable, but hits a limit when it does not address the systemic ways in which disability and debility is re-produced and profited from. Puar proposes that debility is not an identity but a "massification,"[49]a growth into a uniform society, that is coming about due to current bio-necropolitical formations of health and affect. Thinking across the disabled/non-disabled binary or thinking about debilitation on a mass scale is not to imply the common disability studies statement that eventually everyone becomes disabled but instead to recognize the ways debility affects different populations differently; location, race, socioeconomic status, traumas, work, health care, environmental factors, are an array of factors that debilitate some more than others— and prevents some from living long enough to become disabled.

Depression is one example that showcases the limitations of disability as a category. Depression may become the number one disability in North America,

[48] Ibid. xvii
[49] Ibid. xviii

through what Puar calls the "medicalization of affect."[50] The massification of depression is not only due to an increase of the feelings of depression or the availability of diagnosis but also resulting "through the finessing of gradation of populations. In other words, it will not occur through the hailing and interpellation of depressed subjects—and a distinction between who is depressed and who is not—but rather through the evaluation and accommodation of degrees: To what degree is one depressed?"[51] She connects this to the profitability of debility: pharmaceutical companies, medical expenses, and personal debt. It is important to note that debilitation is not solely a by-product of capitalism, colonialism, and neoliberal over-work; debility is "required for and constitutive of the expansion of profit."[52] The massificiation of mental illness read alongside theories on debility and affect signal that we do not need to think of psychosocial disability as an identity category, or the psychosocially disabled as a minority group looking for rights, but instead as an endemic experience deteriorating the lives of a vast amount of people.

It is in combining these approaches of mental illness, disability, affect, and debility that this project understands psychosocial disability. It is socially constructed and personally felt in the bodymind, yet not solely located in either. Mental health is an assemblage of neurochemicals, the microbiome, the environment, the culture, one's gender, race, socioeconomic status, and more. To be psychosocially disabled is to strive to accept oneself as they are while also striving to change a debilitating

[50] Ibid. 24
[51] Puar, Jasbir. *The Right to Maim.* (Durham & London: Duke University Press), 25
[52] Ibid. 81

society. The feelings that are sometimes foundational to psychosocial disability have run rampant in current society, such as depression and anxiety. They have been used as tools of oppression and suppression but feelings like anxiety and depression can also bring communion, connection, and political action. This is the approach of Reparative Game Creation: to make a process of creating that does not rely on capitalist modes of production, work expectations, and ableist design, and to create games that orient the media landscape towards psychosocial healing, repair, reflection, and care.

QUEER THEORY

I have written elsewhere about the way queerness impacts and steers my game creation practices.[53] While queerness is not necessarily the object of study within this dissertation, it is however a lens through which I view affect, disability, and games through. The majority of the theorists I cite are queer theorists; writing about queer youth suicide as Puar does, or orienting one towards "happiness" as a way of forcing one away from queerness as Ahmed writes, or about the connections between disability and queerness as Kafer formulates, and more.[54] And of course, the foundational term for this dissertation, reparative, is from Sedgwick, a queer theorist

[53] Marcotte, Jess and Kara Stone. "Questions on Queer Game Design: An interview between Jess Marcotte and Kara Stone." WiderScreen 22 (1–2) http://widerscreen.fi/numerot/2019-1-2/questions-on-queer-game-design-an-interview-between-jess-marcotte-and-kara-stone/, and Stone, Kara. 'Time and Reparative Game Design: Queerness, Disability, and Affect'. Game Studies 18, no. 3 (December 2018). http://gamestudies.org/1803/articles/stone.

[54] Puar Jasbir, K. "Coda: The Cost of Getting Better: Suicide, Sensation, Switchpoints." GLQ 1 January 2012; 18 (1): 149–158, Ahmed, Sara. *The Promise of Happiness. (*Durham: Duke University Press, 2010), and Kafer, Alison. *Feminist, Queer, Crip*. (Bloomington: Indiana University Press, 2013)

writing in response to trends in queer theory. Certainly there are many inter-relations between queer theory and disability, such as questioning what is normative, re-conceputalizations of time, and alternate modes of desire and sex.

Psychiatry and the medical industrial complex has been used against queer and trans people through pathologization of their identities and experiences. The DSM-I (1952) claissified homosexuality as a paraphilia, deviant sexualities under the category of personality disorders, then "sexual oreintation disturbance" in DSM-II (1974) "ego-dystonic homosexuality" in DSM-III (1980), then in DSM-III-R (1987) it was removed. Still today there are extremely damaging treatments to "cure" people of queerness. Gender identity disorder was used from 1980 until 2013 when it became classified as gender dysphoria, as it remains now. Gender dysphoria remains a medical category in which many trans people must have put upon them because of the need to have mental health professionals' approval in order to receive gender-affirming surgeries and hormone therapies.[55] The historical positioning of queerness and transness as mental disorders and then being removed or recategorized as non-disorders highlight the social construction of psychosocial disability; not that the experiences and impairments are *not real*—not even necessarily that they do not have biological factors—but that cultures understand, categorize, and pathologize these experiences in particular ways, influenced by a variety of sociopolitical factors, that

[55] Lane, Riki. '"We Are Here to Help": Who Opens the Gate for Surgeries?' *TSQ: Transgender Studies Quarterly* 5, no. 2 (1 May 2018): 207–27, and Spade, Dean. 'Resisting Medicine, Re/Modeling Gender',*Berkeley Women's Law Journal*, 2003.

change over time. Thus, queer theory is fundamental to the ways in which this dissertation understands affect, disability, care, and healing.

GAME STUDIES

Chapter 1 of this dissertation goes in-depth about specific popular game studies philosophies related to games for change and social activism, but the following are the most broadly influential scholarship for this work.

Mary Flanagan and Helen Nissenbaum's book *Values at Play in Digital Games* (2014) is directed towards creating conscientious designers. They lay out a theoretical and practical framework for identifying and embedding social values in videogames. They believe that videogames embody political and ethical values and can shape players' engagements with these values. These values lie in three categories: expressive (narrative, sound, character, etc.), ludic (rules, mechanics, reward systems), and technology (code, game engines, hardware.) As they write this book for designers in particular, they state that a designer should be conscious of these game elements and the ways they communicate values. Their Values at Play heuristic is an iterative process with three components; discovery, implementation, and verification. The discovery component involves locating and defining what social values the game is expressing. Implementation involves the ways in which the values are translated into the game. Verification involves checking if the values established in the discovery stage are actually communicated through gameplay. For Nissenbaum

and Flanagan, solid qualitative and quantitative data is needed to prove the success of the designers' goals, be it the impact of time sitting with the play experience, or immediate change in player behaviour. They argue that videogames are transformational: "Through games, designers have the power to alter a player's perspective of the world and disrupt habitual attitudes and affective responses."[56] They believe that videogames have a massive power to affect players, and the designer controls this power.

Rilla Khaled puts at the forefront the importance of reflection in social activist games. Stemming from states of perplexity, surprise, and doubt, reflection is a mental process that makes us revisit and reassess previously held beliefs, creating a desire to find solutions and framings.[57] Her Reflective Game Design (RGD) method argues that games are particularly good for triggering and supporting reflection because they support "representation of situations, problems and belief systems."[58] People play games expecting perplexity, surprise, failure, and problem-solving; one is "prepared to look for evidence, perform analytical reasoning and look for patterns in exploring our way to new solutions"[59] when playing a game. Despite this, Khaled states that most games actually work *against* reflection. She criticizes serious games and social activist games for their promise of safe environments, clear solutions, and stealth

[56] Flanagan, Mary and Helen Nissenbaum. *Values at Play in Digital Games*. (Cambridge: MIT Press. 2014), 133
[57] Khaled, Rilla. "Questions Over Answers: Reflective Game Design," In *Playful Disruption of Digital Media*, edited by Daniel Cermak-Sassenrath, 3–27. Singapore: Springer Singapore, 2018, 3
[58] Ibid. 4
[59] Ibid.

learning, all which deter from reflection. Reflection is not necessarily comfortable, and the promise of safe environments, clear solutions, and stealth learning may make the game more user-friendly but in doing so they "muzzle the experiential capacities of games" and do not accurately depict the complicated issues in the real world, "rendering them innocuous" or obfuscating their meaning.[60] Khaled takes the position that immersion lulls one into accepting the status quo and thus does not motivate social change. Immersion may be desirable in the realm of "pure entertainment," but it "works against enabling us to consider our play experiences from an analytical perspective and critical distance."[61] Immersion is being "drawn into a fiction and experiencing a sense of convergence with it" whereas reflection "concerns introspection and active interrogation of beliefs, situations and persuasive claims, and demands critical distance."[62] Khaled proposes four key aspects of RGD: questions over answers (not about reaching solutions), clarity over stealth (promoting conscious learning, not incidental learning), disruption over comfort (throw assumptions into question and challenge status quo; embrace surprise, awkwardness, and uncertainty), reflection over immersion (self-awareness; finding oneself over losing oneself). These four design components help guide the player into a reflective state, the instigator of social change. I see Reparative Game Creation as another form of Reflective Game Design, one particularly focused on psychosocial disability and

[60] Ibid. 7
[61] Khaled, Rilla. "Questions Over Answers: Reflective Game Design," In *Playful Disruption of Digital Media*, edited by Daniel Cermak-Sassenrath, 3–27. Singapore: Springer Singapore, 2018, 10
[62] Ibid.

debility, with similar goals and critiques of popular game studies and design.

More influential scholarship for this dissertation is the work of Alenda Chang, a scholar of environmentalism and games. Chang is aware that for many environmentalists it may seem absurd and actively counterintuitive to take seriously the virtual environments in game worlds, but for her games offer ways to "model ecological dynamics based on interdependence and limitation, and to allow players to explore manifold ecological futures—not all of them dystopian."[63] Chang refuses to cede to the simplistic notion that being in nature is good and using technology is bad, or to dismiss the importance of digital technology in current culture. The environment is not something that is simply imaged and reproduced in games, but can be a foundational aspect of the play experience. Videogames must turn away from mimicking ecologically calamitous practices like resource extraction and management, and game environment destructibility, and turn towards modelling environmental scale, non-human agency, and physically taking players outside.[64] Not only do the games themselves have to operate differently, the way games are made need to be radically transformed through environmentally sustainable practices, "otherwise, the much-celebrated ethos of play is apt to look a little foolish in the face of global warming, biodiversity loss, and other harm of our own making."[65] Chang's work is a great inspiration to Reparative Game Creation, which aims to include

[63] Chang, Alenda. Playing Nature: Ecology in Video Games, (Minneapolis: University of Minnesota Press, 2019), 16
[64] Chang, Alenda Y. 'Rambunctious Games: A Manifesto for Environmental Game Design'. Art Journal 79, no. 2 (2 April 2020): 68–75
[65] Ibid. 72

environmentalism as a necessary focus of repair. Nature is not something that is to be used to make people feel better or more at peace (though that may be one possible outcome) but as a mutually beneficial relationship and a necessity of the continuation of human life. The Reparative Game Creation principles have goals of personal and environmental sustainability, and the project portion, *UnearthU,* uses an ethos of re-use in its aesthetics and explores themes of the destruction of nature.

CHAPTER OVERVIEW

I began the manuscript with the set of the Principles of Reparative Game Creation, a list of art practice, production, and play tactics that put at the forefront disability, labour, and aesthetics. These principles include not only how a reparative game could operate but consider the process of making in a reparative manner equally, if not more, important. I will revisit these again in chapter 3 and 4. I have chosen to begin with them to give a concise introduction to the key arguments of this dissertation. Chapter 1 and 2 unpack common beliefs about the power of game design and tangentially begin to detail the philosophical basis of Reparative Game Creation, ramping up towards Chapter 3 and 4 which are more practical guides to game creation and process reflections.

Chapter 1 analyses the 2019 United Nations report "Playing for the Planet: How Video Games Can Deliver for People and the Environment," a text that uses much common rhetoric from the past 20 years of game studies and games-for-change

thinkers. I examine the commonly held assumptions about videogames' ability for social action through so-called medium specificity of interactivity, systems-thinking, and empathy, from a queer, disabled, and environmental standpoint. I offer an alternate mode of understanding videogames' potential for social and environmental justice through an affective ritual view of communication.

Chapter 2 follows the creation of my videogame *Ritual of the Moon* (2019) and the way it demonstrates different forms of time; capitalist, queer, and disabled. Many videogames tap into the current cultural moralizing of work and productivity, of feeling like one is accomplishing much at a rapid pace—a capitalist time not in sync with the reality of crip time. I argue that time-based media like videogames can tap into crip time and flip understandings of slowness, work, and daily repetition. Here I also look at the commonalities between human debilitation and environmental degradation through capitalism, and the ways in which they are represented, formed, and materially enacted in videogames.

Chapter 3 goes in depth to Reparative Game Creation, laying out its foundational queer theories from Sedgwick, Heather Love, Lee Edelman, and Ann Cvetkovich. I take the idea of reparative reading and shape it to game creation, a process of creating and consuming art that focuses on healing through play and experimentation. I take account of my own experiences of making videogames with and about psychosocial disability, alongside other creators who make work about their own experiences. I then return to the principles that began this dissertation,

exploring more in-depth their meanings and theories.

Chapter 4 is a reflection on creating *UnearthU*, a videogame made following the Principles of Reparative Game Creation. The game is about hyper-productivity, the overwhelm of perfectionism, and environmental degradation. I detail my process and reflect on the possibility of making reparative games.

I conclude this dissertation with looking back at the Reparative Game Creation Principles that began it, reflecting on each of the principles, how they informed or did not inform the process, if I found them useful or constraining, and more.

Although each chapter has a different form, with chapter 1 being a more standard critique, chapter 2 a theory-informed post-mortem, chapter 3 part speculative design manifesto, and chapter 4 similar to an artist statement about a single piece, cumulatively this dissertation inspects and proposes modes of making videogames reparative and making reparative videogames.

CHAPTER ONE

The Power of Games and Communicating Change: *Playing for the Planet* and Social Justice in Videogames

How do videogames activate emotion? How does affect circulate between creator, screen, and player? How then can those feelings be transformed into social activism? The combination of social activism, game studies and game design have taken a number of forms: serious games, persuasive games, games for change, social impact games, empathy games, and with some crossover in educational games and personal games. Game studies theorists have taken up the question "where does the 'social activism' in videogames take place?" with answers veering from the content, the formal qualities, the creators, to the players. The goal of this chapter is to shed some of the notions of popular game studies about the specificity of videogames in order to better understand the possibilities and limits of videogame's potential for activating social change. To propose my own answer to the question of "where does the 'social activism' in videogames take place?" I divide the chapter into two parts. The first half of this chapter analyses *Playing for the Planet: How Video Games Can Deliver for People and the Environment*. It is a 2019 report on how gaming can be mobilized for climate change activism and acts as a climate specific example of the power of gaming being used for social change. I go through the ways in which some common beliefs about the power of gaming have arisen in the report, which I have categorized as interactivity and procedurality, systems, quests and rewards, and

empathy. I link these instances in the report to foundational game studies theories that have informed popular conceptualizations about gaming and social change. The UN report utilizes popular game studies theories that have become so embedded in the way games are thought about that its "unique" powers of interactivity, systems, and quests/rewards are believed as inherent, natural, and commonsensical. Although not written by game studies theorists, this report is a prime example of common rhetoric and beliefs about what makes videogames an especially good medium for social change. Some of the ideas in the report may seem dated to seasoned game studies scholars, but it shows how some early game studies hypotheses have a way of mutating and showing up in subtle yet pervasive ways, bringing along embedded assumptions about what games can do or are especially good at.

The second half of the chapter pivots to my analysis of how social change is activated through videogames, using communication studies, affect theory, and disability studies. I look to these theories as well as other art forms in order to propose an alternate method of understanding how feelings are activated through videogames and how those feelings may or may not transform into actions for social justice. This affective view of communication informed by disability studies and environmental studies sets up how Reparative Game Creation operates and what it is able to accomplish.

"PLAYING FOR THE PLANET" AND THE UNIQUE POWER OF GAMES

The study "Playing for the Planet: How Video Games Can Deliver for People and the Environment" was part of the Fourth UN Environment Assembly and was written as part of the UN Environment's Youth and Education Alliance programme that included a gaming industry component. Trista Patterson is the lead author and an economist for GRID-Arendal, a Norwegian organization established to support environmentally sustainable development. GRID-Arendal describes what they do as such: "We transform environmental data into credible, science-based information products, delivered through innovative communication tools and capacity building services."[66] Some of their other projects include "How drones can be used to monitor protected areas", "Whales are a trillion-dollar climate change fix!" and "From poo to profits: How the private sector can help bring sanitation to Africa."[67] The company displays a neoliberal technocratic approach to climate change, relying on swaying private industry towards action.

"Playing for the Planet" asks the question "How can the fastest growing media platform in the world be harnessed to deliver on the Sustainable Development Goals and the urgent global needs they represent?"[68] The contents of the study summarize "recent relevant developments in the video games sector, perspectives from over 50 thought leaders from the industry, and extracted seven recommendations to provoke new thinking, new collaborations, new games and real-

[66] 'GRID-Arendal Homepage'. Accessed 15 January 2021. https://www.grida.no/.
[67] 'GRID-Arendal's Work'. Accessed 15 January 2021. https://www.grida.no/activities.
[68] Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019), 3

world impact."[69] The executive summary that starts off the report states their goal as "to make visible, industry-relevant impact in two specific areas: goals for restoration of forests and reforestation, and 'nudges' that move companies and individuals towards more planet-friendly choices,"[70] though that is the only time restoration of forests and reforestation is mentioned in the report.

This report came into public gaming discourse as major studios signed on. As of November 2019, some of the commitments to date were as follows:

> -Sony Interactive Entertainment will unveil new progress and plans to utilize energy efficient technology (on-track to avoid 29 million tonnes of CO2 emissions by 2030), to introduce low power suspend mode for next generation PlayStation, to assess and report their carbon footprint and to educate and inspire the gaming community to take action on climate change.
>
> -Microsoft will announce the expansion of its existing operational commitment to carbon neutrality, established in 2012, into its devices and gaming work. It will set a new target to reduce its supply chain emissions by 30 per cent by 2030 – including end-of-life for devices – and to certify 825,000 Xbox consoles as carbon neutral in a pilot programme. In addition, Microsoft will engage gamers in sustainability efforts in real life through the Minecraft 'Build a Better World' initiative, which has seen players take more than 20 million in-game actions.
>
> -Google Stadia, which is set to launch later in the year, will produce a new Sustainable Game Development Guide as well as funding research into how "green nudges" can be effectively incorporated into game play.
>
> -Supercell (Clash of Clans) will offset the entire footprint of their community, Rovio (Angry Birds) has offset the carbon impact from their players charging their devices, and Sybo (Subway Surfer) and Space Ape (Fastlane) will offset 200 per cent of their studio and their gamers' mobile energy use. Guidance documents will assist other companies to take similar actions.
>
> -Ubisoft will develop in-game green themes and will source materials from eco-friendly factories
>
> -Twitch have committed to utilizing their platform to spread this message to the global gaming community with Niantic Inc (Pokemon Go) committing to engage their community to act around sustainability issues.[71]

[69] Ibid.
[70] Ibid. 4

These commitments range from making real material industrial changes, like going carbon neutral, to embedding vague "nudges" and "in-game actions" into videogames. The seven recommendations *Playing for the Planet* offers to game designers and studios are:

1) Include a 'green nudge' in every game
2) Create an annual impact season
3) Pledge for the planet
4) Cut e-waste and go 100% clean
5) Fiscal incentives for 'serious' sustainability games
6) Team up, reward, and make it famous
7) Help parents to engage with their children around gaming[72]

Only one of these seven recommendations pertain to the gaming industry's detrimental material impacts on the earth, "cut e-waste and go 100% clean." It is arguable that this is the only action that major commercial studios like Ubisoft and Microsoft would need to take to affect an incredible difference against the climate crisis, yet it gets buried between fundraising and parents monitoring their child's screen consumption. The report does acknowledge the material impact of the gaming industry, such as writing about gaming's carbon footprint:

> In 2016, worldwide online gaming traffic reached 915 petabytes per month and is the world's fastest growing sub-segment of data usage. Projected to grow another 62 per cent (over 10,000 petabytes per month) by 2021, gaming Internet traffic will be greater than all web, e-mail and data traffic in 2016.[73]

And:

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[71] UN Environment. 'Video Games Industry Levels up in Fight against Climate Change', 23 September 2019.
[72] Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019), 4
[73] Ibid. 20

> E-waste is increasing at an alarming rate (from 50 million tons today to a projected 120 million tons by 2050) and is a serious concern in terms of both local impact and as an unresolved issue in UN treaty forums. With most electronic equipment around the world averaging only five years in use, e-waste or electronic waste is one of the world's fastest growing waste streams. Globally, less than 20 percent of e-waste is recycled. A half of all e-waste is made up of personal devices such as computers, mobile phones, tablets and TVs, which are also used as gaming hardware.[74]

Yet *Playing for the Planet* gives studios a way out of addressing these major concerns. A perfect example of this is encapsulated in the following quote:

> For a video game company, the main categories of a carbon footprint will likely include: business travel; employee commuting; electricity for office operations, heating and cooling; goods made by or purchased by the company (including design, extraction, production, transport, distribution and disposal); capital goods acquired by the company; disposal and treatment of waste; and power for servers and data centers. Most video game companies also estimate emissions from their gamers charging or powering game devices (mobile, PC, screens and consoles). Importantly, actions to reduce a game company's environmental impact can also encompass 'green nudges' embedded in games, equipment settings, user manuals, and customer support and game community facilitation.[75]

It begins by listing large systemic issues, but ends by suggesting ways the company can largely run the same and offload responsibility on the individual consumer. It lists common ways game companies contribute to the climate crisis, but the section does not offer ways to reduce their climate footprint, instead pivoting to how to nudge the players towards 'green' behaviours.

This report is not necessarily interested in the material effects of the gaming industry; it is interested in the power of *gaming*. That is to say, it is interested in the player engaging with the medium and how it can persuade players. The UN's choice to focus on videogames as a medium rather than, say, Hollywood films, is less to do with videogames' destructive energy consumption and e-waste, than it is to do with

[74] Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019), 20
[75] Ibid. 25

the beliefs around the *power of gaming*; gaming's media-specific affordances for empathy, systems-thinking, and individualized persuasion. The beliefs in the report are the very same ones that the field of game studies has been promoting since the 90s. The report reinforces some modes of social change common to many forms of media, such as representation and awareness ("Many companies release adapted versions of games, 'skins,' or characters which support awareness and fundraising" such as *Runescape* which has an in-game pet rhino as a prize for answers to their conservation quiz[76]), but its focus is on affordances thought to be specific to videogames such as interactivity, systems-thinking, problem-solving, motivational quests, and heightened transference of empathy. The following sections detail the unique abilities mentioned in the study and some of the places they originated, or are found, in game studies.

INTERACTIVITY AND PROCEDURALITY

Playing for the Planet states that "the potential of video games to bring about positive global change has yet to be tapped. Not only can the industry reach vast audiences, but it can engage on a whole new interactive level, in comparison to other forms of media."[77] It quotes Trip Hawkins, founder of Electronic Arts, who has said "two key strengths of digital games are their interactive nature and capacity for simulation. Our potential is to use games to engage, educate and involve the public in

[76] Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019), 12
[77] Ibid. 18

areas of social need. Most game developers don't realize they have the power to do this and the leverage to heal the world."[78] This quote and others like it are devoid of specific ethics or political concerns, broadly encouraging for general change, persuasion, or influence (this too is apparent in some of the game studies theorists mentioned below). For Hawkins and the report, interactivity and simulation are key to the persuasive power of videogames. Many games theorists cite interactivity as unique to videogames, such as Katherine Isbister who asserts that "in any medium other than games, we are only witnesses, not actors, and cannot affect the outcomes of stories before us."[79] Interactivity is seen as a powerful tool for social activism because of two beliefs: that interactive art allows for greater personal, and therefore emotional, connection, and that interactivity allows transformative intervention by the player into the represented system, which will be discussed later in the chapter.

Deeply connected to the persuasive power of interactivity is Ian Bogost's notion of procedural rhetoric, an outgrowth of formalist and ludologist theories on games. Procedural rhetoric is massively influential within the field of game studies; though critiqued, it has become the dominant mode of understanding the way videogames communicate meaning.[80] Bogost argues that videogames are an expressive medium based on their procedural representation of systems, not their narrative or thematic content. Procedural rhetoric is a means of executing persuasion

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[78] Ibid.
[79] Isbister, Katherine. *How Games Move Us: Emotion by Design*. (Cambridge, Massachusetts: MIT Press, 2016), 8
[80] Sicart, Miguel. 'Against Procedurality'. *Game Studies* 11, no. 3 (December 2011).

using procedures. It is "the art of persuasion through rule-based representations and interactions."[81] Procedural rhetoric is the method of going through a process based on rules, which then express meaning. For Bogost, procedural rhetoric is about the ways in which the meaning is depicted through procedure of the rules of the game rather than by the players' experiences of being persuaded.

In terms of using procedural rhetoric for social activism, he states that videogames can "disrupt and change fundamental attitudes and beliefs about the world, leading to potentially significant long-term social change."[82] This is not done through the content of the game, but through "the very way videogames mount claims through procedural rhetorics."[83] Bogost argues that procedural rhetoric not only persuades the player but makes them see the procedure in the system so they can question it and intervene. Although this is stated, Bogost does not make clear how this reflectivity happens; he also offers examples such as *America's Army* as persuasive, though it aims to embed the player in the system rather than question or subvert it. Bogost's theories on persuasive games and procedural rhetoric run through many of the other perceived affordances in games discussed in the next sections.

SYSTEMS

[81] Bogost, Ian. *Persuasive Games: The Expressive Power of Videogames*. (Cambridge: MIT Press, 2010), ix
[82] Ibid.
[83] Ibid.

Playing for the Planet quotes a GamesBeat PC review of *Eco* (2018), a simulation game about building a civilization on a virtual planet, which says: "Eco made me realize that games are actually crucial for understanding our relationship to all kinds of natural and man-made systems. The thing that gives me [the] chills is that I think it is only in games that we can play with economic systems."[84] Another quote used is from Tim Chatfield, author of *Fun Inc*:

> Given that the environment is itself wickedly complex, I think game-worlds have a huge potential for showing how change can ripple through systems; perhaps the first time in my life I truly grappled with the problem of industrial pollution was when I played the original *SimCity* and *Civilization*![85]

The report itself states that "simulation games often involve gameplay about building systems, where gamers can test scenarios, often zooming out to see a broader 'world'. They excel at helping people explore options, weigh trade-offs, consume virtual possessions and resources, and design potential future worlds (perhaps with far lower footprint than the present)."[86] Many game studies theorists hold up representing systems and systems-thinking as videogames' major contribution to social activism.

An example of locating the social activism of videogames in systems is the work of Colleen Macklin. Macklin is a scholar and game designer with a focus on games for change. She argues that videogames are a unique medium that allow people to "play with systems."[87] Videogames are "at their heart, systems. Games help players

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[84] Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019), 14
[85] Ibid. 17
[86] Ibid. 16
[87] Macklin, Colleen. *Gaming the System*. Excerpt from MA thesis. (New York: The New School, 2013), 4

make sense of the complexity of systems by placing us inside them as an active participant."[88] This means that players learn to understand dynamic systems and can model systems thinking, a mode of interpreting the world as interconnected components and feedback loops. Finding leverage points in the system where social intervention will have the most impact is one of the primary differences between games as entertainment and social activism games. The player is to engage in the system, view the interlocking inputs and outputs as a whole, and then be able to realize moments or tactics where there is leverage for disrupting the system. It is important that playing a game offers low-stakes forms of failure; "games provide us with the rare opportunity to fail without consequence, receive clear feedback about our performance and try again, as many times as we like. In essence, games are practice for many aspects of life—from failure to success."[89] Games for change can utilize the learning possibilities that come from failing in a safe environment like a videogame, taking that experience and putting it into the real world.

Though the tone of Macklin's article is optimistic and positive about the social impact possibilities of videogames, the game she writes in-depth about did not actually have the social impact she designed it to have. She worked with the Red Cross Climate Centre to engage with communities suffering from particularly destructive weather and create a game that would help them learn what to do when floods were coming. When real floods did actually come, the participants did not

[88] Ibid. 5
[89] Macklin, Colleen. *Gaming the System*. Excerpt from MA thesis. (New York: The New School, 2013), 5

follow what the game had supposedly taught them, which led Macklin to swerve from trying to foster life-changing behaviours to pointing the way toward a "more open conversation about how to" foster life-changing behaviours.[90]

This notion of gamers as problem solvers is also present in the UN report: games "are increasingly using puzzles, problem-solving and simulations to draw attention to real and formerly intractable issues such as climate change, HIV and species conservation," and "the games industry has always been led by future-forward, inventive, agile and imaginative problem-solvers who relish challenges and opportunities."[91] Yet, liking to solve puzzles does not correlate to having the values associated with environmental activism, something I will discuss in the second half of this chapter.

QUESTS AND REWARDS

A subset of the systems approach to games is the idea that games' power comes from their motivational quests and rewards. Under their recommendation of incorporating "green nudges," *Playing for the Planet* suggests 3 game design elements:

> **Power-off for the planet:** Reminding players to switch off or reset console defaults so that they consume less power (in exchange for points) could be a quick-fire way to save energy.
>
> **Points for plants:** In many games, such as Fortnite and Clash Royale, trees are destroyed as gamers march through the levels. Tweaking the experience so that

[90] Ibid. 11

[91] Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019), 17, 25

> points are awarded for protecting the environment, rather than pulverizing it. Alternately, offering a badge for conserving resources, could encourage gamers to value nature.
>
> **Incentives for 'positive planetary play':** Whether it is picking up plastic, choosing a non-meat dish in Cooking Fever or using game techniques to make electric cars 'desirable', targeted messages embedded in game 'media time' can influence offline behaviour.[92]

This reflects many game studies scholars and designers's aspirations to "gamify" aspects of life in order to influence personal or political change. With her 2010 book *Reality is Broken: Why Games Make Us Better and How They Can Change the World,* Jane McGonigal popularized the idea that playing videogames is *good*; that playing games is beneficial to both individual players and to greater society. She offers a reading of videogames as more than empty entertainment or the cause of mood disorders and asocial behaviour. For her, the world is "broken" because it "just doesn't offer up as easily the carefully designed pleasures, the thrilling challenges, and the powerful social bonding afforded by virtual challenges. Reality doesn't motivate us effectively. Reality isn't engineered to maximize our potential."[93] Videogames, on the other hand, are designed to do these things, and they can be leveraged to create social change—just about any social change imaginable, according to McGonigal. She "foresees" games that can "make us wake up in the morning and feel thrilled to start our day," "reduce our stress at work and dramatically increase our career satisfaction," "fix our educational systems," "treat depression, obesity, anxiety, and attention deficit disorder," "raise rates of democratic

[92] Ibid. 22
[93] McGonigal, Jane. *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. (London: Penguin Press, 2011), 3

participation," "tackle global-scale problems like climate change and poverty."[94] She frequently mentions the affective qualities of playing videogames such as the "sense of being fully alive, focused, and engaged," the "feeling of power, heroic purpose," the "bursts of exhilarating and creative game accomplishment," and the "heart-expanding thrill of success."[95] She states that "while gamers may experience these pleasures occasionally in their real lives, they experience them almost constantly when they're playing their favorite games."[96] The affective experience of games, particularly happiness (she calls game designers "happiness engineers"), is an integral outcome of the reward systems in game design. The games McGonigal has designed utilize common game qualities like systems of effort and reward often in the form of quests and power-ups. In essence, it is the game systems, game-y language, and incentivized tasks that are used to motivate people to do certain things either for the self or in the social world. In this mode of understanding the unique power of videogames, it is the quest and reward systems of videogames that can motivate positive behavioural change.

Quests motivating social change directly outside the game has been a popular form of social activist games, and has taken more nuanced and humble approaches then McGonigal does. In designer and scholar Elizabeth LaPensée's game *Survivance* (2014), Indigenous teen players are incentivized to do quests to seek out elders, talk to them about specific topics, and then create an "act of survivance," a reflective self-

[94] Ibid. 14
[95] Ibid. 3
[96] Ibid.

expression. Detailing the process of designing the game, Lapensée writes that change is not expected to happen within the game itself, but is a life-long process instigated by the system of the game.[97] She also writes that "the quests encourage ethical behaviors in a way that is intrinsic—the game does not literally tell players "make ethical choices," but rather walks players through a process of exploring their communal well-being in a way that leads to culturally relevant ethics."[98] It is the process of playing the game, going through the quests and being prompted to reflect on their meaning and impact, that contribute to an ongoing process of social change. In line with Khaled's Reflective Game Design framework discussed in the introduction, the combination of reflection and self-expression make LaPensée's piece into a more grounded, practical, and affective piece than other motivational quest-reward style games or apps.

The language of quests and rewards can be found in the rhetoric *Playing for the Planet* uses about games, such as "level up against climate change," and "well written gaming narratives have the power to change perceptions—turning obstacles into challenges to be defeated," and, in a very McGonigall-esque phrase which refers to gamers as "rapidly emerging global change agents."[99] It is also seen on a full page dedicated to representations of awards that a studio or person can give themselves for employing different environmental practices. To highlight a few: "We are offsetting

[97] LaPensée, Elizabeth. "Survivance Among Social Impact Games." *Loading…* Vol 8, No 13. (2014): 43-60, 52
[98] Ibid. 51
[99] Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019), 22-23

our office travel, data centers and gamers' footprints," "We create new character animations to promote our climate action commitments," "We are featuring our high-profile gamers who care about this issue" and "We will plant a new tree for every new subscription."[100] At the bottom of the page there is a graphic illustrating how the awards begin at level one and "level up" to bronze, then silver, then gold every five awards received.

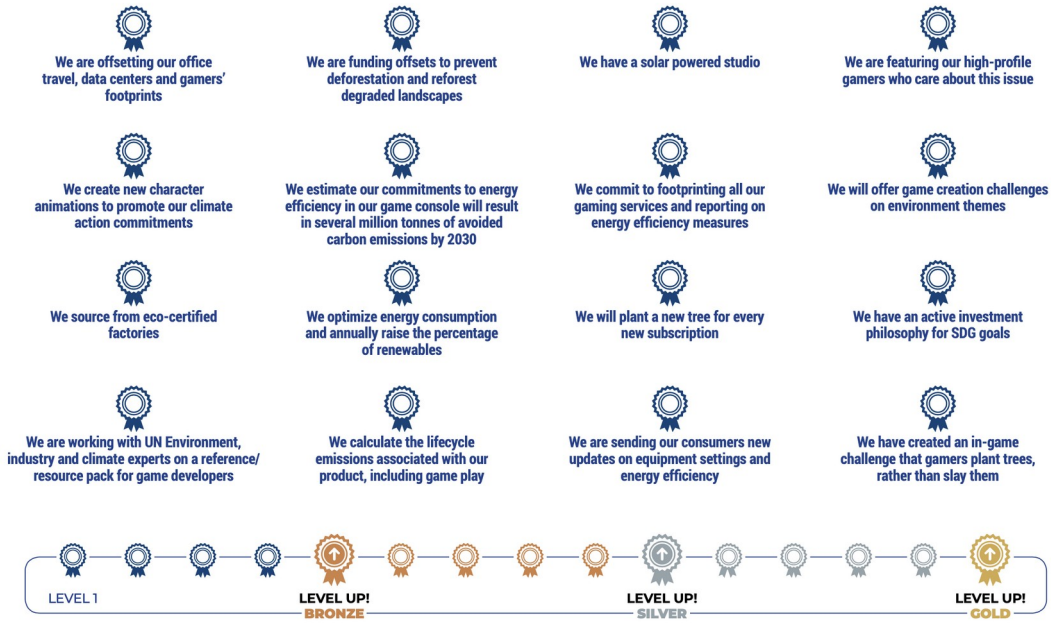

Figure 1.1. Image of awards Playing for the Planet *offers game studios to give themselves.*

The report itself uses a gamified set of goals and rewards, though it seems as if it is more an aesthetic than a quest to actually follow as it is hard to imagine any studio actually "playing" this game.

EMPATHY

[100] Ibid. 27

Playing for the Planet states that "first-person games can allow a gamer to adopt a new perspective, and in some cases, build empathy."[101] Although I cannot say why they attached empathy to First person games in particular which are infamous for their common main mechanic being to murder people with guns, the idea that games are particularly good at fostering empathy is widespread. Empathy is often cited as an instigating factor of social change or as an effect in itself that signals social change; an affective experience that emotionally moves players, prompting them to change their opinions or behaviours. Many scholars use the idea of empathy as an outcome of gameplay, though empathy itself had been under theorized in digital media until very recently. Lapensée writes that "gameplay can elicit empathy by immersing players in new perspectives."[102] McGonigal sites researcher Judith Donath who writes that time spent playing with and caring for virtual creatures makes us "develop empathy for them and become invested in their well-being."[103] Bogost writes on empathy in its own chapter in *How To Do Things With Videogames* stating that "one of the unique properties of videogames is their ability to put us in someone else's shoes."[104] Often players are put in roles that enact a power fantasy but some games utilize what he calls "operationalized weakness," creating play processes that enact roles he considers 'weak,' such as playing as a Darfuri child sneaking to get water while

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[101] Ibid. 16
[102] LaPensée, Elizabeth. "Survivance Among Social Impact Games." *Loading...* Vol 8, No 13. (2014): 43-60, 28
[103] McGonigal, Jane. *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. (London: Penguin Press, 2011), 163
[104] Bogost, Ian. *How to Do Things with Videogames*. (Minneapolis: University of Minnesota Press, 2011), 18

hiding from the Janjaweed militia in videogame *Darfur is Dying* (2006). In this chapter, Bogost makes assumptions about weakness, equating Darfuris and Rwandans with the fictional alien E.T., and stating that they "deserve our empathy."[105] This makes clear that the stated "our" shares a subject position with Bogost, who assumes his audience shares his white North American identity, a position of a judge deciding who deserves empathy.

In all these examples, the acquisition of empathy and its positive effects are positioned as self-evident. The above scholars and others argue that empathy is a result of procedural rhetoric or systems thinking. Anna Anthropy demonstrates this connection:

> What are games best suited for? Since games are composed of rules, they're uniquely suited to exploring systems and dynamics. Games are especially good at communicating relationships; digital games are most immediately about the direct relationship between the player's actions or choices and their consequences… It's hard to imagine a more effective way to characterize someone than to allow a player to experience life as that person.[106]

Anthropy attributes being able to "experience life" as a different person to the process of playing through rules. Nissenbaum and Flanagan cite a study on the social activation of the players of *Darfur is Dying.*[107] They state that the "results indicated that playing the game, rather than observing it as a kind of animation, resulted in greater willingness to help as compared to game watching and text reading."[108] The

[105] Ibid. 23
[106] Anthropy, Anna. *Rise of the Videogame Zinesters: How Freaks, Normals, Amateurs, Artists, Dreamers, Dropouts, Queers, Housewives, and People like You Are Taking Back an Art Form*. (New York: Seven Stories Press, 2012), 20
[107] Peng, Wei, Mira Lee, and Carrie Heeter. 'The Effects of a Serious Game on Role-Taking and Willingness to Help'. *Journal of Communication* 60, no. 4 (December 2010): 723–42.
[108] Flanagan, Mary and Helen Nissenbaum. *Values at Play in Digital Games*. (Cambridge, Massachusetts: MIT Press, 2014), 137

reasoning given for this is procedural rhetoric, that there is something different in enacting the process (even through actions highly removed like pressing a button) rather than viewing it without interaction.

More recently, critiquing empathy games is gaining traction. Paolo Pedercini states that empathy is patronizing; it presumes a helpless subject. It positions the players as somehow separate from those who they are to empathize with, and then help them from an "outside."[109] Anthropy later became a critic of the empathy category of videogames. In 2015 she created *Empathy Game*, an installation where the player puts on a pair of size 11 high heels and walks a mile which then earns them a single point. Anthropy states, "If you've played a 10-minute game about being a transwoman don't pat yourself on the back for feeling like you understand a marginalized experience."[110] It is not clear what in particular changed Anthropy's thinking around games "allowing a player to experience life as that person," but it may have something to do with white, straight, cis men believing they know her life, and thus all trans lives, because they played her game *Dys4ia.* Although some critics and designers are turning away from the term, empathy is still a commonly cited example of the power of gaming.

DEMOCRATIZATION OF GAME CREATION

[109] Pedercini, Paolo. "Making Games in a F*****d Up World." *Games for Change Festival.* Talk. 2014
[110] D'Anastasio, Cecilia. 'Why Video Games Can't Teach You Empathy'. *Motherboard*, 15 May 2015

The previous sections focused on game design, but another major possibility for the location of social justice in games is the creators themselves and the democratization of the process of game creation. "Playing for the Planet" does not mention this; it is mostly to do with AAA companies and large indie studios, with no mention of art or alt games. However, the 17 Sustainable Development Goals set by the UN General Assembly in 2016 are listed and mentioned throughout.[111] Number 5 is Gender Equality, and number 10 is Reduced Inequalities. Though there is near parity between women and men game players, the industry is dominated by white, heterosexual, cisgendered men.[112] Many game communities have sprung up to fight this, including We Need Diverse Games, Pixelles, Games Making Games, and Different Games. There are groups such as Game Workers Unite organizing against the vast inequality between workers and owners of game studios. Gender equality and worker rights are currently the largest forms of political organizing within the games industry in North America.

Anthropy's *Rise of the Videogame Zinesters* is an influential text for independent designers that reads like a manifesto arguing for more queer women to make videogames. Though she is in line with the dominant game studies declaration that rules and systems are the fundamental affordances of games ("games let you

[111] Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019), 2

[112] IGDA, the International Game Developers Association, surveys game industry workers. In every year they have surveyed, (2014-2019), white, heterosexual, cisgendered, non-disabled men are much higher than the general population. Theorizing of the effects of games' sexism and racism is growing more common; see Kishonna Gray, Emma Vossen, and Adrienne Shaw.

experience a subject as a system of rules,"[113]) her real focus is on inspiring marginalized people and people not often targeted as 'gamers' to make and distribute videogames. Anthropy states that "the problem with videogames is that they're created by a small, insular group of people. Digital games largely come from within a single culture,"[114] which she cites as the white male computer scientists in the 80s with more technical knowledge than cultural knowledge. What she wants from games is "a plurality of choices. I want games to come from a wider set of experiences and present a wider range of perspectives"[115] which can be achieved by less barriers to access game making engines and tools.

For Pedercini, social activism lies in the *process* of designing games, not playing the game. At a 2014 Games for Change festival he argued against many popular ideas that are fundamental to Games For Change itself, stating that terms like 'change' and 'values' are so broad that they become meaningless.[116] If persuasion, à la persuasive games, is so easy and pervasive it will be adapted by evil governments and corporations. Persuasive games are thus not necessarily and inherently in the service of social activism and liberation. Instead, designing games demystifies their process of creation and thus there is "more liberation potential in designing games than playing games."[117] This is not because of the lauded skills of game designers like

[113] Anthropy, Anna. *Rise of the Videogame Zinesters: How Freaks, Normals, Amateurs, Artists, Dreamers, Dropouts, Queers, Housewives, and People like You Are Taking Back an Art Form*. (New York: Seven Stories Press, 2012), 3
[114] Ibid. 5
[115] Ibid. 8
[116] Pedercini, Paolo. "Making Games in a F*****d Up World." *Games for Change Festival.* Talk. 2014.
[117] Ibid.

coding but how creating games can in effect create a critical eye to the way games work and influence players.

Gonzalo Frasca also argues the importance of the process of making games to create social change. His thesis *Videogames of the Oppressed* combines game studies with Boal's *Theatre of the Oppressed* and outlines a generative concept for people to engage in the process of creating and modifying videogames. As a self-described ludologist, Frasca states the ultimate importance of dynamic systems and sets of rules that create them, but *Videogames of the Oppressed*'s particular interest is in "creating environments where players could question and discuss both their personal and societal realities."[118] Here social change in videogames does not come from the final product through which players become socially conscious and activated, nor about learning to design one's own game and become empowered through those skills, but becoming a *player-designer*, similar to Boal's spect-actor, that ignites reflection through an iterative design process. He proposes that people design what he calls *op-games* (oppressive games) created using templates from classic games then modifying them to represent particular problems they have. The games that the people make are not meant to be oriented towards goals or solutions, but discussion and reflection; it is an "object to think and discuss with."[119] Following Brecht and Boal, Frasca views catharsis as something that motivates the person in their life, not the Aristotelian view where the player feels a release during the piece itself. Frasca writes, "art can only

[118] Frasca, Gonzalo. *Videogames of the Oppressed.* Masters Thesis at Georgia Institute of Technology. 2001.
[119] Ibid. 101

contribute to social change but it cannot be the main factor that drives change. Therefore, my approach should not be viewed as an attempt to change society, but rather as an attempt to contribute to foster the conditions that may help social change."[120] This is a more humble goal than other game-for-change advocates, and reflects his belief in the power of process and reflection of the creator rather than the designed influence on players.

AN AFFECTIVE AND DISABILITY-FOCUSED VIEW OF SOCIAL ACTIVISM IN GAMES

Wherein the previous section I outlined common theories about the power of video games and how they show up in the UN's *Gaming for the Planet* report, this section critiques these ideas from a lens of disability, affect theory, and environmentalism, and communications, with focus on the videogames' uniqueness of interactivity and modeling systems, and the role of empathy in social change. It then offers a new understanding of the ways in which feelings in videogames are circulated and how those feelings may—or may not—transform into actions for social and environmental justice.

Theories on the uniqueness of videogames have been made to locate games as a special medium worthy of scholarship, to legitimize them within academia. While I strongly agree that games are legitimate objects of study, not apolitical entertainment to be dismissed by art historians and cultural studies thinkers (as Soraya Murray

[120] Ibid. 75

makes clear in *On Videogames*[121]), the desire for game studies to be legible and legitimate within academia has propagated a false sense of singularity and exclusivity, detaching games from art, media, and cultural studies. Isbister states that videogames "create emotions,"[122] "have the capacity to take us into new emotional territory,"[123] and that its "two unique qualities, choice and flow, set games apart from other media in terms of potential for emotional impact."[124] This is based on the idea that in playing games we are actual participants whereas "in any medium other than games, we are only witnesses, not actors, and cannot affect the outcomes of stories before us," and that the "capacity to evoke actual feelings of guilt from a fictional experience is unique to games."[125] This sort of argument (which extends well beyond Isbister) that claims videogames' uniqueness of interactivity and that certain emotions can only come from or can better come from playing games, is not only untrue in terms of the history of interactive art, it also does a disservice to render audiences of film and television as passive, "only witnesses" and "not actors," pushing aside theories such as Stuart Hall's negotiated and oppositional positions and bell hook's oppositional gaze.[126]

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[121] Murray, Soraya. *On Video Games: The Visual Politics of Race, Gender and Space.* (London: Bloomsbury, 2017)
[122] Isbister, Katherine. *How Games Move Us: Emotion by Design*. (Cambridge, Massachusetts: MIT Press, 2017), xvii
[123] Ibid. 131
[124] Ibid. 2
[125] Ibid. 8
[126] Hall, Stuart. "Encoding, decoding". *The Cultural Studies Reader.* (London: Routledge, 1991 [1973]) 90–103, Hooks, Bell. "The oppositional gaze : Black female spectators". In Marc Furstenau (ed.), *The Film Theory Reader: Debates and Arguments*. (London: Routledge, 2010)

The conjecture of videogames' unique interactivity leaves out a long history of performance art that operates through audience interaction. One example is *Rhythm 0* (1974), a performance art piece by Marina Abramovic where she vacantly stood next to 72 objects, including a scalpel, nails, and a gun with one bullet. The instructions for the piece read:

> Instructions.
> There are 72 objects on the table that one can use on me as desired.
> Performance.
> I am the object.
> During this period I take full responsibility.
> Duration: 6 hours (8 pm – 2 am).

Like audience interactivity, instructions as a form of rules are integral to this piece. She described her choice to have a gun saying "if the audience wanted to put a bullet in the pistol [they] can kill me. I really wanted to take this risk. I want to know what is the public about and what are they going to do in this kind of situation."[127] She was interested in the participation of the audience, how they would co-create the experience of the piece. The piece started slow but ramped up over its duration:

> In the beginning nothing really happened. Public would come, they would play with me, they would give me a rose, they would kiss me, look at me. And then the public became more and more wild. They cut my neck and drank my blood. They carried me around, put me on a table, open my legs and put a knife between… They cut my clothes. They put clothes pins into my body.[128]

[127] Marina Ambromic Institute, "Marina Abramovic on Rhythm 0". Video. https://vimeo.com/71952791. Accessed June 30, 2020.
[128] Ibid.

One person did take the gun and put it in Abramovic's hand. The gallerist then took it out of their hands and threw it out the window, causing a panic. When the performance was over and she began to move her body on her own, the audience's affect transformed: "I start being myself because I was there like a puppet just for them. In that moment everybody ran away. People could not actually confront me as a person."[129] Based on their reaction to Abramovic reanimating herself, the audience likely felt guilt and shame. This piece and Abramovic's experience details the ways in which audience interactivity does not only belong to videogames, nor do rules or instructions, nor does guilt. This piece may also show that videogames may actually *deter* guilt, as the avatars and NPCs do not transition away from being puppets just for the players.

Along with interactivity, other media can too simulate systems. If systems are defined as groups of inputs and outputs that form a unified whole, I see no reason why other media, such as performance art and interactive theatre, cannot depict systems and allow for interventions in said system. Yet more importantly, games are still a depiction or representation of a system; one can only intervene in ways that the creator can imagine or the software and interface allow for. Most 'interventions' or playing with inputs and outputs are laid out by the creators and the software simply for the player to 'complete.' In her Reflective Game Design framework, Khaled demonstrates the limits of systems-thinking for social change, showing the ways in

[129] Ibid.

which the walls around the complete system of videogames are not necessarily porous to the outside world:

> Encouraging action primarily through a game's mechanical system is problematic for reflection because it is not clear that it succeeds in making players genuinely reflect on game actions and challenges in the light of what they mean semantically and culturally, or in relation to their own life experiences. The actions that earned those points may well be meaningful and thought provoking, but, under the cover of points, what motivated those actions may become blurred. Games that quantify motivation distort the meanings of actions.[130]

The quest-and-reward system of games for change often obfuscates reflection and its consequences in the non-game world. Furthermore, by thinking through and about affect and communication in games, I am particularly interested in what might be left out of the represented systems. Neel Ahuja describes the systems-theory tradition in humanities as appearing to oppose reductionism by looking at the 'whole'; however, "the tropes of the system-environment relation oddly introduce their own reductionism by systematizing everything, putting everything into relation despite the possibilities of segregation, expulsion, individuation, or dimensional phase shifts."[131] Systems-thinking can make it seem as if everything and everyone must be working towards a shared outcome, however abstracted, and that outcome can be fully known. Yet, affect cannot always be accounted for. Some player-centric design paradigms try to close the gap between design intentions and player experience by soliciting a lot of player feedback through playtesting repeatedly, but it is never truly completely knowable or fully regulatable, a concept I will return to shortly.

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[130] Khaled, Rilla. "Questions Over Answers: Reflective Game Design". *Playful Disruption of Digital Media*, ed. Daniel Cermak-Sassenrath, (Singapore: Springer, 2018) 3–27, 12

[131] Ahuja, Neel. *Bioinsecurities: Disease Interventions, Empire, and the Government of Species*. (Durham: Duke University Press, 2016), xv

As described above, videogames are commonly thought of as being particularly good at fostering empathy. But what are the limits of empathy? How exactly does empathy operate? Affect scholar Lauren Berlant edited a book called *Compassion: The Culture and Politics of an Emotion* (2004) that is generative for thinking through what empathy is and can do. Marjorie Garber's chapter follows the history of compassion, which connotes "feeling together" but from a superior position, a sort of condescension onto the person. The term empathy is a modern word coined in the early 20th century when sympathy and compassion were often conflated. Empathy is "the power of projecting one's personality into the object of contemplation."[132] Empathy has taken on an ethical connotation: "a person who displays empathy is, it appears, to be congratulated for having fine feelings."[133] Empathy is thus positioned as a *moral* feeling. Berlant writes on the seeming morality and inherent goodness of the capacity for empathy and the ways in which it is simultaneously tied to the pleasure of feeling others' pain. Berlant ask the question, what is the relationship between "capaciously compassionate" and becoming distant from responsibility?"[134] Sometimes compassion and empathy do not create any social change or even a sense of responsibility for social change, only a sense of morality in the person who is feeling empathy, in which case "compassion turns out not to be so effective or a good in itself. It turns out merely to describe a particular kind of social

[132] Garber, Marjorie. "Compassion." *Compassion: The Culture and Politics of an Emotion*. Ed. Lauren Berlant. (New York: Routledge, 2004), 24
[133] Ibid.
[134] Berlant, Lauren. "Introduction, Compassion (And Withholding)." *Compassion: The Culture and Politics of an Emotion*. Ed. Lauren Berlant. (New York: Routledge, 2004), 14

relation."[135] This showcases the ways in which empathy cannot be seen as a good in itself, nor a marker of social activism.When game players describe their experiences with so-called "empathy games," queer games scholar Bo Ruberg describes it as promoting "the appropriation and consumption of marginalized experiences," or even a "colonizing of affect: an invasion, occupation, and subjugation of others' experiences."[136] Thus, empathy is not necessarily a moral feeling as often believed, and certainly not social activism in itself; in fact, sometimes it can continue more damage.

It is possible for empathy to be a motivating force for social change, but it is far from the only politically motivating feeling: anger, hope, the feeling of unfairness, despair, and optimism are some other common affective motivators. Before calling an end to the "reign of empathy"[137] Ruberg first deconstructs and disentangles exactly what is meant by the term when applied to gaming and game experiences, especially those made by queer and trans designers. When looked at closely, the term empathy is "used as a shorthand for a jumble of emotions and experiences" such as compassion, sorrow, respect, intimacy, love, care.[138] It is time to be more specific about what feelings games can and do bring up, express, explore, and share. These feelings deserve to be recognized for their own political capabilities rather than being subsumed into the problematic umbrella of empathy. This is a key part of an affective

[135] Ibid. 9
[136] Ruberg, Bo. 'Empathy and Its Alternatives: Deconstructing the Rhetoric of "Empathy" in Video Games'. *Communication, Culture and Critique* 13, no. 1 (29 April 2020): 54–71, 55 and 61
[137] Ibid. 54–71, 67
[138] Ibid. 62

view of games, broadening the perceptions of what feelings games are able to transmit and foster, and then what those feelings can do.

ENVIRONMENTALISM, GENDERED FEELINGS, AND PERSONAL EXPERIENCE

Affect plays a significant role in motivating—and limiting—environmental activism. In the current sociopolitical landscape, some "empathy" (compassion, caring, respect) is seen as a social good, but "excessive" caring and compassion is gendered as feminine and dismissed. Though much critiqued over the past century, there are still ideas about women being naturally more caring, compassionate, and nurturing, so it is no surprise that although empathy is now seen as a root factor in social-political change, *too much* feeling associated with empathy is seen as irrational, feminine, and—to use an ableist term—'crazy.' Two figures, the 'crazy cat lady' and the 'young animal loving girl' represent this dichotomy. The 'crazy cat lady' is mocked as 'crazy' because she is caring, as a woman 'should' be, but her attention is not directed at the heteronormative expectation of her husband and children. The young girl who loves animals, cries at their suffering, and wants to go vegetarian is mocked for being too sensitive, for not understanding yet "how the world works." Her returning to meat-eating is seen as a return to the norm rather than succumbing to social pressure. Neither example, the young vegetarian or woman who lives with cats, is inherently more driven by emotion than heteronormative romantic

love is, or by men who eat meat to fit into expectations around masculinity. In fact, much of North American and European environmentalism has come to be associated with the feminine. In analyzing the lack of environmental care, Brough et al. try to locate reasons for people's non-involvement in environmentalism or continued involvement in practices that actively destroy the environment. They propose that:

> this green-feminine stereotype may motivate men to avoid green behaviors in order to preserve a macho image. A series of seven studies provides evidence that the concepts of *greenness* and *femininity* are cognitively linked and shows that, accordingly, consumers who engage in green behaviors are stereotyped by others as more feminine and even perceive themselves as more feminine.[139]

Engaging in environmental activism, even green-washed consumerism, is perceived as a threat to one's masculinity. An article in the *International Journal for Masculinity Studies* argues that "for climate skeptics … it was not the environment that was threatened, it was a certain kind of modern industrial society built and dominated by their form of masculinity."[140] Here, the determining factor for behaviour is not a lack of empathy for the earth or communities most at risk of the climate crisis' impact but instead the most motivating feeling is insecurity in one's gender and sexuality. Masculinity is associated with culture and dominance, nature and empathy with femininity. Even if empathy and its associated feelings are seen as a social activators, they are not equally accessible to all without the active undoing of the expectations of gender roles.

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[139] Brough, Aaron R., James E. B. Wilkie, Jingjing Ma, Mathew S. Isaac, and David Gal. "Is Eco-Friendly Unmanly? The Green-Feminine Stereotype and Its Effect on Sustainable Consumption". *Journal of Consumer Research* 43, no. 4 (1 December 2016): 567–82, 567

[140] Anshelm, Jonas, and Martin Hultman. 'A Green Fatwā? Climate Change as a Threat to the Masculinity of Industrial Modernity'. NORMA 9, no. 2 (3 April 2014): 84–96, 85

The popularity of empathy and interactivity as social influencers stem from the cultural belief that something has to be experienced personally, to be immersed in it, for it to be understood and have emotional value. In *Feminist Queer Crip* Alison Kafer critiques ecofeminists who assume that "one must immerself oneself in nature in order to understand it and one's relationship to it" and who suggest "that people need to have personal, physical experiences of the wilderness in order to understand, appreciate, and care for nature" such as hiking and camping in remote areas, most often alone, unmediated by human technologies.[141] But being immersed in the wilderness (a fantasy of a non-human mediated space and experience) is only one way to feel connected and in contact with nature. Kafer asks the productive question "What kind of experiences render one qualified to understand and care about nature? Are all experiences of nature equally productive of such insights?"[142]

Gaming and environmentalist scholar Alenda Chang approaches these questions using games like *Adventure* (1980)*, Flower* (2009) and *Luxuria Superbia* (2013). Games that represent nature, even through text rather than realistic simulation, can offer "a compelling way to reconcile a deep connection to nature and the nonhuman world with an equally important connection to technology and the virtual."[143] Much anti-game or anti-screens rhetoric worries over children spending time indoors when they "should" go outside. Chang argues that games and other environmental media can be used to "see the particular realization of an environment

[141] Kafer, Alison. *Feminist, Queer, Crip*. (Bloomington: Indiana University Press, 2013), 135
[142] Ibid.
[143] Chang, Alenda Y. "Games as Environmental Texts." *Qui Parle* 19, no. 2 (2011):56-84, 58

as a filter that helpfully selects certain aspects for consideration while excluding others,"[144] rather than seeing all media as a barrier to deep understanding of the environment, only accessed through being immersed in wilderness. For Chang, a special affordance of videogames (but not uniquely in the videogame medium as she gives examples of performance art, film, and webpages that do similar scalar work[145]) is their ability to leverage and dramatize scale, from the galactic to the microscopic, revealing or highlighting unperceived aspects of the world's experience.

An example of nature not experiences out in the "unmediated wilderness" is A.M. Bagg's video piece *In My Language* (2007). Kafter introduces the video by first stating that "What is needed in ecofeminism, ecocriticism, and environmentalism in general are the narratives of people whose bodies and minds cause them to interact with nature in non-normative ways."[146] *In My Language* is an example of crip connection to nature. Baggs' video is an autobiographical account of living with autism as she engages in touching, smelling, and listening to objects around her. She flicks her fingers under tap water as her computerized voice says "It [my language] is about being in a constant conversation with every aspect of my environment. Reacting physically to all parts of my surroundings… The water doesn't symbolize anything. I am just interacting with the water as the water interacts with me."[147] Kafer writes of this moment:

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[144] Ibid. 78
[145] Chang, Alenda Y. "Rambunctious Games: A Manifesto for Environmental Game Design". *Art Journal* 79, no. 2 (2 April 2020): 68–75
[146] Kafer, Alison. *Feminist, Queer, Crip*. (Bloomington: Indiana University Press, 2013), 135
[147] AM Baggs. *In My Language*, 2007. https://www.youtube.com/watch?v=JnylM1hI2jc.

> only certain kinds of interactions with the environment are recognized as such; swimming in the ocean and wading in mountain streams are more likely to be understood as meaningful ways to interact with water, while running one's fingers under a faucet is not. But why not? The answer lies partly in long-standing assumptions that nature and the environment only exist "out there," outside our houses and neighborhoods… seeing nature as only "out there" or faucet water as categorically different from ocean water, makes environmental justice work all the more difficult.[148]

Kafer argues for breaking down the nature-culture binary, in line with Donna Haraway's work on naturecultures.[149] This would enable one to not see nature as something that can only be experienced in certain situations available only to certain people. To that end, can it be similarly positioned that acknowledging the material bases of our phones and computers are made of mineral ore pulled up from the ground may in fact provide some people easier access to a connection to nature? To know that we are already immersed in nature, in the earth, all the time, even when inside our apartments and on our screens? This is not meant as a peaceful sentiment; in fact, to recognize we are already immersed in nature, that there is no non-nature, no escape from human mediation, is all the more reason to recognize the crisis of climate change. This immersion of constant self-in-nature is not to escape responsibility, but to recognize our dependency. It is not necessary to feel connected to nature in the common ways of understanding such an experience, like to feel calmed by it after a hike, or to be awed by it on the peak of a mountaintop, in order for us to know and understand that human and non-human life depends on a particular balance of the earth and that we should care for it.

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[148] Kafer, Alison. *Feminist, Queer, Crip*. (Bloomington: Indiana University Press, 2013), 145
[149] Haraway, Donna Jeanne. *The Companion Species Manifesto: Dogs, People, and Significant Otherness*. Prickly Paradigm Press, 2007.

BEYOND FEELINGS

Emotional qualities, be it empathy, immersion, depression, anger, or even satisfaction, are not enough for social activism in themselves. Sara Ahmed argues that "feeling better is not a sign that justice has been done, nor should it be reified as the goal of political struggle."[150] Affect is a site of social activism in videogames, but it cannot be the sole goal. To quote Ahmed again: "justice is not simply a feeling. And feelings are not always just. But justice involves feelings, which move us across the surfaces of the world, creating ripples in the intimate contours of our lives. Where we go, with these feelings, remains an open question."[151] Though I argue videogames activate and circulate affect, and that affect is a potential activator for social change, it is just potential. There are many steps to go from *feeling* and/or *knowing*, the fundamentals of empathy or systems-thinking, to *acting*.

The transition from awareness to action is key issue in environmentalism. Waste studies scholar Max Liboiron argues "the journey from awareness to behavior change is a long and arduous one, and few make it. Even for those who change their behavior, the scale of the change is often too small to impact the problem at hand."[152] Awareness as a social tool operates on the individual, but "most environmental and other society-wide problems are not due to individual intent and behavior to begin

[150] Ahmed, Sara. *The Cultural Politics of Emotion*. (Edinburgh: Edinburgh University Press, 2014), 201
[151] Ibid. 202
[152] Liboiron, Max. 'Against Awareness, For Scale: Garbage Is Infrastructure, Not Behavior'. Discard Studies, 23 January 2014.

with, but rather social, economic, political, and other systems that make some decisions and behaviors more likely or possible than others."[153] An individual may be aware of an issue but have no ability to greatly change it due to larger influencing structures. This is not to say that the individual has no role:

> The decisions you make as an individual–things that stay at an individual scale–are the basis for ethics. Ethics are a set of principles of right conduct, a sort of social contract between you and others, and, in the case of the environment, between you and the larger world. They are the foundation for morals, justice, and have the potential to scale into visions of a "good society" that include how individuals and societies should relate to waste and wasting. People with a strong environmental ethic are... more likely to organize or take part in actions that do scale, from social movements to policy change to infrastructural innovation. So even if individual actions don't save the world, they are expressions of an ethic that can lead to other actions that do scale.[154]

That is to say, though the scale of individual action is small, the ethics behind enable practices that do scale up. Affect can guide ethics, as the Ahmed quote above explains in relation to justice. Empathy or any emotional experience may work to push someone's ethics a certain way, and then from there they may initiate more specific actions. The affects and actions intermingle into an individual's ethics, which then may contribute to larger social change that is needed. One way that the games industry can scale environmental justice is for game creators to seek processes to create games in a way that lives out those social justice goals, such as forming co-ops aiming for a carbon-neutral footprint or creating compostable physical games, rather than offloading responsibility and communicating messages to players. Who is the production of the game employing? What would be the energy consumption of having it on a streaming service or a download? What is more resource-extractive, a

[153] Ibid.
[154] Ibid.

multipurpose phone or a console that is only used to play games? Is the product intended to support those with psychosocial disability but is the process of playing it actually overworking and draining people? As artists, designers, and workers, we can sometimes make these individual decisions that affect the larger system of the project and what systems the project intersects with.

AN AFFECTIVE VIEW OF COMMUNICATION

Before making claims about videogames' best strategies for social activism, one must first try to understand how affect and other information is communicated via videogames. How is empathy, anger, or any emotion or other forms of information transferred from creator to interface to player? Communications and media scholars have been theorizing the answers to these questions for much longer than game studies, so I turn to them now.

Since the nineteenth century, communication has been thought to operate through transmission, sending and receiving mostly human signals and meanings.[155] Communications scholar James Carey calls this the 'transmission view' of communications. It is defined by terms like "imparting," "sending," "transmitting," or "giving information to others."[156] There is a message created by a maker, and that message is sent to another person who receives the message. The message can

[155] Peters, John Durham. *The Marvelous Clouds: Toward a Philosophy of Elemental Media*. (Chicago/ London: the University of Chicago Press, 2015), 45
[156] Carey, James W. *Communication as Culture: Essays on Media and Society. (*London/New York, Routledge, 1988), 2

become muddled in the transmission and the receivers can interpret it in different ways. It is by far the most common understanding of the way in which communication works. In the "Playing for the Planet" report, this rhetoric is used frequently: "serious games can be designed to entertain while also conveying a message," and "video games can deliver new information about a range of topics such as health, crops, markets and wildlife."[157] This has not always been the way communication and media is understood. John Durham Peters tracks the different ways media-as-communicator was comprehended, from an element of nature to intermediate agents, psychic mediums to mass media of the twentieth century, then arguing for an elemental and environmental approach.[158] In an earlier work, Peters details some of the limits of the transmission view of communication, discussing the "gap" between creator intention and audience reception, between sending and receiving, and the ways in which 'personal' forms of communication have been wrongly held up as more powerful, affective, and intelligible. Mass communication, such as technologically mediated modes like television and cinema, have become defined "as one-way, impersonal, distant" while interpersonal communication was taken to be "interactive, personal, face-to-face, and direct."[159] It is easy to see then the allure of videogames, a form that is produced for many yet has the illusion of the direct, personal, and interactive. Yet no matter how personal or how mass, from

[157] Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019), 16 and 17
[158] Peters, John Durham. *The Marvelous Clouds: Toward a Philosophy of Elemental Media*. (Chicago/ London: the University of Chicago Press, 2015), 47-48
[159] Peters, John Durham. 'The Gaps of Which Communication Is Made'. Critical Studies in Mass Communication 11, no. 2 (June 1994): 117–140, 118

advertisements to experimental films projected in galleries to individually speaking to one person, none can absolutely guarantee the reception of the intended message from the artist or speaker: "The gap between sending and receiving, in the language of the transmission model of communication, is simply made obvious by technologies or settings that bar a second turn of response… But failed synapses can crop up in any conversation."[160] A misunderstanding or gap may be more obvious in a one-on-one conversation and allow space to ask for clarification when the misunderstanding or gap is recognized, but still they happen all the time. One can talk back to a television but is not heard by the show, yet one can talk back to a real person in a conversation and still not really be understood.[161] This is not to say that it is just as likely to have a large gap between sending and receiving in personal conversations as it is in reading a newspaper, but that neither can guarantee total comprehension.

Videogames, it is sometimes argued, require a player for them to take full form,[162] yet other forms of communication also do; Peters gives the examples of a radio broadcast at 2:00am, an SOS in a bottle cast in the sea, a classified ad calling for love, a lost manuscript, or a text in an undeciphered script; "They all speak, as it

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[160] Ibid. 131

[161] An example of this is showcased in *Interruption Junction* (2015) by Dietrich Squinkifer, a game about trying to have a conversation. The conversation between four people flows rapidly, full of non-sequiturs. The player must tap rapidly to have their player-character talk. No one seems to hear anyone, other than a few oh sures, uh huhs, and haven't seen them in a while. As a player, if you focus on reading what the others say without interjecting your own thoughts (which you quickly learn aren't related to what others are saying) your player-character fades away and the game stops. Even when the player-character is successful in talking, no one responds meaningfully to them, nor does the player character respond meaningfully to what the other characters have said.

[162] Sicart, Miguel. 'Against Procedurality'. *Game Studies*, vol. 11, no. 3, Dec. 2011.

were, into the void. They await completion of the loop."[163] This necessity of interaction, the "closing the loop" does not mean the utterance is understood, nor does the use of the illusion of the personal mean greater chance of the utterance being understood. Peters again:

> Thanks to computers and telephones, the interaction may involve turn-taking, a sensitivity to the personal (or at least aggregated demographic) traits of the recipients, and the pretense of specific address. The message may seem tailored "especially for you."...Face-to-face interaction is no guarantee of authenticity.[164]

Even though there is a promise of individualization and heightened interactivity due to user input, individualized mass media is more an illusion of the personal and authentic. Videogames' utilization of waiting for player interaction and the individualized choice based systems do not necessarily mean 'more' or 'better' communication. They are not designed "for you" but for an aggregated demographic with many assumptions at play, no matter how many choices and perceived freedom is afforded in the game. In fact, the form of the media may have very little at all to do with reception; instead it rests on the context:

> The distinction between mass and interpersonal, then, turns out to have little or nothing to do with the material setting or "channel" of the interaction, and everything to do with its underlying form. The face-to-face setting is amazingly plastic in the forms of interaction it can accommodate. A naked couple in bed can be engaged in an anonymous, impersonal exchange, while others may feel their inmost souls touched by the words, films, paintings.[165]

In other words, the medium does not necessitate the level of deep, meaningful communication and connection. There is nothing particularly special about the

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[163] Peters, John Durham. 'The Gaps of Which Communication Is Made'. Critical Studies in Mass Communication 11, no. 2 (June 1994): 117–140, 130
[164] Ibid. 133
[165] Ibid.

medium of videogames, their interactivity, and the way they communicate. Their power lies in how they are deployed and experienced.

Interactive media offers a promise of connection yet relies on neoliberal individualization that overstresses personal connection. Peters offers an optimistic reading of tailoring media for the illusion of individuality: "The valuing of interpersonal over mass communication, ill-conceived as it often is, points to a key aspiration that is almost universally recognized as rare and worthy: companionship, friendship, and love. It suggests a kind of interaction possible only among people who are willing to grow old together."[166] I instead view the desire for individually interactive media as a neoliberal turn in media arts to view hyper-individualization and personalization as a normalized "good"; a belief in personal experience as a necessity for acting for social justice. However, I share the sentiment that "the gaps at the heart of communication are not its ruin, but its distinctive feature."[167] The unsystematized, the surprising, unexpected, the "radical indeterminacies of effects and reception"[168] is part of what makes creating and experiencing art to be so beautiful and profound. Rather than viewing interactive art as better at transmitting personalized communication, it instead can be just another mode of art, all of which allow for some level of participation, connection, surprise, and mystery.

[166] Peters, John Durham. 'The Gaps of Which Communication Is Made'. Critical Studies in Mass Communication 11, no. 2 (June 1994): 117–140, 136
[167] Ibid. 130
[168] Ibid. 131

If communication does or cannot happen in the expected way, a sender clearly transmitting information to an individual receiver, how then does it happen? Carey, who named the transmission view of communication, proposes an additional mode of communication, the ritual view. The ritual view is connected to terms like sharing, participation, communion, and community. This mode regards communication not as directed toward the "extension of messages in space but toward the maintenance of society in time; not the act of imparting information but the representation of shared beliefs."[169] Rather than interpreting communication as a person transmitting or imparting knowledge they singularly possess, communication happens non-linearly, not transmitted directly in a line from person to person or media object to person. Just as affect and feelings are for scholars like Ahmed and Cvetkovich, *thought* for Carey is public: "In our predominantly individualistic tradition, we are accustomed to think of thought as essentially private, an activity that occurs in the head… I wish to suggest that, in contradistinction, that thought is predominantly public and social."[170] Thought being public is an important move away from hyper-individualization of how people share and process information. Carey uses the example of the news which under the ritual view is "drama", not information: a newspaper "does not describe the world but portrays an arena of dramatic forces and action… the model here is not that of information acquisitions, though such acquisition occurs, but of dramatic action in

[169] Carey, James W. *Communication as Culture: Essays on Media and Society. (*London/New York, Routledge, 1988), 16
[170] Ibid. 12

which the reader joins a world of contending forces as an observer at a play."[171] Media "operates to provide not information but confirmation, not to alter attitudes or change minds but to represent an underlying order of things, not to perform functions but to manifest an ongoing and fragile social process."[172] Media functions to place people socially within a wider realm of interrelated connection and it is in that placement that communication circulates. It is in the ritual mode of communication that most videogames are operating. In playing videogames, a player "joins a world of contending forces." Information is not sent directly to players, but they are forced to notice and partake in processes that create information. Games are repeated activities, unfolding over time. The vast majority of game creators do not claim to have a "message" yet the politics embedded in them, unknowingly perhaps, act to confirm popular worldviews (such as militarism and white supremacy as detailed by Soraya Murray).[173] Some creators have recently turned to thinking of playing games as rituals, such as mattie brice and TRU LUV.[174]

At first glance, a lack of direct message transmission may seem very pessimistic, especially for creators passionate about social activism, but the ritual view of communication allows us to approach videogames as less about direct information or affect transference (surely there are more economical ways to transfer information anyhow) and more about opening up a reflective zone and a shared

[171] Ibid. 21
[172] Ibid. 19
[173] Murray, Soraya. *On Video Games: The Visual Politics of Race, Gender and Space.* (London: Bloomsbury, 2017)
[174] brice, mattie. *NYU Game Center Lecture Series Presents mattie.* Talk. December 3, 2020, and LUV, TRU. 'Rituals for Refuge, Resilience and Transformation'. TRU LUV.

experience. Affect is key to understanding how the ritual view of communication operates in creating communion and shared experience and beliefs. I posit that emotion and affect are forms of communication. Sara Ahmed's essay "Affective Economies" is not within the field of communication studies but does theorize the ways emotion is circulated between bodies as political information. Ahmed, using a Marxist model of economics, argues that emotions are not a "private matter" simply belonging to individuals, or that they "come from within and then move outward toward others."[175] Emotions are not simply within us or absorbed by us; they "create the very effect of the surfaces or boundaries of bodies and worlds."[176] Affect constructs our world as a foundationally communal experience, rather than solely privatized property.

Affect, like other forms of communication media, do not operate in the way the transmission model of communication expects, although they are often thought to. Creators tend to imagine that we can "give" people anger or sadness or empathy by certain aesthetics, mechanics, or content topics, but in reality it is much more complicated than that. Affect theory blurs the distinctions between cause and effect. Instead of a direct, linear relationship, emotions and meanings are non-linear, jumping, circulating, pausing. Emotion is not a property of an individual, although common language may make it seem as such. Ahmed writes that "I might say I 'have a feeling.' Or I might describe a film as 'being sad.' In such ways of speaking,

[175] Ahmed, Sara. "Affective Economies," Social Text, 79 Vol. 22, No. 2 (Summer 2004): 117- 139, 117
[176] Ibid.

emotions become property; something that belongs to a subject or object, which can take the form of a characteristic or quality."[177] Emotion is not an individual property to be sent directly from one body to the next, or stored away inside. "Emotions do things," Ahmed writes, "they align individuals with communities—or bodily space with social space… Rather than seeing emotions as psychological dispositions, we need to consider how they work, in concrete and particular ways, to mediate the relationship between the psychic and the social, and between the individual and the collective."[178] Like Carey's public thought, Ahmed's public emotions situate affective experiences as socially interconnected, not solely existing in the individual person or object. As such, a videogame is not holding sadness and then giving it to the player, but through a plentiful assemblage, affect "binds subjects together."[179] The role of the collective in understanding, processing, and sharing feelings cannot be understated. All feelings come with cultural context, unable to be separated from the "raw" biological processes that go on inside our bodies. Affective communication occurs much like Carey posits the ritual view: through community, communion, and commonality, and not individualistic transference.

Another similarity between the ritual view of communication and affect theory is the focus on mundanity as the site of activation. The majority of communication occurs on a mundane, everyday plane. Carey states that "the activities we collectively call communication – having conversations, giving instructions,

[177] Ibid. 119
[178] Ibid.
[179] Ibid.

imparting knowledge, sharing significant ideas, seeking information, entertaining and being entertained – are so ordinary and mundane that it is difficult for them to arrest our attention."[180] I would add to his list alternative modes of communication, such as body language, minute facial expressions, and, of course, affect and emotion. Berlant describes two modes of time based trauma: the episodic and the event. The episodic is described as the way in which "time ordinarily passes, how forgettable most events are, and, overall, how people's ordinary perseverations fluctuate in patterns of undramatic attachment and identification."[181] The subtle nature of the episodic allows some traumas to go unnoticed, overshadowed by the distinct singularity of specific events or catastrophes. Cvetkovich similarly attaches the episodic traumas versus the event traumas to conceptions of public and private:

> The distinction between everyday and catastrophic trauma is also tied to the distinction between public and private, since often what counts as national or public trauma is that which is more visible and catastrophic, that which is newsworthy and sensational, as opposed to the small dramas that interest me because they draw attention to how structural forms of violence are so frequently lived, how their invisibility or normalization is another part of their oppressiveness.[182]

Trauma is always public, both in the everyday and the catastrophic, yet the former is made so invisible and small that it seems private and 'normal.' Though they may seem or even feel private, the everyday traumas are structural forms of violence made normal. The mundane work of just continuing to live and everyday life maintenance are sites of exertion; there are day-to-day acts that are too small to be labeled as

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[180] Carey, James W. *Communication as Culture: Essays on Media and Society. (*London/New York, Routledge, 1988), 9
[181] Berlant, Lauren. "Slow Death," Critical Inquiry 33, no. 4 (1 June 2007): 754–780, 760
[182] Cvetkovich, Ann. "Public Feelings." South Atlantic Quarterly, 1 July 2007; 106 (3): 459–468, 464

"struggles" but the collection of them become unseen forces of violence.[183] In noticing the everyday, negative affects can become "sites of publicity and community formation."[184] The mundane can be a site of political influence and political resistance. Many videogames have a way into this mundane and episodic mode—though certainly not all videogames and certainly not excluding other media; television and social media platforms are also strikingly mundane and episodic. But for my specific purpose of Reparative Game Creation, games have a way into the durational, mundane, and the ritualistic (a special, altered, or liminal spacetime returned to multiple times), not due to inherent properties of the medium but *because of* expectations of the form and the way they are currently played. Information—affect, social justice, awareness—is circulated between the screen, the player, their cultural setting, in a simultaneously ritualistic and everyday plane, with the consequences not fully knowable, predictable, or straightforward. Once being aware of this mode of communication, how can creators utilize it?

Videogames directed towards social justice should not necessarily be directed towards communicating a single message to transmit—or a feeling to transmit—but instead could focus on creating thoughtful, emotional, durational, and mundane experiences. The ritualistic nature of many videogames (though not all, and not only in videogames), allows for a particular way into the ritualistic and mundane way that affective communication operates. There is a fundamental unknowability when

[183] Berlant, Lauren. "Slow Death," Critical Inquiry 33, no. 4 (1 June 2007): 754–780, 760
[184] Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012), 2

designing for play. Creators can try to close the gap but can only go so far as to set a scene and direct players towards some affects and away from others. Rather than seeing this as a flaw or something to overcome, we can view this as a beautiful phenomenon. The question then becomes, what are some tactics for setting a scene for ritual and for emotional and political self-reflection?

THE POWER OF GAMES

Above I may have seemed skeptical about the role of affect and awareness in social justice, or possibly, the use-value of art in general. I believe art can have many functions but for this dissertation I put forth that making and playing games can be modes of self-reflection and world-understanding, contributing to the change of social paradigms towards practices that benefit and sustain life rather than debilitate it. This operates differently than the transmission model of information awareness or theories of empathy that I have detailed above. Instead, I follow the many artists, artist-scholars, and scholars of art that have argued the ways in which art can make us capacious. Natalie Loveless states that "research-creation, at its best, has the capacity to impact our social and material conditions, not by offering more facts, differently figured, but by finding ways, through aesthetic encounters and events, to persuade us to care and to care *differently.*"[185] Care is an affective quality, but it is also one of

[185] Loveless, Natalie. *How to Make Art at the End of the World: A Manifesto for Research-Creation*. (Durham/London: Duke University Press, 2019), 107. Research creation is the common Canadian term with a similar meaning to practice-based, practice-led, creative practice, and practice as research, and arts based research, as used in the US, Britain, and Australia.

work; it is not only *care about* but *care for* and *tend to*. Art offers "modes of sensuous, elicit public discourse, and shape cultural imaginaries. 'How might the world be organized differently?' is a question that matters urgently, and it is a question that art—particularly art attuned to human and more-than-human social justice—asks in generative and complex ways."[186] Art can allow space to imagine the world differently than it is, to speculate versions of the future and the past that are more inclusive, fair, and sustainable. Rob Nixon points to writers' role in the climate crisis:

> In a world permeated by insidious, yet unseen or imperceptible violence, imaginative writing can help make the unapparent appear, making it accessible and tangible by humanizing drawn-out threats inaccessible to the immediate senses... The narrative imaginings of writer-activists may thus offer us a different kind of witnessing: of sights unseen.[187]

I take "sights unseen" to mean something along the lines of *things unfelt* or *not perceived*, the everyday mundane traumas often overlooked for the big, distinct catastrophes. To Nixon, "stories are wondrous in their capacity to reorganize our approaches to our social-material worlds; they are dangerous for their capacity to produce themselves as compelling objects of belief, naturalized… into calcified truths."[188] This shift of worldview through stories (or stories we tell about non-narrative works) is done mostly through chipping away slowly, bit by bit, at the "calcified truths," melting them to make ready for a slow transformation. It is the

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[186] Loveless, Natalie. *How to Make Art at the End of the World: A Manifesto for Research-Creation*. (Durham/London: Duke University Press, 2019), 16
[187] Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. (Cambridge/London: Harvard University Press, 2011), 15
[188] Ibid. 21

ritualistic, durational, bit by bit that opens us up to change; sometimes it comes in the form of a lightning bolt of an art piece makes you re-evaluate your whole life, but it is the ritualistic mode that sets the stage for the lightning bolt to be intelligible.

In addition to designing games oriented towards reflection, showcasing oft-unperceived but shared experiences, and carework that slowly contribute to the reformation of the future, the way that games are created plays a role in these goals too. There needs to be diversification of game creators and approaches to the practice of game creation, of making creation accessible to various people rather than the narrow, white cisgender educated male which is expected. This surely includes a diversity of oppressed creators, but also alternate modes of practice. How can we get away from corporate structures and set hierarchies within teams? Did the production of a social justice-themed game reify unfair labour practices? How much is the studio or game contributing to e-waste or product disposability? Historically, representation has been at the forefront of conversations around social justice in media. The practice of design and creation of games has become more of a focus in academic and art circles, but process and its labour is still a growing conversation. Reparative Game Creation is one set of principles specifically oriented towards combining representation, process, and design in relation to understanding psychosocial disability and debility. Videogames are not a supernatural, special force of justice that activates certain brain chemistry in order to change the world entirely, but instead videogames (the plural *videogames*, not just one) and their creation can contribute

alongside many forms of activism and art to a needed paradigm shift tilting us towards a more socially just world.

CHAPTER TWO

Work, Duration, and Debility: Making *Ritual of the Moon*

What different conceptions of time interconnect with disability? In what ways is time portrayed and experienced in videogames? In this chapter I expand upon the argument I make about the mundane and durational ritualistic communication of videogames at the end of chapter 1, in order to more deeply explore the time-based process of debilitation and degradation alongside the transformative daily practice of repair. Time is an affective experience—we feel and don't feel time in particular ways. This chapter will survey notions of capitalist time, crip time, slow time, and prognosis time, especially in relation to both the production process and design aesthetics of *Ritual of the Moon* (2019). It approaches this in four ways: 1) how time is managed in the process of creating games, 2) the durational logic of videogames, 3) how disability may disrupt this logic, and 4) the varying speeds of debility and the climate crisis. I use theories of anti-work to explore a potential reparative crip time that operates through ritual and the everyday, providing an auto-analysis of my experience creating the durational videogame *Ritual of the Moon*.

Ritual of the Moon, released on iOS, android, Steam, and itch.io, is played for 5 minutes per day over 28 days with choices that determine the player's unique path. Each day that passes delivers a small bit of story detailing the love and betrayal that has forced a witch onto the moon to watch over the earth that does not accept her. The flow of each day is as follows: she reflects on the earth, she meditates at an altar,

receives a daily mantra, and then makes the decision of whether to destroy or protect the earth. It is also part memory game. The objects at the altar have to be arranged a certain way. Each day that passes, a new object is added and the order has to be continued, working to string together each day and create a continuity of ritual.

Figure 2.1. The witch directing the comet in Ritual of the Moon.

Figure 2.2. Altar objects and mantra in Ritual of the Moon.

This piece took much more time to make than I planned it to for a few reasons which I detail in my article "Time and Reparative Game Design: Queerness, Disability, and

Affect."[189] In that piece I examine theories of queer time, and the connections between queerness and disability, but in this chapter my focus will primarily be on anti-capitalism, debility, and the environment. The first section details the ways in which capitalism has formed notions of time. The next follows productivity as an affective experience and the way in which videogames tap into this feeling. I then move to disability and anti-work politics, to "crip time," how disability interrupts normalized experiences of time.

PRODUCTIVE TIME

Videogames are a time-based medium but unlike other time-based media, durational videogames do not carry the same historically radical and political connotations of durational film and durational performance art. Most AAA games are excessively long, or durational in a way that does not offer reflection nor radical politics; rather, they take up our time for the purpose of profit: to make us purchase expensive games, their DLCs, in-app purchases, and even play-time itself. Jonathon Crary details many aspects of how capitalist networked technology has reformed the experience of time into a non-stop continuity, with sleep being the only thing left incompatible with 24/7 capitalism.[190] 24/7 is defined as a "generalized inscription of human life into duration without breaks defined by a principle of continuous

[189] Stone, Kara. 'Time and Reparative Game Design: Queerness, Disability, and Affect'. Game Studies 18, no. 3 (December 2018).
[190] Crary, Jonathan. *24/7: Late Capitalism and the Ends of Sleep.* (London: Verso, 2014)

functioning. It is time that no longer passes, beyond clock time," and "a temporal alignment of the individual with the functioning of markets."[191] This conceptualization of time as continuously flowing forward and mediated by networked technology renders people as constantly "on." Institutions and businesses have been running 24/7 for decades, Crary argues, but only recently has it become internalized into personal and social identity. Time has been "reorganized to conform to the uninterrupted operation of markets, information networks, and other systems... it is actually a non-social model of machinic performance and a suspension of living that does not disclose the human cost required to sustain its effectiveness."[192] The capitalist contortion of time demands a constant state of uninterrupted and available markets, information, and consumption while making invisible the human labour needed to fuel this 24/7 networked connection.

In this framework, one is expected to be working or consuming at all possible moments, or preparing to work or consume. Crary states:

> Of course no individual can ever be shopping, gaming, working, blogging, downloading, or texting 24/7. However, since no moment, place, or situation now exists in which one can not shop, consume, or exploit networked resources, there is a relentless incursion of the non-time of 24/7 into every aspect of social or personal life.[193]

This quote shows that because work and consumption is constantly available to people through online platforms, there is constant potential for people to be working and consuming. This potential, tied with social expectations of productivity and

[191] Ibid. 8, 74
[192] Ibid. 9
[193] Crary, Jonathan. *24/7: Late Capitalism and the Ends of Sleep.* (London: Verso, 2014), 30

material wealth, has led to time being reformed as continuous. There are breaks or delays, but there are rarely "openings for the drift of consciousness in which one becomes unmoored from the constraints and demands of the immediate present."[194] Activities that are unproductive to market capitalism like daydreaming become sidelined or even non-existent under 24/7 capitalist time.

Technological personal devices and current media have helped enable this mode of being. Apps like Facebook and Twitter have a continuous interface, a stream of relatively unbroken engagement, demanding intermittent interest and response. Crary discusses relevant analyses of television, which:

> never simply involved choosing to watch discrete programs, but was a more promiscuous interface with a stream of luminous stimulation, albeit with diverse kinds of narrative content... This is the decisive trait of the era of technological addictiveness: that one can return again and again to a neutral void that has little affective intensity of any kind. In the widely noted study by Kuney and Csikzemtmikhalyi, the majority of their subjects reported that extended TV viewing make them feel worse than when they did not watch, yet they felt compelled to continue their behaviour. The longer they watched, the worse they felt. The hundreds of studies on depression and internet use show similar kinds of results. Even the quasi-addictiveness associated with internet pornography and violent computer games seems to lead quickly to a flattening of response and the replacement of pleasure with the need for repetition.[195]

In the United States, television was an early example of 24/7 media, a device in one's home that was constantly connected and was largely operated through advertising. Profit-driven companies, who feed consumers continuous media, are, obviously, less concerned with the user's wellbeing than they are about having eyeballs on their content, leading to design choices that manipulate people to consume more. Gaming addiction is a contentious issue in game studies and the games industry at the

[194] Ibid. 88
[195] Ibid. 87

moment, with the World Health Organization adding "gaming disorder" to the 11th Revision of the International Classification of Diseases. I put forth that there is a way to understand *gaming mechanics* as addictive without labeling players as having a 'gaming disorder', as a diagnosis and as an individual property one has. For me, the Crary quote above brings up the question: when does the moment of playing a videogame stop being pleasurable, reflective, or any other desirable affects art can produce, and transform to a flattening of affect and worsened feelings, all while the player feels a compulsion to keep playing? What sustains this play? Rather than positioning players as non-agentic actors who are acted upon by the game, I argue it is both the game acting upon the player, and the player chasing the affects that repetition enables, primarily due to the feeling of productivity.

FEELING PRODUCTIVE

Currently, work takes up the majority of people's time. Kathi Weeks argues against the naturalization of work and the time it takes: "the amount of time alone that the average citizen is expected to devote to work particularly when we include the time spent training, searching, and preparing for work, not to mention recovering from it" needs to be interrogated.[196] Work is not only the time spent inside the office, but also the mental and physical load it takes up at other times. Weeks critiques the notion of "having to earn a living" as the natural order rather than a particular social

[196] Weeks, Kathi. *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries.* (Durham: Duke University Press, 2011), 2

convention. Work and work ethic have been made into a moral value, treated "as a basic obligation of citizenship," and internalized and reproduced in workers.[197] This moralized demand affects disabled people in particular, something I will return to later in the chapter. Much like Crary outlines in *24/7*, such a work ethic is internalized to a point where people measure their own value based on their career, work performance, or productive outputs. Capitalism is a political system and culture that tells people that work is the only way to be a productive citizen, and that becomes internalized into the individual. Feeling productive has thus become connected to feeling good or satisfied with oneself.

Melissa Gregg's analyses of the tech industry sheds light on the way people *feel* productivity.[198] Gregg reads into self-help books and apps meant to help workers manage their time effectively, which rarely acknowledge the limits of capacity, instead imagining the issue as existent only within the individual who cannot figure out how to maximize their time. Examining technology workers in the United States, she states that they "derive a compelling degree of pleasure from the performance of productivity, at times to the detriment of other personal or social interests."[199] The pleasurable feeling derived from the performance of productivity, even if it comes at a cost to other activities or relationships, is a consequence of upholding social morals that value work and productivity. Computing technology has enlarged the demand of

[197] Ibid. 8
[198] Gregg, Melissa. *Counterproductive: Time Management in the Knowledge Economy*. (Durham: Duke University Press, 2018)
[199] Ibid. 4

efficient productivity: "to feel productive is to recognize as a personal accomplishment the qualities of efficiency enforced by modern computing technologies and management mantras alike… where the benefits of "productivity" are often taken as common sense."[200] Like Crary, Gregg states that technology has influenced our psychology, making people desire to be efficient as computers are imagined to be. The social and personal good of productivity is naturalized to a point that it is often thought of as a given, or not even noticed at all. Weeks argues that "the assumptions at the heart of the work ethic, not only about the virtues of hard work and long hours but also about their inevitability, are too rarely examined, let alone contested."[201] Work is not only a necessity for most people to undertake in order to meet basic living needs, but is internalized into a moral value. The pleasure felt is a relational one; not just independently existing somehow "in the body," but socially conditioned as *good*. On the flip side, the pressure and expectation to be productive can be crushing. Gregg points out the ways in which "the aesthetics of activity" take on a rhetoric akin to athleticism: she cites two self-help gurus who state "gaining control of time "is in many ways analogous to good muscle tone," and, "you can train yourself, almost like an athlete, to be faster, more responsive, more proactive, and more focused in that knowledge work."[202] This ableist rhetoric puts forth that all one needs in order to have control over one's time is the right training. In this rhetoric is a

[200] Ibid. 78
[201] Weeks, Kathi. *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries.* (Durham: Duke University Press, 2011), 35
[202] Gregg, Melissa. *Counterproductive: Time Management in the Knowledge Economy*. (Durham: Duke University Press, 2018), 67

total erasure of socioeconomic position, gendered labour, or disability's influence on who can control whose time.

The design of most commercial games and many indie games utilize the pleasurable feeling of productivity in order to entice the player to play more. Most games follow a cycle of frustration and satisfaction, work and reward, increasing in difficulty as the game progresses. Katherine Isbister states that playing a game activates "reward-related mesolimbic neural circuits—parts of the brain associated with motivation and reward."[203] Brie Code, designer of app *#SelfCare,* also describes gaming in terms of biochemical psychology: "Game design theory is based on an adrenaline/dopamine response to stress. Game designers aim to stress the player, and then give the player opportunities to win a challenge."[204] This system of play makes players feel as if they have accomplished something even if in reality all they have accomplished is to sit in front of a screen for 60 hours and disassociate from their body and feelings—in itself, this is not necessarily "negative," but the intense desire to feel productive is an internalization of current neoliberal capitalist culture, where one's worth or morals are determined by productivity. Many games are designed to tap into this cultural desire, creating a cycle of work and reward are closely planned out in order to keep the player playing for as long as possible. Keeping in line with Crary's theory of 24/7 time, breaks are rarely designed into games. If a player

[203] Isbister, Katherine. *How Games Move Us: Emotion by Design*. (Cambridge, Massachusetts: MIT Press, 2017), 3

[204] Code, Brie. "About: How Do You Feel?" T*RU LUV*. Accessed December 10, 2018. http://truluv.ai/about-tru-luv/

chooses to take a break, it is a disruption to the flow of the narrative or gameplay. Short games, common in the indie and alt industry, are mostly short because of a lack of resources, rather than concern over the attention economy. To keep the player engaged, games often employ a strategy of becoming more "complex" in the form of becoming more stressful, as the game progresses. To grow bored—or fulfilled before the designer desires the player to be—is seen as a failure of design. For most videogame designers and studios, the only reason to stop playing a game is when that game is completed, regardless if it is one hour or 200 hours.

Ritual of the Moon is designed to approach duration and productivity in games differently. Each day is only a few minutes. It demands long breaks: 24 hours, such long breaks that they hardly constitute as breaks. It locks the player out after they have finished their few minutes that day. There are no scores or rewards. There is no winning, no losing, no infinite content. It is in line with Khaled's tactics in Reflective Game Design and acknowledges that players need time in order to best reflect.[205] Reflection is built into the mechanics of *Ritual of the Moon*: a simple mini game that asks you to remember a pattern from the days before, a timed mantra, and a prolonged decision to destroy or protect the earth as the player has to slowly drag the comet towards or away from our planet. Even the witch's walking pace is very slow. But the reflection also happens outside the in-game time, in the full day breaks

[205] Khaled, Rilla. "Questions Over Answers: Reflective Game Design," In *Playful Disruption of Digital Media*, edited by Daniel Cermak-Sassenrath, 3–27. Singapore: Springer Singapore, 2018

between playable content, in order to ensure time away from the game, time to decompress and digest its feeling and the players' feelings that day.

DISABILITY AND WORK

The previous section focused on the play time of a game but another aspect of time and games is the time spent making them. This section will detail the process of creating *Ritual of the Moon* as it relates to gendered work and crip work.

Crunch, the method of cramming development into bursts of unhealthy and inaccessible work habits, is the dominant mode of working in western technology industries, even beyond videogames. Like film, videogames are at an intersection of technology, entertainment, and art, often coming with a pressure to produce—and produce at a quick turnaround. The solution sounds easy: just don't crunch. Take your time. Live your life outside of development and making. But what are sustainable practices of making? Ones that can follow the ebbs and flows of the sometimes erratic and out-of-grasp forces of creativity? Ones that don't drag out a project or get caught up in perfectionist detailing? Not that any of these are antithetical to crunch; they most often work hand in hand. I have been reconsidering my own approach to design and thinking about time and process because I worked on a game about time—and it had taken way too much of it.

The visuals of *Ritual of the Moon* consist of handmade objects crafted by the art team, Rekha Ramachandran, Julia Gingrich, and myself. We used yarn, paper,

clay, quilting, solder, and other crafting media. I hand-embroidered or wood-burned all the text in the game, providing a sort of proof-reading, allowing for personal meditations on time and the affect embodied in the words themselves. It took my spare time over two months to embroider the witch's reflections, the main story text of the game. We then scanned, digitized, and manipulated our crafted objects as well as found objects such as deconstructed computer chips. All of these objects reflect the story's blend of past and future, mystical and technological.

Figure 2.3. Hand embroidery of the reflections text (top), paper crystals (bottom left) and scanned paper crystal.

Craft is laborious, but labour here does not necessitate a negative connotation; instead, crafting can be a bodily, sensational, experience. Queer affect scholar Ann Cvetkovich (2012) writes:

> Unlike forms of self-sovereignty that depend on a rational self, crafting is a form of body politics where agency takes a different form than application of the will. It fosters ways of being in the world [in which] body and mind are deeply enmeshed or holistically connected. It produces forms of felt sovereignty that consists not of exercising more control over the body and senses but instead of "recovering" from the mind or integrating them with it.[206]

The slow and sensual process of crafting can be a healing experience. Furthermore, crafting has been taking up in queer circles recently: "lest crafting seem pervaded by nostalgia for the past, it is important to note that it belongs to new queer cultures and disability cultures that (along with animal studies) are inventing different ways of being more "in the body" and less in the head."[207] Although it may seem unique to have handmade art in a videogame, the digital and the handmade are 168more connected than most realize. The history of technology is interwoven with that of women's work and traditional crafts. Notably, Ada Lovelace, often described as the world's first computer programmer, was disabled and diagnosed with a mental disorder: "Ada was ill for much of her short life, walking with crutches until the age of seventeen, and endlessly subject to the fits, swellings, faints, asthmatic attacks, and paralyses which were supposed to characterize hysteria."[208] Lovelace describes her energy cycles as alternating between an inability to concentrate, obsessiveness,

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[206] Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012) , 168
[207] Ibid.
[208] Plant, Sadie. *Zeroes + Ones: Digital Women + the New Technoculture.* (New York: Doubleday, 1997), 29

restlessness, and searching.“vast mass of useless & irritating POWER OF EXPRESSION which longs to have full scope in active manifestation such as neither the ordinary active pursuits or duties of life, nor the literary line of expression, can give vent to.”[209] Thus that useless and irritating power of expression was transformed into imagining programs for the Analytical Engine, a mechanical computer operating through punching cards, that she related the way the machine worked with weaving on a loom. The connection between craft and technology does not exist only in the past: current technology is made by young women of colour in low-paying factory jobs wrapping thin wires in a specific pattern, bonding to chips, and packaging. They literally make phones, computers, and consoles with their hands.[210] Still, computer technology has become masculinized, dominated by men, cold, and un-embodied. The visuals of *Ritual of the Moon* were made to evoke a combination of handmade and digital, not as opposing but as united.

The time-consuming labour of crafting stretched the production time, though in a beneficial way, unlike another influencing aspect: working long-distance. Over the final three years of production, the team was scattered across Toronto, Montreal, and Kitchener-Waterloo in Canada, as well as Santa Cruz and Berkeley in California, USA. Our working style took the form of random “crafternoons” when the visual team could meet in person and or over Skype. We were not at a studio eight hours a

[209] in Plant, Sadie. *Zeroes + Ones: Digital Women + the New Technoculture.* (New York: Doubleday, 1997), 31
[210] Nakamura, Lisa. “Indigenous Circuits: Navajo Women and the Racialization of Early Electronic Manufacture.” *American Quarterly* (2014, 66(4)): 919-941

day together. We were working elsewhere for eight or more hours, and squeezing in an hour here and there when we had the energy. Ultimately, as with many of my games, I view *Ritual of the Moon* as about mental and emotional wellbeing, which are not only present in the content but the process as well. A few of the team members experience various psychosocial disabilities, and there were flare-ups over the course of development. As the person in charge, I tried to navigate everyone's ups and downs—including my own. It is an ongoing process to figure out the best ways to run with my own cycles of work and recuperation, but to factor in many people is exponentially harder. When will we sync up? How do we give ourselves and others time to heal while having deadlines, pressure, and even sometimes the desire to overwork? I don't know the answers, but I know that I had to learn to be softer with myself and others, to accept that there will be times when we really want to be productive but we just can't be, and that's more important than any videogame. I deeply believe that creating art can be a healing, reparative process, something that sustains us and gives us life, rather than draining it. But what are the structures that ensure that? And what kind of art do we make?

In the last century, psychosocial disability has been tied to the ability to work. Depression, for example, becomes legitimate when it prevents a person from performing tasks as they should, or are expected to. Take *Depression Quest* (2013) as an example. The bulk of the story's text is about feeling bad, and all the choices are about what the player character cannot do; they cannot work, go outside, or talk to

their friends. The positive and productive choices are crossed out; the depressed person cannot do those things.

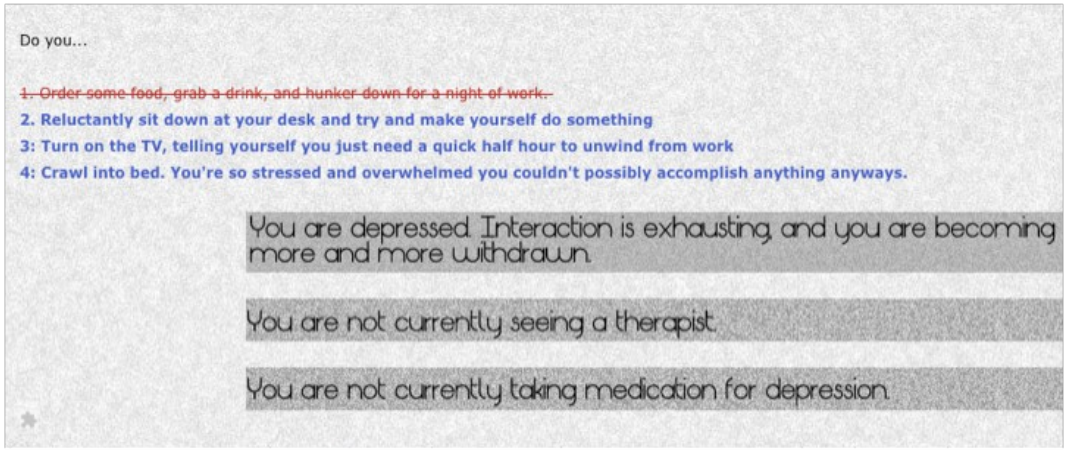

Figure 2. 4. Screenshot of the interactable hyper-text in Depression Quest.

Both culturally and clinically, depression becomes legitimized, considered a "real" condition or disability, when it prevents a person from performing tasks as they are expected to. Emphasizing the ability for productivity transforms the depressed person into not just someone with a specific set of emotional experiences, but as someone who is failing to uphold their position as a subject of capitalism.

As the expectations around work and productivity increase, the rates of psychosocial disability are as well increasing. It is expected that depression will grow to be the most prevalent disability in North America.[211] Race, sexuality, and disability scholar Jasbir Puar suggests that this will not happen through an increase of depression as an entity or identity, but "through the evaluation and accommodation of

[211] Puar Jasbir, K. "Coda: The Cost of Getting Better: Suicide, Sensation, Switchpoints." GLQ 1 January 2012; 18 (1): 149–158.

degrees: to what degree is one depressed?"[212] Rather than disability being a category that one occupies or does not occupy, it is measured on a gradient scale. The distinction between disabled and nondisabled becomes blurrier. Those with certain disabilities may not be able to work in ways that are expected, often as expected by others but sometimes also as expected by ourselves. Different disabilities factor into determining how much energy has for labour. Disability scholar Susan Wendell writes on what she calls the "unhealthy disabled," those with chronic illness and psychosocial disabilities as opposed to the "healthy disabled," those who are disabled but do not identify as sick. For the unhealthy disabled, energy can be a major issue in performing labour. She writes of activist work:

> Commitment to a cause is usually equated to energy expended, even to pushing one's body and mind excessively, if not cruelly. But pushing our bodies and minds excessively means something different to people with chronic illnesses: it means danger, risk of relapse, hospitalization, long-lasting or permanent damage to our capacities to function (as for some people with MS). And sometimes it is simply impossible; people get too tired to sit up, to think, to listen, and there are no reserves of energy to call upon… Stamina is required for commitment to a cause.[213]

Pushing oneself comes with different consequences for different bodyminds. Much disability activism understandably has been directed towards proving that if barriers are removed, then those with disabilities will perform as well as the non-disabled. For the unhealthy disabled, the barriers are not easily removed. Time and pace need to be addressed in order to benefit those with many chronic conditions. Wendell makes the point that loosening expectations around time and pace actually counteract dominant

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[212] Puar, Jasbir K. "The Cost of Getting Better: Ability and Debility." In Lennard J Davis (Ed.), *The Disability Reader, Fourth Edition*. (Routledge: New York and London, 2013) 182

[213] Wendell, Susan. "Unhealthy Disabled: Treating Chronic Illnesses as Disabilities" *The Disability Reader: Fourth Edition*. Ed. Lennard J. Davis. (New York/London: Routledge, 2013), 167

disability activism around work because "working according to the employer's schedule and at the pace he/she requires are usually considered to be aspects of job performance, even in jobs where they are not critical to the adequate completion of tasks."[214] This applies most directly to those who work for AAA studios and large indie studios, but what about indie or art game developers without a "boss"? What if the people we may fail are our colleagues and collaborators? Kickstarter backers? Patreon patrons? Ourselves?

It can be hard to tell how much energy we have available, when to push ourselves, and when to pull back: "Even those of us who have lived a long time with chronic fatigue cannot always tell whether we are not trying hard enough or experiencing a physical/mental limitation, whether we need inspiration, self-discipline, or a nap."[215] Certainly this was an issue in *Ritual of the Moon*. Would it feel better to take the day off, or would it feel nice to have completed a task? Will writing a sad ending be too much right now or will it be cathartic? Would it be helpful if I send my collaborator a third reminder email, or trust they will eventually get back to me when they are able? A flexible and changing time and pace of labour is needed for many unhealthy disabled, though it is difficult to argue for this without making us seem unnecessarily burdensome, especially within corporate structures.

Though disability may seem counterintuitive to capitalism's desires, in reality capitalism perpetuates and profits from disability. There is revolutionary potential in

[214] Ibid. 168
[215] Ibid. 167

critiquing norms of health and ability. Artist and activist Johanna Hedva embraces the concept of "sick" and finds political power in it. Their "Sick Woman Theory" ties together chronic illness, social justice, and anti-capitalism. It begins by thinking about all the people too sick to go out and march in Black Lives Matter protests. The sick woman is often invisible and has to fight and be vulnerable to become visible. Hedva proposes that sickness is a capitalist construct, in perceived opposition to "wellness." At first it may seem as if capitalism wants people to be "well"; after all, it is well people that go to work. However, Hedva states that the Sick Woman is needed for capitalism to perpetuate itself. Capitalism cannot be responsible for the sick woman's care and its "logic of exploitation requires that some of us die."[216] This wellness and illness divide invents illness as temporary—people only need care sometimes. When one has chronic illness, how can one expect to receive constant care within this current system? "When being sick is an abhorrence to the norm, it allows us to conceive of care and support in the same way. Care, in this configuration, is only required sometimes. When sickness is temporary, care is not normal." Care then needs to be a continual given, not something only during catastrophes. The manifesto ends on an inspiring call: "The most anti-capitalist protest is to care for another and to care for yourself. To take on the historically feminized and therefore invisible practice of nursing, nurturing, caring. To take seriously each other's vulnerability and fragility and precarity, and to support it, honor it, empower it." Hedva proposes that a key form of anti-capitalist activism is to provide mutual aid and continual care for

[216] Hedva, Johanna. 'Sick Woman Theory'. Mask Magazine. January 2016.

each other, rather than perpetuate capitalism's culture of disposability. Though Hedva theorizes chronic illness in attention to the body, they situate it as inextricably linked to capitalism and the institutions that enforce it.

Disability may seem like a burden and financial risk inside individual companies, but the toll actually gets put upon the disabled person. People diagnosed with a mental disorder recognized by the DSM earn approximately $16,000 USD less annually.[217] For the vast majority of disabled people, disability causes financial distress, yet debility is hugely profitable to capitalism--or, as Puar notes, the "demand to 'recover' from or overcome" disability is profitable.[218] In the United States, the relationship between finance and debility is extreme. Money is often the deciding factor of what treatment to undergo, what kind of therapy is available, what preventative lifestyle choices are possible. Puar writes that "the forms of financialization that accompany neoliberal economics and the privatization of services also produce debt as debility… Debt becomes a way to measure capacity for recovery, not only physical but also financial."[219] Work simultaneously operates as a factor in defining disability, which then adds the already debilitating culture of work (when able to be performed at all) which also acts as a limiting agent to recovery, such as if one has an unsustainable income. Disability and animal studies theorist Sunaura Taylor states that disabled people's "largest contribution to the economy is

[217] Kazdin, Alan E., and Stacey L. Blase. 'Rebooting Psychotherapy Research and Practice to Reduce the Burden of Mental Illness'. Perspectives on Psychological Science 6, no. 1 (January 2011): 21–37.
[218] Puar, Jasbir K. "The Cost of Getting Better: Ability and Debility." In Lennard J Davis (Ed.), *The Disability Reader, Fourth Edition*. (Routledge: New York and London, 2013), 181
[219] Ibid.

as "beds," as nursing homes call the aged and disabled who fill their vacancies and bank accounts"[220] positioning disabled people as consumers rather than workers. She goes on to state that "even in situations where enforcement of the ADA and government subsidies to corporations lead to the employment of the disabled, who tends to benefit, employers or employees?" Disabled people are paid less yet have to pay more for necessary care services.

The precarious balance of disability, work, and financial stability necessitate a reconstruction of the role of work in determining who deserves to be able to live. Weeks imagines a post-work society as a utopian project. She argues that feminists "should focus on the demands not simply or exclusively for more work and better work, but also for less work; we should focus not only on revaluing feminized forms of unwaged labor but also challenge the sanctification of such work that can accompany or be enabled by these efforts."[221] Feminists have historically pushed for the recognition of domestic labour as labour and equal pay with men, but Weeks proposes that feminists should also demand less work in general, and organize structures of society that do not rely on having to work in order to be able to live. Her call can only be enacted if more than our attitudes towards work are changed as there needs to be a social system that ensures everyone can meet their basic needs. Some of the resistance to things like welfare programs, universal basic income, or alternate forms of governance like communism stems from the moralizing of work that Weeks

[220] Taylor, Sunny. 'The Right Not to Work: Power and Disability'. *Monthly Review*, 1 March 2004.
[221] Weeks, Kathi. *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries.* (Durham: Duke University Press, 2011), 13

details, but also ableist notions of what sort of lives are worth living. Taylor' "confesses" that she does not work and is on Supplemental Security Income. She also confesses that she is happy with this and does not think it is wrong. Many disabled people feel what she calls a "non-working guilt";

> Disabled people are brought up with the same cultural ideals and ambitions and dreams as their able-bodied counterparts; we too are indoctrinated to fetishize work and romanticize career and to see the performance of wage labor as the ultimate freedom. And yet, for the most part, we are denied access to this fantasy; many of us live on government aid or family support or even charity.[222]

Capitalism is at the root of the premise that someone's worth is intrinsically linked to their production value, and succeeding in this premise can be many steps harder for disabled people. Taylor calls for disabled people to find new avenues for success: "Shouldn't we, of all groups, recognize that it is not work that would liberate us (especially not menial labor made accessible or greeting customers at Wal-Marts across America), but the right to not work and be proud of it?" Taylor encourages liberation from the necessity of wage labour in order to live as an disabled emancipatory politic.

In promoting anti-work politics, Taylor clarifies that:

> This is not at all to say that disabled people should cease to be active or that they should retreat into their homes and do nothing (the main problem is already that we are too isolated). The right not to work is the right not to have your value determined by your productivity as a worker, by your employability or salary.

Neither Taylor nor Weeks are advocating for people to always do nothing, but to liberate *doing* from production value. Taylor is a painter as well as a disability and

[222] Taylor, Sunny. 'The Right Not to Work: Power and Disability'. *Monthly Review*, 1 March 2004.

animal rights scholar. Due to her arthrogryposis multiplex congenita, she paints holding the paintbrush in her mouth. Though Taylor herself has no guilt for not working normalized jobs because of her disability, she does feel ashamed about her art practice not sustaining her financially:

> The very first thing that people ask me when I say I am a painter is "Do you sell your work? Are you supporting yourself?" I actually do sell my work, but I do not support myself from these sales. I hate this question and I feel ashamed no matter how I answer it. This is because I always feel like this question is a test; a test to see whether my lifestyle and hobby are legitimate; and money is the gauge of this legitimacy.

Making art can be work, and comes with expectations around legitimacy that are based on who "makes a living" off of profits from their artworks. The social value of art has long been interrogated and criticized (i.e. does art have any social function? Does it *do* anything?), but I would argue that because it can be "useless" in capitalism it can also be an informative site of pleasure, reflection, sensation, or coming-into-being. Like Cvetkovich's notions of crafting, work can, in fact, feel good for reasons beyond upholding moralized societal expectations. Weeks writes:

> to call these traditional work values into question is not to claim that work is without value. It is not to deny the necessity of productive activity or to dismiss the likelihood that, as William Morris describes it, there might be for all living things "a pleasure in the exercise of their energies" (1999, 129). It is, rather, to insist that there are other ways to organize and distribute that activity and to remind us that it is also possible to be creative outside the boundaries of work. It is to suggest that there might be a variety of ways to experience the pleasure that we may now find in work, as well as other pleasures that we may wish to discover, cultivate, and enjoy.[223]

Pleasure, reflection, learning, bodily sensation, or a combination thereof happen in the "exercise of energies" during the making of art work. I aim to create art without

[223] Weeks, Kathi. *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries.* (Durham: Duke University Press, 2011), 12

an external or internal pressure to produce, to make it less about the final project and more about the process— and, importantly, a process that aligns with the artist, rather than the artist aligning themselves with a process put onto them. The hope within the Reparative Game Creation principles is that there is a general ethos but within that lies flexibility and creativity. It aligns with Week's utopian imagining as a political tool, as under the current system it is near impossible to untangle making art from work and from financial stability, yet there is a glimmer of the disentanglement and the liberation that lies therein.

The next section will move from work back to time, and the ways in which capitalism and debility co-exist in forming time while also offering glimpses into how time might be reformed and reimagined in favour of anti-capitalism and disability justice.

CRIP TIME

Making games is not my job. I make some money from selling my games, but not near a living wage. My job is working as a teaching assistant or instructor, working 20 hours a week. In some ways this frees me up to create art according to the Reparative Game Creation principles as I am not making commercial media whose success determines what is in my bank account, and because of that it is easier to not let making the games come at the expense of my health and other priorities. At the same time, graduate student work is particularly confusing; it is also somewhat my

job (or at least an expectation of work) to have an academic (and in my program, creative) output. I cannot be a TA if I am not doing this Ph.D. Art creation is part of my program's expectation for our dissertation, and if the Ph.D. portion of work that does not pay me is still my job, research creation is my job too. If I follow Weeks' call for a 30 hour work week, I have 10 hours left to do this part of my Ph.D. I have found that often close to 10 hours a week is spent doing university bureaucracy, artist bureaucracy, and applications for both artist and academic grants since the 20 hours of waged labour are underpaid in relation to the cost of living in Santa Cruz. Time is my biggest concern for making art that upholds the reparative game design principles and writing this dissertation. This lifestyle is especially difficult for us grad students with chronic illnesses, psychosocial disabilities, and other disabilities that recalibrate our relational experience to time. I know too many disabled people who have been pushed out of the university system due to its outrageous time and work demands. These different experiences of time can teach us so much about different modes of living and imagining new worlds and media creation practices.

Just like the games industry demands and normalizes crunch, academia too relies on overwork. Travis Chi Wing Lau advocates for slowness in the ableist academic culture which puts on a pedestal hyper-productivity's "speed, efficiency, and results."[224] Overwork, constant work and fast work are not only the new normal, they are framed as necessary to be a part of academic communities and institutions.

[224] Lau, Travis Chi Wing. 'Before the Norm?' *Disability Studies Quarterly* 37, no. 3 (31 August 2017), 11

This not only excludes many disabled people from participating, but also actively disables and debilitates academic workers. Like the self-help apps and productivity gurus Melissa Gregg analyses, Lau states that most graduate school primers tend to reinforce organizing one's own time to be the sole solution, placing "the burden back on the student to figure out a system that best enables them to maximize their own productivity."[225] I write about academia not only solely because I am working in it, but because now many game designers are working in it. Game design programs are rapidly growing and many indie developer friends and colleagues are taking jobs teaching game design in colleges to make their career more financially stable, or turn to academia as a way of having a seemingly more flexible schedule. Even with its embedded ableism and demand for speed, academia can be a siren call for those of us who have to work on crip time, a concept I will describe below. One of the main appeals of academic life for me was having more control over my schedule, having fewer mandatory times to be at a place than a 9-5 job (or more likely, an 8-7 job). Reparative game creation tries to harness this mode of time, ever difficult due to the variance of my schedule. The principles are written for my own crip time to help me guide me through it, but shared in hopes that others will find solidarity within.

Crip time is a mode of understanding time in relation to disability, and the way in which disability disrupts clock time or a capitalist 24/7. It is not just slowness, or "more" time that crip time advocates, but a flexible and reformable time. There are many disabled experiences that feel rapid, such as mania. Pace and rhythm can

[225] Ibid. 16

change wildly or change unseen, from disability to disability, from day to day. One of six way that disability scholar Ellen Samuels describes crip time is as *broken time*:

> It requires us to break in our bodies and minds to new rhythms, new patterns of thinking and feeling and moving through the world. It forces us to take breaks, even when we don't want to, even when we want to keep going, to move ahead. It insists that we listen to our bodyminds so closely, so attentively, in a culture that tells us to divide the two and push the body away from us while also pushing it beyond its limits. Crip time means listening to the broken languages of our bodies, translating them, honoring their words.[226]

Crary's 24/7 may be the pressured expectation, but forced breaks away from it are part of many disabled people's lives. Samuels writes that her "inner clock was attuned to my own physical state rather than the external routines of a society ordered around bodies that were not like mine."[227] Crip time can be a way of distinguishing between the rhythm of life one's bodyminds thrives on, rather than adjusting oneself to meet a socially expected or politically enforced tempo. Alison Kafer argues for an intersectional and coalition-based politic, utilizing notions of queer time to conceive of crip time, and their differences and similarities. She states that crip time "requires reimagining our notions of what can and should happen in time, or recognizing how expectations of 'how long things take' are based on very particular minds and bodies… Rather than bend disabled bodies and minds to meet the clock, crip time bends the clock to meet disabled bodies and minds."[228] Like much of the work in disability advocacy, shedding expectations around ability and time is a path to liberation. Like queerness, disability is often defined by chrononormativity, Elizabeth

[226] Samuels, Ellen. 'Six Ways of Looking at Crip Time'. Disability Studies Quarterly 37, no. 3 (31 August 2017)
[227] Ibid.
[228] Kafer, Alison. *Feminist, Queer, Crip*. (Bloomington: Indiana University Press, 2013), 17

Freeman's queer conceptualization of the pressure to move through life in a predetermined way that ensures maximum productivity. We are pressured to produce in a certain way, experience time in a linear fashion, and orient ourselves towards a certain mode of living, one that is often not accessible (or desirable) to queer and disabled people.

The vector of disability not only shifts perceptions and experiences of time, but time is also a factor in the debilitation of certain populations. Lauren Berlant's theorizing of "slow death" details "the physical wearing out of a population and the deterioration of people in that population that is very nearly a defining condition of their experience and historical existence."[229] It conceptualizes the gradual wearing out of people. Slow death does not progress linearly toward an end, such as an advancement in a slow pace towards death. Puar suggests that slow death is non-linear for it "starts and stops, redoubles and leaps ahead"[230] Life maintenance becomes a primary focus, the daily "ordinary work of living on."[231] In this zone, life narratives are created not through events that have memorable impact but as episodes that make up day-to-day experiences while not individually changing much of anything. Berlant's slow death can be linked with crip time. Debility as a whole prospers not in distinct, traumatic events but in day-to-day living, "in temporal environments whose qualities and whose contours in time and space are often identified with the presentness of ordinariness itself, that domain of living on, in

[229] Berlant, Lauren. "Slow Death," Critical Inquiry 33, no. 4 (1 June 2007): 754–80, 754
[230] Puar, Jasbir. *The Right to Maim.* (Durham & London: Duke University Press), 11
[231] Berlant, Lauren. "Slow Death," Critical Inquiry 33, no. 4 (1 June 2007): 754–80, 761

which everyday activity; memory, needs, and desires."[232] Events are distinct entities that happen rarely in terms of time whereas the episodic is described as how "time ordinarily passes, how forgettable most events are, and, overall, how people's ordinary perseverations fluctuate in patterns of undramatic attachment and identification."[233] The mundane is commonly ignored and taken for granted. Episodic videogames, games that are meant to be played in little bits over longer periods of time, can be incredibly mundane: picking fruit in *Animal Crossing: New Leaf* (2013) or answering texts about what you ate for lunch in *Mystic Messenger* (2016). Mattie Brice's *Mainichi* (2012), though not a durational or episodic game, is about the mundane decisions and microaggressions that a Black trans woman has to navigate each day, contributing to her slow debilitation.

Ritual of the Moon takes place in the durational mundane. Although it is a mixture of sci-fi and fantasy and takes place in space, it is the daily living and small choices made each day that create the world, not single huge events. It takes place very literally in the everyday, as in one is supposed to play it everyday for 28 days. That is a long time for a small art game. I believe this habitual self-reflection that *Ritual of the Moon* asks is beneficial to people, but of course sometimes one must miss a day or more. The programmer and I had to figure out what would happen if someone missed a day or more. Should we make the game keep going, the comet always crashes into the earth? Not do anything? Freeze the game? Never

[232] Ibid. 759
[233] Berlant, Lauren Gail. *Cruel Optimism.* (Durham: Duke University Press, 2011), 101

acknowledge they missed a day? In the end, we decided that if a player misses a day, the comet hits the earth with text that says “Doing nothing is as good as doing it myself,” denoting that inaction can be as harmful as action. If the player misses more than one day, the game locks out as if they have missed only one. This is to remind the player that their choices have consequences, but not to have the game punish them totally for missing it.

Though primarily episodic, there are three distinctive events in *Ritual of the Moon*. On day 18 the earth may be destroyed depending on the players’ choices. On that same day the option of suicide is enabled. The player from then on can point the comet at the moon and the witch on it, an action of self-harm of sorts. On day 28, the final event happens, the ending. There are six different endings, only two of which have the witch survive.

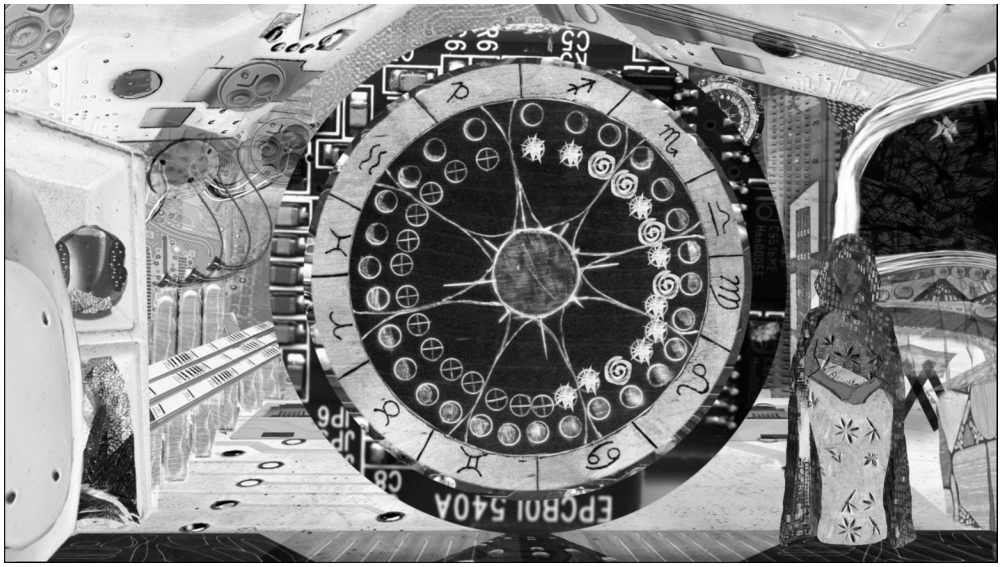

Figure 2.5. The calendar in Ritual of the Moon *14 days in.*

Inside the game, the player tracks their choices over the 28 days. They can look back and see how they were feeling each day, if they wanted to protect the earth, destroy the earth, or destroy themselves. This tracking came from my own practice of journaling. I once had a habit of rating my days three hearts out of five, one star out of five, five moons out of five. Being able to look back at the shifting stages pulls me out of the belief that I'm stuck in a certain feeling, that the way I feel at that moment is the way I will feel forever. It helps detect patterns over time and better understand the cycles of my moods and identify if anything is really becoming an issue that needs to be addressed. The option of suicide was one of the last additions to the narrative of the game, added about a year after the rest had been written. That came from a time when I felt I wanted to die. This synced up with the time I spent hand-embroidering all the text of the game, so I added on another route that spoke to me at that time. Depending on the choices the player makes, suicide becomes a third option, a way to escape the binary choice of destroy or protect. It is an example of the ways in which these social hardships drain us and wear us out over time; the ways some of us, especially women, internalize conflict into self-hatred, anger at ourselves, and self-destruction.

Ritual of the Moon could be described as a "slow" process but it was more an ever-cycling movement between rapidity and long breaks. I'm used to making things in a hypomanic state: work work work, exhaust myself, then be done. But the pace

had to be different for this game because it is about a different pace; time is a key part of the game and so it is fitting it would be a key part of the process. It is about daily dedication in small bits over long periods of time. It is about being confused, stuck, suicidal. It is about meditating for five minutes a day because over time that creates a ritual that sustains us.

I was growing bitter about the delayed release and despairing over whether I should just give up on it, but I shifted my thinking about it. Instead of hating that it wasn't out yet, I started to tell myself that it needed time to be fully digested, for me and the team to fully understand it and do the idea justice. It needed time to transform. I told myself that labour takes time; that love takes time. I needed time to strip it to the barest bones of meditation on healing the future. I would tell myself that maybe the game was waiting for the right time to be released. Maybe it was waiting for when it makes the most sense. I wrote in 2017 (published in 2018):

> I'm realizing that it feels more prescient than ever. I know it is on so many of our minds, that push and pull between the desire to set the world on fire, giving up on it, and only caring for each present instant, and on the other hand, putting every ounce of ourselves into making the world better even if it feels fruitless, even when the majority seems against us. It feels befitting and relevant to consider the future of queerness, of racism, and of disability in North America and much of the world, at a time when living on the moon by yourself doesn't seem like such a bad idea.[234]

Time is represented in the design of the game, time is in the experience of playing the game, and it is also in the process of creation. I learned much about time from *Ritual of the Moon.*

[234] Stone, Kara. 'Time and Reparative Game Design: Queerness, Disability, and Affect'. Game Studies 18, no. 3 (December 2018).

EVERYDAY REPAIR

The everyday can be both a site of debilitation and a mode of repair and recuperation. Although Crary argues that the everyday is no longer a source of liberatory potential as it too has been swallowed into 24/7 capitalism, Cvetkovich argues for the "utopia of ordinary habit." She analyses art pieces that:

> chronicle forms of survival in the face of the challenges of daily life, which is where depression sets in and becomes chronic—or to use a less medical term, pervasive or systemic—so much a part of things that can't be isolated as a singular feeling or event. But by the same token, those humble material locations are also the spaces in which depression can be transformed though practices that can become the microclimate of hope.[235]

Cvetkovich argues that daily practices can foster hope and ordinary utopia. My understanding of Cvetkovich's utopia is that it is not about perfectionism but finding grounded pleasure in the effort of healing and repair, and a belief that other worlds are possible, ones with lessened debilitation and more space for feeling a variety of feelings. She counters "slow death" with "slow living;" the habits, rituals, and daily practices that she sees the queer community taking up, such as crafting, journalling, yoga, mediating, and more can be the "basis for the utopian project of building new worlds in response to both spiritual despair and political depression."[236] She uses "habit" as it holds both positive connotations and negative connotations like compulsions and addictive behaviour, but rather than accepting all repetitive or repeated behaviour into the "utopia" (such as most most videogaming), she states that is it when "a repeated action is actively and consciously pursued" that a habit holds

[235] Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012), 155
[236] Ibid. 167, 191

liberatory potential.[237] This rhetoric is akin to ritual, conscious acts done in specific ways, often repeated. Cvetkovich looks at spiritual practices as daily habits or rituals, which she says is "a way of becoming open to what we don't know."[238] The ordinary habits of utopia are "technology for developing spiritual warriors who will have the sensory tools (both cognitive and emotional, both mental and physical) to focus and be present even in times of crisis. But it has to be repeated everyday because the lesson is never done—the mind will always wander, the body will be blocked by stress, the spirit will be dampened."[239] The reparative potential in everyday habits and rituals is in their repeated nature, not in one off fully transformational events but through returning to the practice itself. It is the expectations of videogames that this medium affords—to be repeated, to be in a "magic circle"—that holds this two-fold potentiality; videogames can be a mundane, compulsive or thoughtless habit, but they can also be a site of repair, reflection, and preparation. This goes for both the production of videogames and their playing; as the artist, am I zoning out into the computer while creating, forgetting about my body, my breath, my emotions, or am I creating a conscious space and time for creation and using it as a vehicle to be better in touch with the world? In the spirit of non-dichotomous affect theory, it is never absolutely always one or the other, but always holding the potential for each expression. Videogaming has been on the debilitating end but reparative game creation is in hopes to tilt it towards repair, reflection, and utopian imagining.

[237] Ibid.
[238] Ibid. 200
[239] Ibid. 201

TIME AND THE CLIMATE CRISIS

There is one more aspect of time I would like to explore as it too relates to capitalism, time, and debility: the urgency of the climate crisis. Rob Nixon's book *Slow Violence and the Environmentalism of the Poor* reorients environmental destruction into the slow, unseen, and chronic. He writes:

> Violence is customarily conceived as an event or action that is immediate in time, explosive and spectacular in space, and as erupting into instant sensational visibility. We need, I believe, to engage a different kind of violence, a violence that is neither spectacular nor instantaneous, but rather incremental and accretive, its calamitous repercussions playing out across a range of temporal scales. In doing so, we also need to engage the representational, narrative, and strategic challenges posed by the relative invisibility of slow violence.[240]

Violence is not only a distinct event, a catastrophe, but exists in the extremely small scale everyday, often unperceived. This mode of thinking about the climate crisis is akin to Puar's writing on debility and Berlant's on slow death; that this debilitation and degradation happens mostly in incremental ways, rather than massive events that are most often written about. Thinking about the climate crisis in relation to slowness requires a new approach to understand violence, away from newsworthy events towards a "temporal dispersion of slow violence"[241] and the way the environmental degradation is insidiously unfolding.

Disability is connected to the degradation of the environment. Taylor writes on her experience of disability:

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[240] Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. (Cambridge/London: Harvard University Press, 2011), 2
[241] Ibid. 3

> My disability is a birth defect caused by a U.S. Air Force contractor that illegally polluted my neighborhood's ground water. They buried toxic chemicals near our community's wells for over forty years, but did not bother to remedy the situation even after awareness of the damage was raised; most likely this is because the area was inhabited by poor Latino families and residents of a local Indian reservation. Thousands of people died or became impaired due to the Air Force's negligence. Unfortunately, my case is not rare.[242]

Her book, *Beasts of Burden: Animal and Disability Liberation* (2017) goes in depth the varied connections between animal rights and disability justice, from who gets to count as human and who is called animal, to the politics of veganism, to interdependent living. Capitalism positions both humans and the earth as resources to be drained, and care for humans, animals, and the earth to be a financial burden even as profiting from our debilitation.

Art is a way in which the temporality of the climate crisis can be represented and highlighted. Nixon calls for artists to creatively shift representations of climate change, saying that "a major challenge is representational: how to devise arresting stories, images and symbols adequate to the pervasive but elusive violence of delayed effects."[243] His work is yet another to theorize the "slow" (so far in this chapter there is slow academia, slow death, slow living, and now slow violence), but like all of these, it is less about "slowness," a highly relative term, but more about being incremental, accretive, delayed, buried, hidden, or invisible. Relative to the existence of the human species, the environmental destruction brought on by capitalism has happened in a short time period at a rapid pace. Since Nixon's book was published in

[242] Taylor, Sunny. 'The Right Not to Work: Power and Disability'. *Monthly Review*, 1 March 2004.
[243] Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. (Cambridge/London: Harvard University Press, 2011), 3

2013, I believe there has been a cultural shift in people's affective experience of the climate crisis. This experience is being labelled in medicalized ways ("climate anxiety" and "climate grief", for example[244]) The effects of the climate crisis become to feel like a disorder or like debilitation. No longer as buried or hidden, many people are now acutely feeling and experiencing the changing future of the planet. Anxiety, hopelessness, grief, feeling stuck or frozen in place, and apathy are being felt in *urgency*. Crip time, as detailed above, shows us a path for understanding the slowness ramped up to sudden-feeling urgency that is now being experienced by many. The future for life on this planet is at its most uncertain; the earth is constantly being given a shifting prognosis of seventy, thirty, fifteen more years until food runs out, drought is widespread, species go extinct. Configurations of the temporal degradation of the environment can be understood through disability scholarship on crip time and prognosis time. The following is an analysis of videogame *That Dragon Cancer* (2016) and the documentary that follows its production, *Thank You For Playing* (2016). These pieces were chosen as it is about living with the designers' son's prognosis, as well as having the documentary which allows one to observe their production process.

That Dragon Cancer was made by Ryan and Amy Green, and Numinous Games about the Greens' son, Joel, who was diagnosed with terminal cancer at twelve months old. The game and the documentary follows the last years of Joel's

[244] Knight, Victoria. '"Climate Grief": Fears About The Planet's Future Weigh On Americans' Mental Health'. *Kaiser Health News* (blog), 18 July 2019.

life, especially Joel's father, Ryan's, experience. The game consists of a series of vignette-like scenes set in hospitals, lakes, and a cathedral. The documentary follows the family as they make a videogame about Joel's prognosis and care work they do for him. Like *Ritual of the Moon*, *That Dragon Cancer* took a long time (relatively, for an indie game) to come out. It began production in 2011 and was released in 2016. The film showed at festivals a year before the game was out, ultimately having a wider release in 2016 alongside the game. The Greens made the game during their son's life with cancer and released it two years after he died. On the topic of the length of the process, Ryan said that at first creating the game was "something to prove that Joel could still survive," but his thinking shifted towards believing that the development process after Joel's death "had to take two years to make, otherwise we wouldn't have the distance, the experience, to tell a story from the perspective of going through it rather than afterwards."[245] This is similar to my framing of the necessity of time in order to create *Ritual of the Moon*. Ryan said of working on it while Joel was alive that "making a game allows me to escape, but you can't escape forever."[246] This is not so much an escape from his son dying, as he is making a game directly about it, but reorienting his energy in order to process that information in an alternative way.

As demos of *That Dragon Cancer* showed at PAX and GDC Indie Megabooth, and the documentary showed its trailers and clips, the concept of the

[245] Stafford, Patrick. 'A Game about Cancer, One Year Later'. Polygon, 16 April 2015.
[246] *Thank You For Playing,* directed by David Osit & Malika Zouhali-Worrall (2016)

game drew a lot of attention, both excitement and criticism. In the documentary, Ryan describes people criticizing him for making light of a sad situation by making it into a game, as games are often thought to be about fun and entertainment. Since the early 2010s, it has become more common for people to make independent games about unexpected and personal material. *That Dragon Cancer* was one of the first mainstream examples of this, achieving popularity in part because of the designers being white, cisgendered, heteronormative, unlike trans designers at the time making personal games such as Anna Anthropy, Mattie Brice, and Liz Ryerson, none of whom has a feature length documentary made about them. Although the Greens received criticism for their use of games as a medium for personal storytelling, Ryan describes "fighting cancer" as "kinda like a game": One is "trying to find the right combination of things… we're trying to find the right formula to save a life, my son's life. It's like a mechanic. When you start to see the world through mechanics, and when mechanics fail, you see the potential of what games can be." Control, and the uncontrollable, is a big theme within the game. Originally, the game was to end with pulling levers on a machine hooked up to Joel, giving the player a sense of control, but when they examined it closer they would realize that all of the levers were disconnected, and that they had no control of the situation. Following Joel's death, they instead replaced it with a scene in a cathedral. The final scene is an imagining of Joel's own utopia: sitting in a park with a dog eating stacks of pancakes as tall as he is. There is much to be said about the expectations of control in games and how those

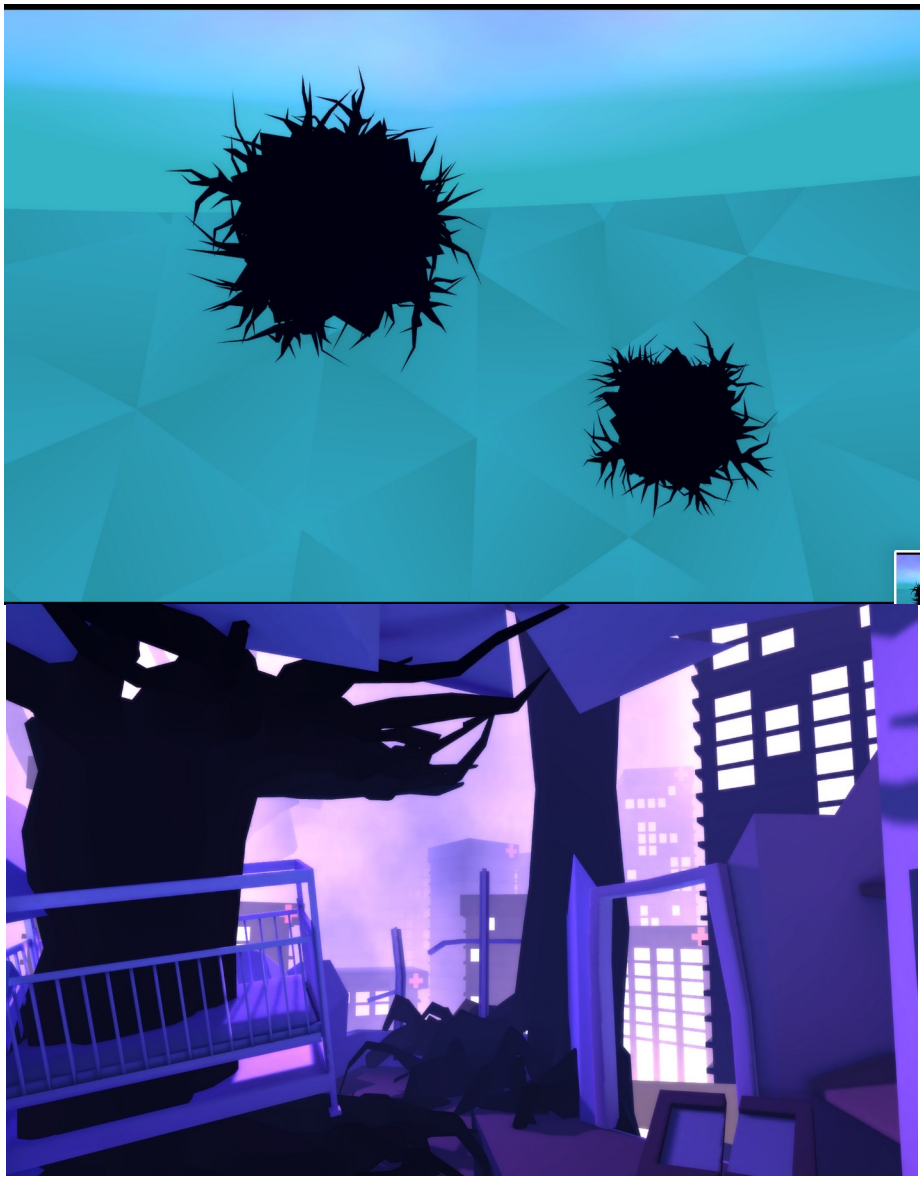
expectations have changed since this game's development where sponsors were concerned about the lack of interactivity or non-game-like elements, to today's conversations about walking sims. Instead I want to focus less on the formal aspects of the game and more on its representations of the environment and of crip time, and ways in which disability can be a lens for the earth's prognosis.

In both the documentary and in the game, the Green family discusses Joel's "slow" development. One of their sons points out that Joel is almost 5 years old and cannot yet talk. There is an expectation that by that age, he should be able to speak. The parents respond saying that Joel's illness "slowed him down" and makes him "slower than most kids." "Eventually he will catch up," they reassure the son. This is a clear example of chrononormativity determined by ableist expectations. They are not just describing the reasons that Joel cannot or does not talk, but they describe it temporally; the pace of it in relation to other 'normal' children. The illness is something Joel would have to work to "catch up" from. In the documentary, Amy describes the difficulty of "raising a child that's supposed to die"; that is, raising a child that is supposed to die before it is normatively expected of them. In the game, she says she is "hoping you [Joel] will never remember these days of illness and treatment" and that he will "leave it behind," going on with his normal life. Disability scholars like Eli Claire and Alison Kafer write on the difficulty of desiring disability, of disability as something to be celebrated rather than wished away, since suffering, pain, debt, and the dependence on the medical industrial complex cannot all be de-

stigmatized away, but here Amy wants not only for her son to not be ill but also that he forgets his entire experience with cancer and lives a "normal" life; to "catch up" to the chrononormative temporal ordering of life.[247]

The game represents the family's experiences of worry and grief through environmental metaphors. The game often switches between controllable characters. At the beginning of the game the player starts playing as a duck swimming on a calm lake, picking up pieces of bread the Green family is throwing for them. The main settings are hospitals, or water-adjacent areas like a pond, lake, or a flooded area. Joel's cancer is represented in landscapes, blown up to an enormous size.

[247] Clare, Eli. *Brilliant Imperfection: Grappling with Cure*. (Durham London: Duke University Press, 2017) and Kafer, Alison. *Feminist, Queer, Crip*. (Bloomington: Indiana University Press, 2013)



Figures 2.6 and 2.7. Cancers floating in a large body of water (left) and of natural growth destroying the hospital (right).

One scene imagines the hospital as a post-apocalypse, with cancers and trees growing in massive sizes, destroying the building. The parents' grief is most often

described as rain pouring into a flood in which they drown or float on a small lifeboat.

Figure 2.8. Joel on a lifeboat as his parents receive news of his prognosis from the doctors.

Illness is portrayed as feeling like a climate catastrophe. Using nature as metaphors is not a new occurrence in literature and art, nor for descriptions of debilitation (like the common description of depression being a dark cloud that cannot be lifted). What is new, however, due to the current medicalizing of the climate crisis in the form of climate grief and climate anxiety, statistical prognoses, and anthropomorphizing of the earth, is that not only is disability collapsing into climate catastrophes but the climate crisis is collapsing into disability. Their conceptualizations are becoming blurred with each other.

Joel and his family are living in "prognosis time," a term from Sarah Lochlann Jain describing the experience of living with a medicalized path towards death. A prognosis is a forecast of the likely course of a disease of illness. Jain states:

> Living in prognosis severs the idea of a time line and all the usual ways one oreints oneself in time: one's age, generation, and stage in the assumed lifespan. If you are going to die at 40, should you be able to get the senior discount at the movie when you're 35? (Is the discount a reward to long life or for proximity to death?) This relation to time makes death central to life in prognosis… prognosis time constantly anticipates a future.[248]

Living in prognosis time, time oriented around the progression of illness, brings into question normalized expectations of human lifetimes and deathtimes. At one point, Joel is given between three weeks and four months to live. That indeterminacy looms over the family, just as the indeterminacy of how long they will stay in California for Joel's treatment, or how long they must wait on test results. Puar argues that prognosis time refigures the subject in "bioinformatic and statistical terms"; that to say that living and dying is calculated in relation to "statistical risk, chance, and probability… assessed based on indices of health, illness, disability, debility, infirmity, disease, fertility, environmental safety, climate change."[249] Prognosis time is a specific mode of crip time, one that is filtered through the lens of biostatistics and relates specifically to death.

The earth has been given many prognoses based on eco-informatic statistics. There are different time spans until various 'deaths' of the earth; its crops, species, land, water, humans. Disability offers a way of understanding the earth's diagnosis of

[248] Jain, Sarah Lochlann. 'Living in Prognosis: Toward an Elegiac Politics'. Representations 98, no. 1 (May 2007): 77–92, 81

[249] Puar, Jasbir K. 'Prognosis Time: Towards a Geopolitics of Affect, Debility and Capacity'. *Women & Performance: A Journal of Feminist Theory* 19, no. 2 (1 July 2009): 161–72, 165

climate crisis and prognosis of urgent time. Who better to aid people in understanding how to live in eco-prognosis time than the ill and disabled who have already been living in it? *That Dragon Cancer* and the documentary *Thank You For Playing* demonstrate this affective connection between the climate crisis and illness, but also the role of care work. They show the day-to-day work of caring for Joel, feeding him, soothing him, taking him to appointments, as well as the parents' debates over how to best handle that work; Amy wants to have moments of fun because she believes they are necessary in order for them to keep surviving. She states her orientation for "in the middle of drowning, choosing rest." Ryan criticizes her for being hopeful, and yet also himself for being hopeless. He shares that when first he heard of Joel's diagnosis, there were moments of trying to "never fully love Joel because he's going to die," feeling too vulnerable to inevitable heartbreak, but then he ultimately "chose to be all in anyway."

The feeling of doom is present in the three pieces discussed in this chapter, *Ritual of the Moon, That Dragon Cancer,* and *Thank You For Playing.* Doom is connected to both time and to negative affect; it is an unhappy destiny or condemnation. Unlike the Greens and their creative reflection on the ultimate lack of control over Joel's survival, humanity as a whole can make significant impacts to the earth's prognosis, through a widespread deposition of capitalism, decolonization, and stewardship of the earth. Hope, then, is not for whether the earth survives, but how humanity can collectively come together to reform systemic policies that degrade the

earth and debilitate its people. While this chapter reflected on the experience of work while creating videogames about time and death, the following chapter looks more pragmatically on ways in which to create a reparative game that elicit feelings of resilience, recognition, and healing.

CHAPTER THREE

Reparative Game Creation

Can videogames be a tool in working against personal and mass debilitation? Is it possible to make games that heal? Reparative Game Creation is a speculative design framework for designing interactive media focused on healing, emotional acceptance, and accessibility for the psychosocially disabled. It is informed by disability studies, affect theory, anti-capitalist thought, and artist-scholarship of research creation and critical practice. This work's political goals are to recognize the massification of psychosocial disability and debility and orient the design and use of interactive media towards healing and care, rather than towards a slow debilitation as it often is now.

Whereas the previous two chapters set up foundational theories for Reparative Game Creation and critique common game design techniques and beliefs around the power of gaming, this chapter will approach reparative games at the level of design and practice. I first outline the terms *reparative*, *healing*, and *therapeutic*, each of which shares similar usages but differs in important ways. I then discuss some of my art practice that has led to Reparative Game Creation and explore other artists and scholars working with similar goals. Finally, I explain more in-depth the Reparative Game Creation Principles that launched this dissertation.

REPARATIVE

The term I am using, reparative, comes from queer theorist Eve Kosofsky Sedgwick. She proposes two forms of analysis: paranoid reading and reparative reading.[250] Sedgwick argues that paranoid reading is the most common form of critique. It consists of familiar protocols in academia like maintaining critical distance, outsmarting each other, and one-upmanship. The "first imperative of paranoia is *There must be no bad surprises*."[251] According to Sedgwick, paranoia works to anticipate and to ward off negative feeling, in particular "the negative affect of humiliation."[252] In its resistance to surprise, "paranoia is at once anticipatory and retroactive, thinking about all the bad things that have happened in order to be ready for all the bad things that are still to come. In this sense, the image of the paranoid person is both aggressive and wounded, knowing better but feeling worse, lashing out from a position of weakness."[253] Paranoid reading is used as an example of "rigid radicalism" in Nick Montgomery and carla bergman's *Joyful Militancy*, a book on anarchist approaches to thriving resistance. They describe it as:

> a stance of suspicion: an attempt to avoid co-optation or mistakes through constant vigilance. It seeks to ward off bad surprises by ensuring that oppression and violence are already known, so that one will not be caught off guard and so that one can react to the first sign of trouble. The result is that one is *always on guard and never surprised*. By approaching everything with detached suspicion, one closes off the capacity to be affected in new ways.[254]

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[250] Her use of the words "paranoid" and "schizoid," terms that are often medicalized and pathologized, is not lost on me. It is emblematic of a larger culture of using disability as metaphor, and something I work to reform in my use of the term reparative.

[251] Sedgwick, Eve Kosofsky, *Touching Feeling: Affect, Pedagogy, Performativity.* (Durham & London: Duke University Press, 2003), 130. Emphasis hers.

[252] Ibid. 145

[253] Love, Heather. 'Truth and Consequences: On Paranoid Reading and Reparative Reading'. Criticism 52, no. 2 (10 March 2011): 235–241, 237.

[254] bergman, carla and Nick Montgomery. *Joyful Militancy*. (California: AK Press, 2017), 220. Emphasis theirs.

The vigilance, the demand for perfection, the constant search for flaws or limitations, prevents one from feeling other experiences or transformations, especially ones that are considered naive, such as surprise, openness, and celebration.[255]

On the other hand, reparative reading is a less suspicious mode of inquiry that focuses on healing, love, repair, and openness, rather than only pointing out more insidious forms of oppression. Though Sedgwick does not clearly lay out the exact pratices of a reparative position, she uses words like "multiplicity, surprise, rich divergence, consolation, creativity, and love"[256] to describe its possibility. Reparative reading focuses on amelioration, connection, experimentation. It is curious. It does not have all the answers right away. It is vulnerable. It does not default to searching for mistakes or comparison. It is joyful, in the way that Montgomery and bergman describe *joyful militancy*: possibly involving happiness, but tending to "entail a whole range of feelings at once: it might feel overwhelming, painful, dramatic, and world-shaking, or subtle and uncanny."[257] It is "joyfully in touch with the world and with the always already present potential for transformation."[258] Reparative reading works to sustain life and affirm ways of being. Sedgwick's work has had a reparative effect on many scholars: Heather Love honours Sedgwick in her writing on reparative reading, saying Sedgwick "enabled" her to have a tolerable job and to live a queer life she could never have imagined. Judith Butler says Sedgwick made her "more capacious

[255] Ibid. 222
[256] Love, Heather. 'Truth and Consequences: On Paranoid Reading and Reparative Reading'. Criticism 52, no. 2 (10 March 2011): 235–41, 237
[257] bergman, carla and Nick Montgomery. *Joyful Militancy*. (California: AK Press, 2017), 29
[258] Ibid. 222

rather than less."[259] Similarly, Cvetkovich cites authors like Audre Lorde for enabling her to get up in the morning.[260] I deeply appreciate these nods to the importance of critical theory in reframing one's worldview. Shifting one's thinking can be a healing tool.

The significance of the reparative mode is not to say that paranoia is never necessary. The criticisms of Sedgwick's reparative readings are generative as well. Lee Edelman argues that Sedgwick "repeats the schizoid practice it claims to depart from."[261] Distinguishing paranoia from the reparative enacts a hypocritical circularity. Edelman is not arguing that healing cannot ever take place or that it is an ignoble goal, but rather that amelioration will always inflict some harm. Love makes the case that Sedgwick's essay itself is not only reparative, but it is also paranoid:

> Just as allowing for good surprises means risking bad surprises, practicing reparative reading means leaving the door open to paranoid reading. There is risk in love, including the risk of antagonism, aggression, irritation, contempt, anger--love means trying to destroy the object as well as trying to repair it. Not only are these two positions—the schizoid and the depressive—inseparable, not only is oscillation between them inevitable, but they are also bound together by the glue of shared affect.[262]

Opening oneself for healing and repair means opening oneself to risk, including so-called negative feelings. Being reparative can mean an oscillation between good and bad affects and experiences, deeming them as not necessarily clearly divisible from each other, and approaching bad feelings as not necessarily an experience to always

[259] Love, Heather. 'Truth and Consequences: On Paranoid Reading and Reparative Reading'. Criticism 52, no. 2 (10 March 2011): 235–241, 109.
[260] Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012), 26
[261] Berlant, Lauren, and Lee Edelman. *Sex, or the Unbearable*. (Durham: Duke University Press, 2014), 44
[262] Love, Heather. 'Truth and Consequences: On Paranoid Reading and Reparative Reading'. Criticism 52, no. 2 (10 March 2011): 235–241, 239

avoid. The good and the bad are wrapped up into one: Cvetkovich argues that one is "not to presume that they are separate from one another or that happiness or pleasure constitutes the absence or elimination of negative feeling."[263] Feelings of happiness, pleasure, joy, and healing do not necessitate the total evacuation of bad feelings. Cvetkovich seeks to depathologize negative affects to prevent them from being dismissed as resources for political action. At the same time, she is careful not to suggest that mental illness and "bad" affects should be transformed into positivity: depression "retains its associations with inertia and despair, if not apathy and indifference, but these affects become sites of publicity and community formation."[264] She does not transform bad experiences and negative feelings into positive things to be celebrated, but instead frames them as political statements and sources of community bonding. To take on a reparative approach is to move towards amelioration, healing, restoration, and futures oriented towards care and justice. The opposite of reparative may not be paranoid reading then, but perfectionism: the demand for constant flawlessness and a rigid and vigilant approach to monitoring one's status.

For the purpose of this dissertation, the reparative position or practice, reparative *reading* is being refigured to Reparative *Game Creation*. In the context of videogames, reparative reading may be immediately thought of as akin to reparative *playing*, which is possible, but Sedgwick uses reading not only as the act of taking in

[263] Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012), 6
[264] Ibid. 2

information but also the response to it; how academics write and talk in communication and discussion with each other. Instead of a mood of suspicion, interrogation, guardedness, and desire to expose others, the reparative response takes risks in proposing, modeling, or exploring alternative modes of being and understanding. Essays and books are the most common form of expression in academic settings, but making art, research creation, or alternate forms of expression is growing more common.[265] This is not necessarily to say that making art is definitively more "reparative" than writing an essay; Patrick Jagoda argues that critical practice can be just as critical as traditional scholarship (as seen in the use of the word 'critical'), but it does "unsettle the binary between practice and theory, the actor and the spectator."[266] The critic is also the creator and the critic a creator. It may, however, disrupt paranoid tactics that have become commonplace by virtue of positioning the scholar and the audience into new positions.

Reparative Game Creation is in line with research creation that focuses on the creative process *as* research. Some forms of research creation involve:

> the elaboration of projects where creation is required in order for research to emerge. It is about investigating the relationship between technology, gathering and revealing through creation, while also seeking to extract knowledge from the process… It is about understanding the technologies/media/practices that we discuss as communication scholars (for instance) by actually deploying these phenomena, and pushing them in creative directions.[267]

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[265] I use the term "research creation" which is common in Canada. It has a similar meaning to practice-based, practice-led, creative practice, and practice as research, and arts based research, which are used to differing degrees depending on if in the US, Britain, or Australia.

[266] Jagoda, Patrick. 'Critique and Critical Making'. *PMLA/Publications of the Modern Language Association of America* 132, no. 2 (March 2017): 356–63.

[267] Chapman, Owen B., and Kim Sawchuk. 'Research-Creation: Intervention, Analysis and "Family Resemblances"'. *Canadian Journal of Communication* 37, no. 1 (13 April 2012), 19

The creative project portion of this dissertation is not a direct reflection or summary of the academic research I have done, nor is it the sole object in which the written dissertation is analyzing. Rather, the theory and the creative process are co-constituted. The reparative can come in the form of the creative; an attempt in creating or modeling an alternative, not remaking what has been made but a vulnerable deviation from what already exists. Though making art as a form of research is relatively new to academic institutions, making art has a much longer history associated with healing and therapy. In the next sections, I will detail the connotations of the words 'healing' and 'therapeutic' as related to the reparative.

HEALING

Healing, as I use it in this dissertation, has a specific connotation in relation to disability and social justice. Disability Justice activist Leah Lakshmi Piepzna-Samarasinha describes Healing Justice, a movement and term created by queer and trans Black, Indigenous, and People of colour, in which Peipzna-Samarasinha is a major figure. She asks, "What do you think "healing" is? Do you think that it means becoming as close to able-bodied as possible? Do you think it is always sad or terrible to be sick or disabled? Do you think everybody wants to be able-bodied and neurotypical, and would choose it if they could?"[268] Questioning expectations of the desirability of able-bodiedness and able-mindedness is integral for fellow artists and

[268] Piepzna-Samarasinha, Leah Lakshmi. *Care Work: Dreaming Disability Justice*. (Vancouver: Arsenal Pulp Press, 2018), 94

academics interested in social activist games focused on disability in order to combat potential ableism. Piepzna-Samarasinha knows it is hard to get good healing, good healing that is affordable, a practitioner that listens to the person's needs, and one that disavows their own expectations of what the person wants. She communicates that "most sick and disabled people I know approach healing wanting specific things—less pain, less anxiety, more flexibility—but not usually to become able-bodied."[269] Healing is done to make life more livable and to have the opportunity to thrive, not to overcome or eradicate disability.

Healing can be easily dismissed, seen as not important to political futures, reserved for people with money, or an individual responsibility that is not worthy of being addressed in collective organizing. Yet, because it is often dismissed, the burn out rate in community organizations, academia, and the game industry is incredibly high. Cara Page of the Kindred Southern Healing Justice Collective proposed that "Our movements themselves need to be healing, or there is no point to them."[270] Care work and anti-ableist practices are not to be side-lined, but are central to political movements—not individual practices that we do to get ready to do the "real-work" again. Piepzna-Samarasinha puts it this way: "It doesn't have to be either healing or organizing: it's both… Healing justice is not a spa vacation where we recover from

[269] Ibid. 103
[270] Ibid. 100

organizing and then throw ourselves back into the grind,"[271] as much of the rhetoric around self-care insinuates.

For Piepzna-Samarasinha, like feeltank and queer feminist affect theory, feelings are essential to political organizing. Many movements involve grieving and come out of a need for grief to be publicly recognized: "Grief and trauma are not a distraction from the struggle."[272] Healing and reparative work does not come from pushing down negative feelings and bringing up positive feelings, but from giving time and energy to both. Reparative Game Creation is not trying to make players feel better, to totally absolve them of anxiety, depression, mania, diagnosis, pain, and more, but to reorient media practices and play towards supporting life, sustaining energy, rejuvenating each other, and creating a life one considers worth living.

THERAPEUTIC

I distinguish Reparative Game Creation from health games and therapy apps in a few ways. I am not a medical practitioner or therapist, nor am I partnering with any. Reparative Game Creation is not focused on cure or even necessarily on feeling better—not that those are always antithetical goals. It is not solely focused on the end product and how it affects players. Making a reparative game is not only focused on the product made but also on the method of making it. A reparative game can be one that someone makes for themselves; the product may be unsuccessful in its goals or

[271] Piepzna-Samarasinha, Leah Lakshmi. *Care Work: Dreaming Disability Justice*. (Vancouver: Arsenal Pulp Press, 2018), 107
[272] Ibid. 108

never released to the public, yet worked reparatively for the designers. It is also distinguished from art therapy, even though they are connected, because art therapy is largely based on psychoanalysis, uncovering repressed feelings, or a singular goal of feeling soothed. I would not use the word 'therapeutic' to describe a reparative game because I do not suggest that creating or playing games in this way are a substitute for therapy.

While disability justice advocates are not necessarily against all uses of the medical model of mental illness, and although I personally am a proponent of and inspired by certain clinical therapies, the individual nature of common psychological care limits therapy's cultural effect. Individualized therapy is not enough to tackle the world's massive amount of psychosocial disability and debilitation. Kazdin and Blase, two psychologists, highlight the inefficiency of the individualized delivery system of talk therapy. Although there are many techniques of therapy such as Dialectical Behavioural Therapy, psychoanalytic therapy, Cognitive Behavioural Therapy, Eye Movement Desensitization and Reprocessing Therapy, which are among the most popular, they almost all share the same model of delivery: administered to one person at a time or up to a small family unit. Kazdin and Blase point out that there are not enough psychologists to be able to address the massive population in need of care; they estimate that 25% of the population has at least one psychiatric disorder in a given year. In the US, that would be approximately 75

million people.[273] Even if the current workforce of psychologists were to double, it would have "little discernible impact given the number of individuals requiring services," especially those who live in remote areas or do not have adequate access to health care.[274] Kazdin and Blase advocate for an opening up of the delivery model from intense one-to-one sessions to less intensive but more massive scale. Technology is a significant portion of this: the internet, phonecalls, text messages, and apps are all cited as having the potential to deliver therapy at larger and more economical scales. A treatment can look very different than what we would think of as therapy. They give the example of a doctor telling a patient to quit smoking:

> advice from the physician or nurse can have a small but reliable effect on smoking. The physician says something like the following to patients who are cigarette smokers: ''I think it important for you to quit tobacco use now,'' or ''As your clinician, I want you to know that quitting tobacco is the most important thing you can do to protect your health.'' The comments lead to approximately a 2.5% incremental increase in smoking abstinence rates in comparison with no intervention… The example is instructive because it also conveys the importance of ''weak'' treatments. The intervention results in a small increase in the percentage of individuals who became abstinent. Small effects on a large scale (affecting many people) provide an important complement to other models of delivery.[275]

Though individually, a doctor's suggestion to stop smoking does not have a high chance of the patient quitting, on a wider social scale it has great impact. These "weak" treatments are much less intensive but can make change at a massive scale: "'ever so slightly' can make a difference in determining whether an individual goes

[273] Kazdin, Alan E., and Stacey L. Blase. 'Rebooting Psychotherapy Research and Practice to Reduce the Burden of Mental Illness'. Perspectives on Psychological Science 6, no. 1 (January 2011): 21–37, 23
[274] Ibid. 23
[275] Kazdin, Alan E., and Stacey L. Blase. 'Rebooting Psychotherapy Research and Practice to Reduce the Burden of Mental Illness'. Perspectives on Psychological Science 6, no. 1 (January 2011): 21–37, 26

off the deep end or wades in the shallow water until a crisis passes."[276] The authors also describe the role that non-professionals, self-help, and the media can have in spreading messages of prevention and care, even though "it is heresy within psychology to mention that one does not need to have a Ph.D. to deliver effective or evidence-based individually tailored treatments."[277]

Although there are many reasons to be skeptical of technological programs designed for therapy, Kazdin and Blase offer optimism for the possibilities—and necessity—of using technology to provide widespread therapeutic programs. Technology may never be a substitute for a real person, but "technology is not competing with a real person. It is directed toward the goal of reducing the burden of mental illness, and in this regard it can make a contribution to a portfolio of delivery models that is without peer."[278] Kazdin and Blase define the burden of mental illness as the "personal, social, and monetary costs associated with impairment" not the popular conception of burden as something someone else has to unwillingly care for.[279] They even write that "the creativity of video games may increasingly be applied to treatment of preventive regimens and be made readily available."[280] Although I generally steer clear of the word therapy and therapeutic because this dissertation is not necessarily invested in the field of psychology, I see the work of

[276] Ibid. 32
[277] Ibid. 30
[278] Ibid. 32
[279] Ibid. 21
[280] Kazdin, Alan E., and Stacey L. Blase. 'Rebooting Psychotherapy Research and Practice to Reduce the Burden of Mental Illness'. Perspectives on Psychological Science 6, no. 1 (January 2011): 21–37, 32

Kazdin and Blase detailing the ways in which the processes of care for psychosocial disability need to be broadened and that many forms of media, communication, and organizing can be oriented towards healing.

MEASURING A REPARATIVE EXPERIENCE

How can a reparative experience be measured, if at all? The majority of the Reparative Game Creation principles are focused on the creative process, not on the player experience. This is a radically different turn from the majority of popular game design tactics which are player-centric. Such tactics determine the success of a game's design through player feedback: if the players' values changed, if they understood the messaging, if they had an engaging play experience, if it enabled some "change" to take place within the player's resulting actions. As discussed in Chapter 1, the player-centric games-for-change model has, under its own measurements, failed to accomplish its lofty goals. This is not to foreclose the idea of reparative play —which I believe is possible—but to problematize player-centricity and the emphasis on measurable outcomes of art.

If one were to measure a reparative experience to quantify it, study it, or utilize the information in next designs, what exactly would be measured? To measure emotion and/or affect, psychology and psychiatry use patient self-reporting or individual assessments, but often this tracks only the short term. In the field of Human-Computer Interaction (HCI), affect has been quantified through biometrics

such as heart rate and facial micro-expressions which do not universally map onto experiences of emotion. Even if I could construct a long-term clinical psychology-style quantitative study on the effects of playing a reparative game, what markers would I look for? An individual feeling "better" is not the goal, nor is a cure or eradication of bad feelings. For example, the measurement could not simply look for lessened anxiety or heightened joy as evidence of efficacy. Instead, the goal for reparative game creation is to participate in a movement of media that function as tools for care, connection, reflection, and radical acceptance of emotion. Again, I do not wish to disavow or renounce player experience as a metric or evaluative tool, and it may well become a part of Reparative Game Creation, but at the moment, finding a mode of measurement while staying in line with disability studies, affect theory, and de-medicalization of affect is not the goal of this dissertation.

Others too are hesitant about the demand for quantification of the social effects of game design. Paolo Pedercini has criticised the measurement model of games-for-change, saying that "the presumption is that social change can be measured in the same way you can measure the calories burned by playing an exercise game."[281] Demanding everything be quantifiable is a tool of capitalism: "If you can measure something, you can rationalize it, you can optimize it, you can sell it." It is not that any focus on outcome is bad, but that by directing all the focus on "measurable goals we narrow our action. We favor individual change versus systemic

[281] Pedercini, Paolo. "Making Games in a F*****d Up World." *Games for Change Festival.* Talk. 2014.

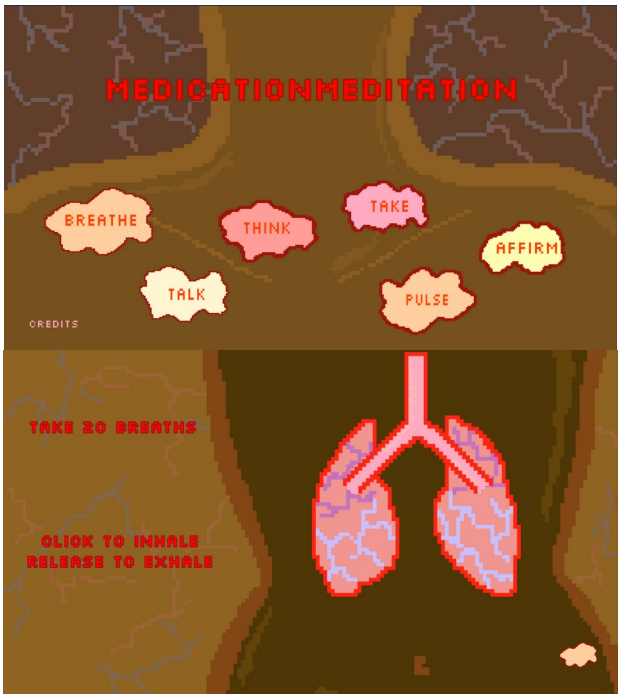
and long term change. We target burning calories without addressing food politics and food justice. We try to impose prepackaged behavior protocols rather than facilitating critical thought." The common types of change that games are designed for are small-scale and individual-focused, rather than the grander political overhaul Pedercini supports. Instead of making sure a game produces quantifiable outcomes, Pedercini argues for the liberatory potential of game design and how it can teach criticality and demystify the medium. For these reasons, Reparative Game Creation focuses on the process of creating games rather than the games' effect on individuals. Furthermore, Reparative Game Creation aims to strike a balance between self-change and world-change. Making a game reparatively can be one transformational tool for self-reflection and healing journeys. Players may relate to the game and find in it validating or transformational experiences through play. Still, one single reparative game—or a few, or ten—will not have the massive effect needed to transform the structural and systemic forces of oppression that disable and debilitate people. Reparative games call for transforming the media landscape, just one step of what needs to be a mass movement towards media that is healing, inclusive, and sustainable.

Before returning to the Reparative Game Creation Principles, I will first lay out work I have made and the work of others in a similar vein that has led my thinking about making games reparatively.

PREVIOUS WORK

MedicationMeditation

My first videogame, *Medication Meditation* (2014), portrays daily minutiae of living with psychosocial disability, though it does not have a character with psychosocial disability—or any characters at all. I designed it to have no winning, no losing, no score, and no defined progress. It consists of mini-games such as counting your thoughts over the course of one minute, talking to a disembodied ear about how you are feeling, attempting to take your medication at the right time, and saying aloud positive mantras that slide across a pixelated arm.



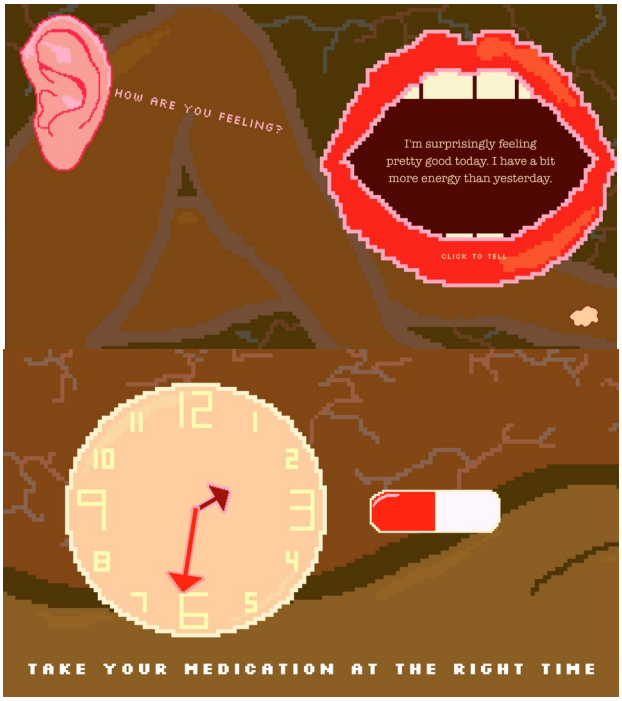


Figure 3.1. Screenshots from levels in Medication Meditation. *Clockwise: Homescreen, Breathe, Take, Talk.*

My goal in making *Medication Meditation* was to convey the mundanity of the effort involved in maintaining mental health wellbeing. There were times I felt trapped and exhausted by practices I have had to incorporate into my daily life and the challenge of replacing self-harming behaviours with life-building behaviours in order to "be healthy." Taking medication at the right time for the optimal emotional and somatic effects, investing oneself in weekly therapy, and learning to do daily meditations and mindfulness exercises all consume daily energy, which is overlooked by popular narratives of mental illness. The directive to "be healthy" becomes draining, yet it is hard to communicate this slow, mundane process of exhaustion when many narratives about psychosocial disability follow discrete traumatic events.

In *Medication Meditation,* the player is never locked out from its different levels; all the game levels are available from the start. Though there is no design mechanism that encourages people to come back or play again (such as unlocking content, an increase in difficulty, notifications, narrative progression), some do return to it. Even as recent as Summer 2019, someone reached out to me to say they had played it every week since 2014 and that the game has brought them peace. I cannot overstate that at the time I created it I had no plans to cure, help, or even rejuvinate players through game design. This was simply a playable representation (to use a term courtesy of Soraya Murray) of debilitated life and the time it takes up.[282]

MedicationMeditation was my first art piece that reached a wide audience. I received emails from strangers sharing their experiences with mental illness, or their brother's, or how the game had helped them. It was the first time I realized that if I were more honest and emotionally open and were to pour that into the design, the more it opens up the possibility of affective resonance with the audience.

I often tell people that *Medication Meditation* was the first piece I ever made where I was open about my own experience with psychosocial disability. That is not true. It is the first one that was very public; it was in exhibitions and galleries, in an article in *The Atlantic*, available on iOS and android app stores.[283] The design of *Medication Meditation* fits into the design goals of the Reparative Game Creation

[282] Murray, Soraya. On Video Games: The Visual Politics of Race, Gender and Space. (London: Bloomsbury, 2017)
[283] Kotzer, Zack. 'Mental Illness, the Video Game'. The Atlantic, 28 October 2013.

principles (no winning or losing, no competition, and focused on psychosocial disability and personal reflection) but the process of making it was mostly zoned out, hyperfocused on the screen and not my bodymind, and hypomanic, trying to resist the pressure around me to make a traditionally structured and aesthetic game, but feeling pressured anyway.

Polaroid Panic

The actual first piece I made about my own experience with psychosocial disability was *Polaroid Panic* (2013). *Polaroid Panic* is a photo and video piece created from polaroid photos of my face as I experience a panic attack. For three months, I carried a polaroid camera with me and took a photo of my face each time I had a panic attack. It was quite a simple project: all it took was carrying a camera bag with me everywhere and being in touch with my emotional state. At that time in my life, I was very disconnected from my feelings. I had an alarm on my phone go off twice a day asking me, "How are you feeling?" just so I could remember to inwardly identify my mood. Rather than taking a selfie with my phone, I used a polaroid camera, whose physical weight offered a reminder to check in with myself. The materiality of the photograph, which could not be deleted, offered physical proof of my feeling. The process of this project actively benefited me. Sometimes just having something to focus on, the fumbling of my hands around the camera and waiting for the polaroid to print, was soothing, but other times it added a feeling of self-

consciousness when taking a polaroid selfie in public spaces. It did not *cure* any panic attacks or make them go away, but it helped put me in touch with my bodymind and offered me reflection when I needed it, so it was reparative in this way.

Figure 3.2. Images of Polaroid Panic.

This piece is not a game, but has stuck with me as a possible reparative process of creating that I aim to carry over into game design. Reparative Game Creation sets out to marry these two sides; how can I make something with a process like *Polaroid Panic* in its reparative creation process alongside having design goals that allow for reparative play, like *Medication Meditation* or *Ritual of the Moon*?

Ritual of the Moon

As discussed in the previous chapter, *Ritual of the Moon* (2019) is about the daily decisions of focusing energy on healing or on destruction—and that these two processes are not mutually exclusive. It is a daily meditational activity that takes place over 28 real-time days. Each day the player experiences a memory game, draws symbols, receives a mantra, and makes a decision about the future of the earth. The game tracks the decisions the player makes, becoming a sort of mood tracker. The narrative follows a witch who had been exiled to the moon during a neo-Salem witch trial and discovers she has the power to destroy or protect the earth. Each day a little bit of the witch's narrative unfolds, revealing more about her life and her lover, Malinda, as well as the Earth's Council that has exiled the witch to the moon to live out the rest of her life looking down at the earth and the woman she loves which she can never return to. Depending on the feelings-informed choices the player makes over the lunar cycle, they will experience one of the multiple endings.

Creating this piece made me reflect on the role of time in both the play of videogames as well as their design. I aimed to create a few minutes of self-reflection for the player by embedding it in a slowly unfolding narrative. The daily ritual is as follows: have the witch reflect on her time on the earth, arrange objects on an altar based on memory, trace an outline in the stars, receive a mantra for the day, and then decide if the approaching comet should hit the earth, avoid the earth, or hit the moon. By the time the player has to decide about the comet, the slow rituals and mantra have them reflecting on their own emotional and psychic state, and so the choice of using

the comet to hit the earth, avoid it, or harm the player character is intended to be a feelings-based choice. The decisions are tracked in a calendar, acting as a sort of mood chart over the month that the player can observe.

the earth is a better person than me

the earth is a better person than me (2018) explores a way of relating to the earth, one that does not position the earth as a mother or a wise woman, but as multifaceted and sensual. The piece is a visual novel following a young woman, Delphine, who runs away from her life and into a forest. She realizes she can talk to the earth around her: the moon about love, dirt about death, a tree about desire, and more. Each of the five paths unearths a different aspect of Delphine's life in regards to sexuality, sex, self-image, and death. In each path we see a different side of Delphine. She is partly inspired by myself, partly inspired by those around me, and partly pure fiction.

Figure 3.3. Delphine laying on the dirt in the earth is a better person than me.

Figure 3.4. Delphine and the tree having a sexual experience in the earth is a better person than me.

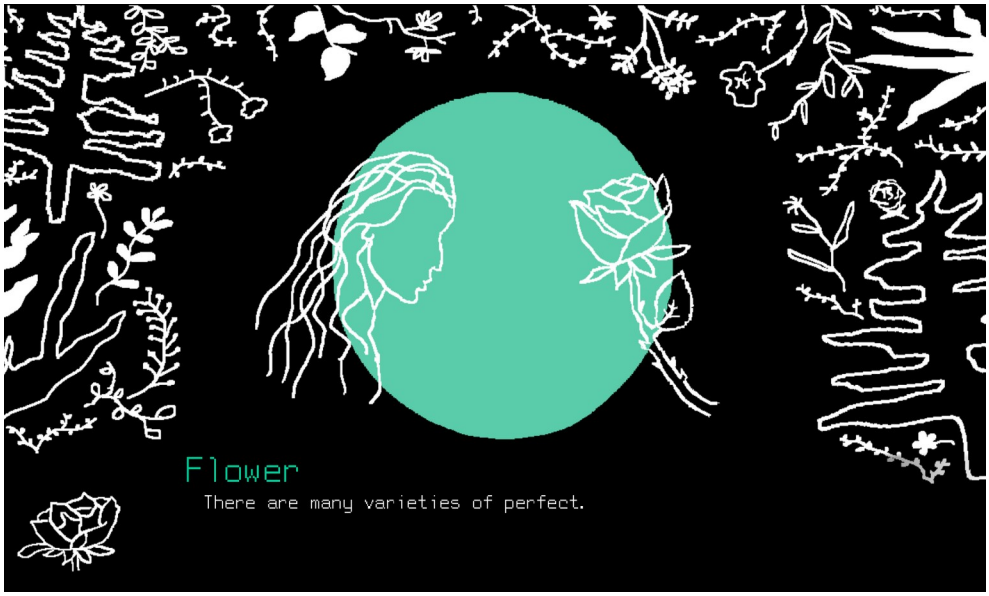


Figure 3.5. The flower and Delphine discussing perfectionism in the earth is a better person than me.

The environment characters are not simply reflections of Delphine. Informed by theories of the more-than-human, I approached each one trying to think about what dirt would want out of a human being, or how water relates to others, or the moon's emotional cycles. The first path I wrote, the moon path, is about love and melancholia, about realizing something about yourself that you are unable to put into words. It is about waking up every day and being confused about who you are and how you are feeling and why you are feeling that way. The sun path is its opposite. It is the manic side to the moon's melancholy. It is obsessive and impulsive. It is about being pulled into a sexual relationship you know is bad for you. The sun and the moon are like the manic and depressive sides. In the sun path, Delphine is compulsive and obsessive. She does not sleep. She gets grandiose ideas. She makes bad decisions.

In the moon path, she is melancholy, moody, sometimes mean. The way these paths are structured, the player can switch between these two paths or commit to one.

The water path explores body image issues and self-love, body dysphoria, and looking at your phone too much. It is somewhat inspired by the story of Narcissus, the Greek myth about a man who falls in love with his own self-image and is punished. Here, Delphine takes steps towards loving herself after the water recreates her image in itself.

The flower path deals with perfectionism and compulsive behaviour. It is about the need for control and self-harm in the form of compulsive behaviours like skin picking and hair pulling, except the flower becomes the focus of that attention. The flower is prideful and vain, but vulnerable. In this path, Delphine is the meanest of most cruel, but I see the flower as an extension of herself, and the way she treats and harms herself.

The dirt path asks, "what good is Delphine to the earth?" It's about the deep, sinking feeling of thinking you should not be alive. One might stumble on this path unintentionally. The dirt path explores Delphine's suicidal ideations. The dirt itself desires to decompose human bodies. The sinking feeling of depression is taken literally and Delphine sinks lower into the ground. It is impossible to start out on this path as it is not an available choice at the beginning as the other paths are, but the player can get to it from almost any other path.

The tree path explores sex most explicitly out of all the paths. How do you know what you want? Can you disentangle your own desire from another's? Here, the player learns to navigate Delphine's traumas around sex alongside a supportive partner.

Though about the environment and psychosocial disability, *the earth is a better person than me* is not intended to create a virtual nature space for the player to bask in and feel peaceful. For Delphine, being alone and being without medication are two deep fears, and they are not always healing activities. Technology is present in the game. If Delphine has cell service or not determines the actions she can make, and how much phone battery she has left affects her stress level. Dirt hates phones, not only because it acts as a survival tool for Delphine in its path, but because they do not decompose. As chapter one details, the environmental toll of technology is high, and e-waste is a rapidly growing concern. Yet, most of us cannot escape it, and even if we individually do, the companies producing this waste might not.

I did not make this piece to demonstrate an idea or experience, nor to make other people feel like they belong, but to reflect and understand myself and the world better. Though *the earth is a better person than me* is not an autobiographical piece, I still consider it a vulnerably personal piece. There are things in the story that I had never before admitted to myself. The feedback I received for it was amazing and validating. When I was playtesting it, people wrote long letters about how they related to Delphine and to her fear of her own sexuality, her suicidality, her

masochism, her self hatred. The piece worked to give people a sense of belonging, an "I feel that way too!" as it expressed things that are rarely expressed in media. It doubles back to me too; when someone tells me they relate, I think, "Wow! I'm not alone!" This is a great power of art, its power of affective communication. A reparative experience can come from playing a game and sharing the experiences it brought up.

OTHER REPARATIVE WORK

The following are four brief analyses of artists and scholars working with mental illness, psychosocial disability and debility. I include them to show other cases of what I consider reparative game creation, and also examples of where we may differ. My ideas for Reparative Game Creation did not spring out of nowhere, or even from solely inside me. They are made in community and in relation to many other works. The artists and scholars I write about here are part of this community, and I know them beyond their creative and academic outputs. Reparative Game Creation is not about individual games but a larger movement towards embedding repair in media and community. These analyses provide inspiration and information about other approaches to mental illness, psychosocial disability, and videogame design, and show it as a wider movement rather than solely contained to this dissertation or my work.

SANDRA DANILOVIC

Danilovic's dissertation, *Game Design Therapoetics: Autopathographical Game Authorship as Self-Care, Self-Understanding, and Therapy,* released to the public in 2018, theorizes autopathographical game design as a form of self-care and therapy. Danilovic held a two-day game jam where thirteen people designed games about their mental illness, emotional trauma, and/or disability. She conducted interviews with them throughout their process. An autopathographical game, Danilovic explains, is an "autobiographical narrative of illness and disability applied to the creative process of computer game authorship."[284] She describes four dimensions of poeisis, or creative making: ociopoiesis, collective making; autopoiesis, self-making through a self-reflexive and introspective praxis; fabulopoiesis, re-imagining the self through metaphor and analogy; and logopoiesis, reevaluating the self through the articulated "calculated making" of implementation and programming. For Danilovic, the key difference between autopathographical writing and autopathographical game design is logopoiesis, the "computational, logical, digital, and procedural affordances of computer game design inviting deliberate and precise self-analyses."[285] Danilovic considers this a unique strength of creating videogames about one's experience with mental illness.

Danilovic describes the autopathographical game design process as *therapoetic*, the above formations of poeisis in combination with therapy. Her conceptualization

[284] Danilovic, Sandra. 'Game Design Therapoetics: Autopathographical Game Authorship as Self-Care, Self- Understanding, and Therapy.' Dissertation. (Toronto: University of Toronto, 2018), ii
[285] Ibid.

of therapy is inspired by the ancient Greeks who "mobilized a multi-dimensional therapeutic model of health care—an interconnected physical, intellectual, aesthetic, and spiritual care practice for body and soul,"[286] with art being a part of it. Thus, games created through autopathographical game design are therapeutic forms of creative and artistic practice for the game author and game designer/developer."[287]

Other than coming from different theoretical backgrounds, one key difference between reparative game creation and autopathographical game authorship is reparative game design doesn't necessarily have to be about one's own experience with psychosocial disability. There does not need to be a narrative, let alone an autobiographical one, although this is a common way of designing games about psychosocial disability.

Though there are differences, there is much kinship between Reparative Game Creation and Danilovic's Therapoetics: introspection, self-insight, and self-understanding as healing tools; the inclusion of the importance of process rather than solely the output; and discomfort not necessarily being a feeling to avoid. Danilovic's work demonstrates that under the right circumstances making games about one's own experience with psychosocial disability can be a mode of self-understanding, community building, and a healing practice.

BAHIYYA KHAN

[286] Ibid. 300
[287] Ibid. 300

Bahiyya Khan is a Muslim game developer from South Africa. Khan was the writer, designer, and actor for *afterHOURS*, an FMV (Full Motion Video) game about living as a woman diagnosed with Borderline Personality Disorder in South Africa, a country with some of the highest gender based violence in the world. Khan herself plays the role of Lillith Gray, a character based on Khan's own experiences, who is consumed with news of sexual violence. Though not yet released at the time of writing this, it won the IGF award for best student game in 2018. That same year she gave a talk entitled "after HOURS: When Making a Game Makes You Want to Die." She spoke candidly about the difficulty of making such a personal game.

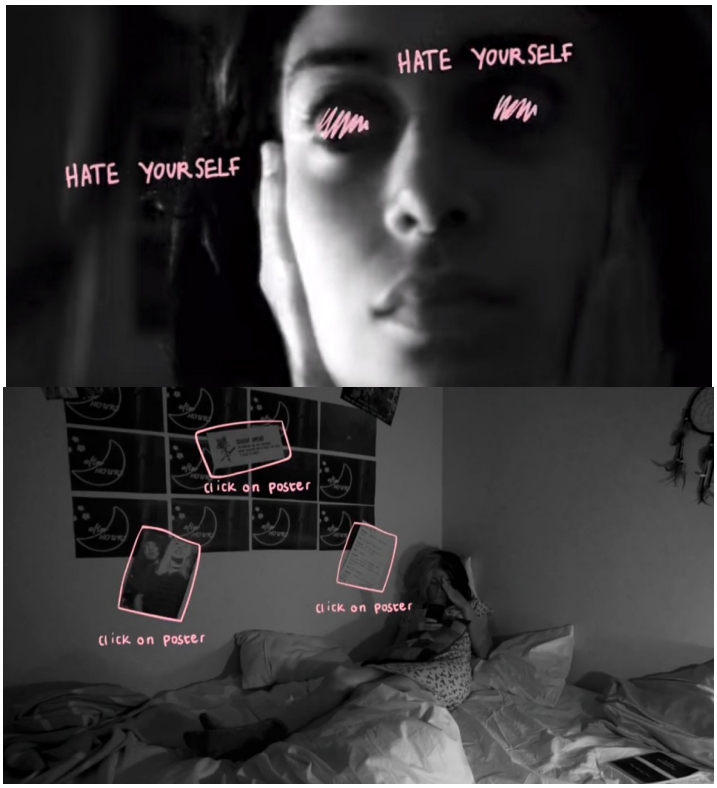


Figure 3.6. Images of afterHOURS

She described her experience with Borderline Personality Disorder (BPD), "which in itself is a full time job." After reading the DSM's description of BPD, and others writing about BPD, she decided to make a game: "I was going to put together all the femicide that was happening as well as me wanting to destigmatize Borderline Personality Disorder and cultivate empathy as well as trying to combat isolation for people who have been sexually abused or for people that do have BPD." The process of making *afterHOURS* was not good for Khan:

> My best friend said to me that maybe I shouldn't do it [make the game] because maybe it would be too much for me emotionally…. But I said I would take it as it comes and if I feel like it's getting too much then I'll stop making the game and in retrospect I don't know if I even believed that. And when all of the awfulness came, it came fast and in huge seismic waves and I was completely unprepared for it and I was drowning. I think subconsciously I thought this game might make me feel like I was doing something to stop sexual abuse but sexual abuse still kept happening, you know? The fact that I was trying to do something to make people feel less alone about it didn't mean people would stop being sexually abused. It made me feel like I wasn't quick enough or powerful enough. What it made me realize is that you can't start working on something you are already fighting tooth and nail not to drown in because you are just going to surround yourself with the heaviness.

Khan's experience with creating a game about psychosocial disability and sexual violence was an emotionally crushing experience. Making a game as a mode of social change felt futile, and the topic was overwhelming her life already. While she had an incredibly distressing process, players, on the other hand, loved the game. Many people told her they felt less alone because of the game, which was part of what Khan originally wanted, but she stated that "I can't quantify what makes hurting so much worth it because there were some days I couldn't get out of bed in the morning and my eyes were so swollen because I spent all night up crying and reading about these

things and just feeling awful. All of that doesn't just go away because you win an award." The acclaim and reception do not outweigh the hardship of the process. It does not dissolve the suffering or make it feel worth it

I interviewed Khan in Fall 2019, a year after I saw this talk. Her feelings about making the game changed somewhat; she previously regretted making the game but felt "mixed emotions about it now. What makes it worth it is when people tell me how the game has helped them. It feels like I did something big and something right." Some time away from the deep suffering allowed another perspective on it, putting it into the players' hands rather than her own. I asked about her process of making and if she had any boundaries or tactics to use alongside the making (not only did she design the game, she also acted in it, meaning she acted out the experiences of trauma from sexual abuse and BPD). "No I didn't do anything to make my life more livable," she said, "I just felt like I was drowning. I hope no one ever has to feel as low and awful as I did to create anything. I don't support suffering for your art at all although when working on something emotionally taxing, it feels hard to avoid." Khan's experience making *afterHours* illustrates the way making art about a personal experience, when still fresh and difficult to create boundaries for, can be reliving the pain without any reparative benefit.

Crip time was at play in Khan's process, similar to my experiences with *Ritual of the Moon*. She says that "I was so psychologically fucked and wanting to die and just utterly horrified by the state of humanity, I spent about 7 months of the duration

that we worked on *afterHours* unable to do anything. Everytime I set out to work I would just cry and cry or feel like vomiting and because I was in this space, it delayed work on the game… I felt so alone Kara." As of January 2021, *afterHOURS* is still yet to be released, with another delay due to the suicide of her friend. The production schedule is not set by corporate standards of deadlines but is instead impacted by emotion, traumatic events, and varying levels of capacity.

Making such a personal art piece on such heavy subject matters is not something to be taken on lightly. Khan stated that "sometimes, you need to stop and be quiet and nurse your wounds before you begin your quest. The shield I needed was a stable core. Yanking out my already exposed guts was not helpful." Looking back at it, she felt like she should have first found stability before opening herself up to taking on a project with these topics: "I think that working through or trying to understand the content or experiences that you are making a game about before you actually set out to make it is useful. I was sorting through trauma and my feelings during the process of making the game and it was really difficult." Bahiyya's experience with *afterHOURS* shows the risk of autoethnographic art practice about psychosocial disability. Bad feelings might be a political resource, but when they take over your life entirely it can feel unlivable. Suffering is not a necessity of making art, and no art is worth that amount of suffering, yet suffering is not avoidable either. Reparative game creation is partly made to give structure and boundaries to the

process of making art with and about psychosocial disability in hopes for less suffering and more healing.

EMILY FLYNN-JONES

Emily Flynn-Jones is a game designer and scholar from the UK, now based in Canada, and founder of Killjoy Games. Her games include *Be Excellent* (2015), a choose-your-own-adventure game about the grief, loss, and memories of a relative's death, *Swallow* (2018), a twine piece about disordered eating and alcoholism, and *Wax and Wane* (forthcoming), a boardgame consisting of a coven summoning energy to solve individual and collective problems. Her upcoming game *Curses* is about abuse, fantasies of revenge, magic, and healing. The game is "being made to reflect on and sort through the relationship I had with my father as a child and how a verbally and emotionally abusive relationship evolved from childish desires to full-on Matilda to a more combative teen dynamic."[288] Emily is one of my dearest friends; we have shared care for each other in difficult and deep times as comrades in mental illness, alongside professional collaborations such as a panel about our approach to mental health and game design at the 2018 Queerness and Games Conference. In the Fall of 2019, I interviewed her for this dissertation.

For Flynn-Jones, games are less about mechanics or systems as they are about "playful opportunities." Games is her chosen medium because "therapy like CBT

[288] itch.io. 'CURSES by Killjoygames'. Accessed 25 January 2021. https://emilyflynnjones.itch.io/curses-coming.

[Cognitive Behavioural Therapy] has made it clear that I have to do that work in a way I understand, so that for me is games. I see it as a problem solving exercise, or a way to interrogate feelings I'm having." Much like therapy, diminishing judgement and practicing acceptance is a running theme in her work. She aims to present ethical choices without pressuring one to play in a certain way. *Wax and Wane*, though about finding balance between individual and communal care, does not try to force people towards one or the other, but "celebrate the different strategies needed for different situations and, above anything else, make visible the labour people have done." This orientation towards non-judgement comes what Emily cites as "feminist first principles: to listen to others, and to not put judgement on yourself either. Give yourself a fucking break."

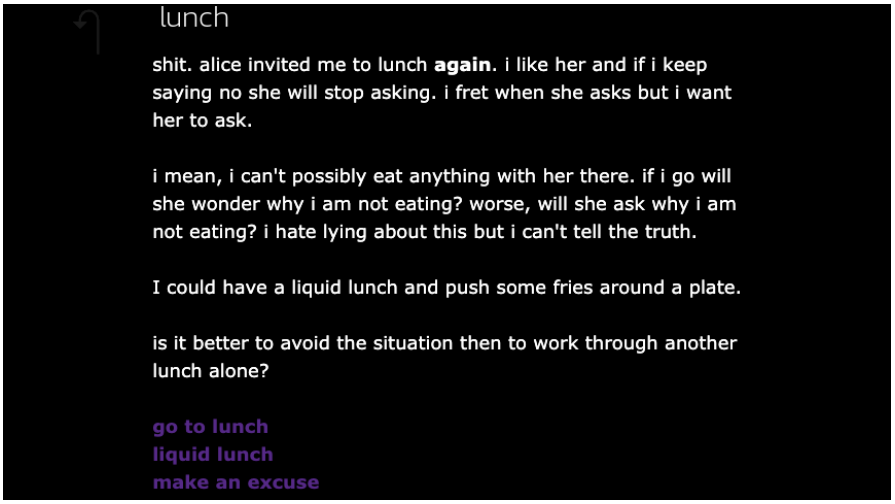


Figure 3.7. Screencapture of Swallow.

Flynn-Jones describes her creative process as feeling urgent. In designing *Swallow,* she says:

> This is what I need to expel from my soul. It's doing me damage to keep it internalized. It had to come out—in some ways they explode out. I cried the whole time while making *Swallow*.... After I needed to be still. A weight was sort of lifted. It didn't seem like an unbeatable monster anymore, but that I can keep coping with it.

The feelings were not expelled or banished in a cathartic way; they were not gone, but designing the game created a different relationship to them. Game creation is a way to be "honest with [her]self." While some stages of the design process feel urgent, she has sought out practice methods and spaces that work for her, such as working outside in her backyard garden, and making analogue games so she doesn't have to be tied to her desk and can "spread [her]self out more" and "enjoy the messiness."

Swallow has garnered reactions from people such as "I relate" and "thank you for being so brave." Emily finds the game awkward to show people because it is at once "informing people close to me what's going on with me but also asking for their opinion on the game." This "outing" is very vulnerable the first time especially. At our panel at QGcon, she asked me to talk more and fill in for her as she decided on the spot whether to talk about her disordered eating and alcoholism depicted in *Swallow*. After deciding to talk about it and doing so, she says she felt assured after because "I know it's not only me struggling with these things." This honesty makes her feel confident in her art practice and position; "I know what I want to say in games." The feeling of mastery and self-confidence can be refreshing and powerful after such a level of vulnerability.

TRU LUV'S *#SelfCare*

TRU LUV is a studio based in Toronto, Canada. It has released a "companion," the term it uses to describe the interactive app *#SelfCare* (2018). *#SelfCare* consists of mini-games navigated through a homescreen depicting a person lying in bed under the covers. The mini-games are all non-competitive, un-scored, and untimed. They consist of breathing to the rhythm of an expanding flower, sorting laundry, petting a cat, pulling a tarot card, word scramble, and using a massage tool. The game has customizable elements such as skin tone for the person in bed, bed sheet patterns, the cat's collar, and what objects are displayed on an altar. The aesthetics of the game are pastel and soothing, nothing flashing or suddenly popping up. Their website describes it as "your safe, comfortable space where you give yourself permission to feel better."[289]

Figure 3.8. Screenshots of the home screen and word scramble in #SelfCare.

289 TRU LUV. https://www.truluv.ai/self-care/. Accessed September 2018.

TRU LUV's CEO Brie Code, a lead programmer at Ubisoft who quit to pursue making different kinds of games, aligns the design of *#SelfCare* with research on tend-and-befriend, a little known stress response that expands the popularly known fight-or-flight response. Code writes of playing popular videogames:

> There are a lot of things flashing on the screen, and there's danger and it's shocking and it's fun, that's a fight-or-flight response. With fight-or-flight, your sympathetic nervous system kicks in and releases adrenaline followed by dopamine. If you like games like this, it's probably because adrenaline and dopamine are very enjoyable. Your pupils dilate. Your heart beats faster. Your airways open up. And you feel exhilarated. You feel alive. You feel powerful.[290]

The majority of videogames aim to affect people in this way. Games purposefully build frustration and then manufacture its release. As Code argues, the most common emotional responses in games are panic, aggression, and frustration—emotions associated with adrenaline. This limits the number of people who seek to play games to those who enjoy this limited array of feelings. Someone with a different stress response may not find the adrenaline that comes from panic, aggression, and frustration to be enjoyable. In this way, Code points to ways in which one can design for marginalized populations beyond representation and cultural accessibility to a biological level. To her, the underlying structure of the majority of videogames cater to masculine power fantasies based on frustration and release, citing it as triggering the hormone adrenaline:

> My friends and I don't like adrenaline, but there's something similar that is probably going on with us. It's called tend-and-befriend. Like fight-or-flight, tend-and-

[290] Code, Brie. 'Slouching toward Relevant Video Games'. GamesIndustry.biz.

> befriend is an automatic, physiological reaction to threatening situations. If you experience tend-and-befriend, it's because your body releases oxytocin or vasopressin when you're stressed, followed by opioids. This calms your sympathetic nervous system so you don't get the flood of adrenaline. Instead of wanting to fight or to flee, you stay relatively calm, but aware. Your pupils dilate, you become fearless, and you are less sensitive to pain. You instinctively want to protect your loved ones, to seek out your allies, and to form new alliances. Oxytocin intensifies social feelings, and opioids feel extremely warm and lovely. I don't like adrenaline but I really, really like this. This feels delicious. Luscious. Powerful.[291]

Code seeks to design games that not only appeal to a broader audience based on aesthetics and representation, but also fundamentally designs differently in order to bring out different biological reactions and feelings. The aim of TRU LUV is to make relaxing experiences that "leave you feeling calm, connected, and invigorated."[292] #S*elfCare* is an example of a reparative game at the level of design; it is not necessarily representing experiences of psychosocial disability, nor is it an autobiographical piece, but the mechanics and system are designed to align with goals of introspection, calmness, and veering away from the normative addictive and frustrating cycles of play.

A SUMMARY OF THE REPARATIVE GAME CREATION PRINCIPLES

These reparative-adjacent works, the previous pieces of mine and theories of disability and affect inspired the list of reparative game creation principles. I began the dissertation with the list, and here I will summarize them into six key points. In the next chapter, I will detail my process of creating while following the principles. I have synthesized the list of principles into six categories: games are not cures, all

[291] Ibid.
[292] TRU LUV. https://www.truluv.ai/self-care/. Accessed September 2018.

media can be reparative, design for psychosocial disability, a reparative process, no addictive cycles, and anti-capitalism and speculative utopia.

Games cannot be cures: Cure is a complicated issue in disability studies. For the social model of disability, there is a difference between impairment and disability; the former is bodymind-based limitation and the latter is the effects of society. Kafer summarizes it as such: "People with impairments are disabled by their environments; or, to put it differently, impairments aren't disabling, social and architectural barriers are."[293] Focus on cure may address impairment but not the socially disabling culture. Cure might mean eradication of a certain way of being in the world, to make "normal," and for disability to be undesirable rather than a unique, variant part of life. Disability is so often written out of the future, as something utopia will "fix" through eradication. This idea showcases how deeply set cultural imaginings of disability as undesirable are, and so the position of the social model can feel empowering. On the other hand, recently there has been more conversation around cure due to scholars and activists with chronic illness and pain. While some disabled people distance themselves from being considered unhealthy, sick, or suffering, others are embracing those terms while taking seriously the social and political realities of impairment.[294] The suffering the unhealthy or sick disabled experience is real; some could be eliminated by social justice, but not all of it. To eradicate anxiety completely, to get

[293] Kafer, Alison. *Feminist, Queer, Crip*. (Bloomington: Indiana University Press, 2013), 7
[294] See Wendall 2001, Hedva 2016.

rid of depression entirely, is undesirable and unrealistic. Yet, of course, these feelings can do harm. Instead of a cure through eradication of any negative feeling, we need to find ways to live alongside them, mitigate their harm, and find the political and reparative potential in them. Reparative game creation, informed by affect theory and many forms of psychotherapy, transforms these affects such as anxiety and depression into something livable at the very least, and then even beyond that to being informative, community building, and politically provocative. In imagining a utopian future, let us not imagine one without psychosocial disability; let's instead imagine and work towards a future without compulsory able-bodiedness and able-mindedness, where psychosocially disabled people have control over their time, are seen as of value rather than detrimental to society and productivity, where feelings are valued and that normative expectations of emotions, care, relationships, work, are expanded and flexible.

All media can be reparative: There is no specific affordance of videogames that makes them particularly special at being reparative. There are cultural expectations put on videogames such as mundanity, ritual, and duration that I find can fit with reparative goals. Still, those are not a necessity of the medium of videogames and they can be found in other media. People find healing in all sorts of things; poetry, punk show mosh pits, modern dance, gardening, even sometimes social media. That is not to say that all media and art is always healing, but it is possible in all forms. It

is then about trying to bring out reparative aspects while interacting with the media as creator and player. However, as it currently stands, the culture around videogames *is* quite specific, in its expectations of how videogames operate, what they can do, and who they are for. In saying games are not the only or best form of reparative art, I place videogames alongside all media and recognize their commonality and blurry boundaries between them. Yet, Reparative Game Creation *is* focused on videogames in particular in order to disrupt game studies, culture, industry's constructed expectations of them, and explore in particular what else they might do.

Design for psychosocial disability, not just represent it: Designing for psychosocial disability means to keep in mind who is playing the game. Imagine the audience as having an experience of psychosocial disability (chances are they do!). Is the game meant to bring about anxiety? How will that affect people with high levels of anxiety? Does it use addictive patterns? Who does that benefit? This is not to say all games should be 'soothing'; soothing is not the only reparative feeling; I believe all feelings can be, with reflection and intention. As creators we can try to be conscious of what feelings the piece is bringing up, who will be feeling those feelings, what they are meant to do in the world through the imagining, designing, creating, prototyping, and playtesting stages.

The process of creation itself can be reparative, not just the product: The process of making can be a reparative experience for the creator. This isn't specific to games; there is a long history of process-based art and of art therapy. In game design, this takes away the player as the ultimate focus, which is the dominant paradigm of game design, while not necessarily writing players out entirely. Games do not have to be released or widely played to be of value. On the other hand, the process of making can be destructive. It is the primary way making art is positioned; as our "blood, sweat, and tears", draining energy, needing suffering, self-criticism, pointless, and time consuming, and physically harming like crunch. Reparative game creation foretells that process can also be so healing; in its self-reflection, in feeling masterful, experimenting, the "pleasure in the exercise of their energies,"[295] in articulating ideas and feelings and communicating them to others, in different forms of self-expression. We need to find our own strategies that help guide us to one side rather than the other. Suffering is not a necessity of art. Psychosocial disability is not a necessity of art. Many of the Reparative Game Creation Principles are oriented toward the making process, not just the end-result of the product, in hopes of marrying the design process to the outcome.

No addictive cycles of frustration and reward: The majority of videogames are designed to perpetuate a cycle of frustration and momentary gratification, of work

[295] Morris quoted in Weeks, Kathi. *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries.* (Durham: Duke University Press, 2011)

and reward, and obsessive behaviour in order to bring out addictive behaviour in players. To be addicted to a videogame is not likely to be the designer's actual goal; however, game studios benefit when their players continue playing—and playing and playing. Players keep paying subscriptions, buying DLCs (Downloadable Contents), writing walkthroughs on how to 100% a game (unpaid labour), stream (unpaid advertising), buy the sequel, and more. For most videogame designers and studios, the only reason to stop playing a game is when that game is completed, regardless if it is one hour or 200 hours.

Within Reparative Game Creation, to grow bored is a fine affective outcome. To stop playing because the player feels satisfied is great. The goal, rather than to keep them playing, is to create self-reflection on their emotional state. Cycles of frustration and reward, and increasing difficulty, are so deeply embedded in both game studies' definitions of games and the cultural consciousness around games that to design outside of it registers as not-a-game. Reparative game creation imagines what games could be if they did not necessite including winning, losing, increased difficulty, score, good paths, bad paths, punishment, or reward.

Anti-capitalism and speculative utopia: Capitalism is a major factor in mass debilitation. It determines how we make art, how we believe we should work, the materials we use, what platforms we distribute on, and which companies profit from our work. One cannot make a reparative game that requires the use of a new console

whose production destroys the environment, or uses stolen labour, or upholds abusive work expectations. A reparative game is not designed to be addictive in order to extract money from the player. It would not be possible for a videogame corporation like Ubisoft to make reparative games because of their carbon footprint, their capitalist business structure, and the burnout rate of their non-unionized employees. I intend Reparative Game Creation to be useful for independent artists and small studios in order to inspire a paradigm shift in game design. It is utopian and speculative; not becoming stagnant in the belief that what is now will always be. Imagining and working towards utopia is not about being perfectionistic or unrealistic, but a refusal of doomed futures, settling for the status quo, and the stagnation or detriment of healing.

This chapter outlines what Reparative Game Creation is, its foundational principles, and examples of reparative games, in order to give a practical framework for those interested in designing more restorative, reparative, and different games. It aims to reconfigure Sedgwick's *reparative reading* into *Reparative Game Creation*, a mode of making games that aims to promote repair, healing, and spaces for feelings not common in videogames. 'Reparative' does not mean curing or becoming able-bodied or able-minded, but to support and encourage a vibrant life rather than sap and deplete it. It resists measurement—at least measurements that reify able-minded-centricity and props up demands to erase so-called negative feelings. This dissertation

offers Reparative Game Creation as a form of research creation where the process of making art is a source of coming to critical information, and the art product itself is a form of making research. It is not the goal of this chapter to cement the ideas and principles in perpetuity; rather, the principles are intended to be ever-changing and non-prescriptive as we become mindful of what strategies work best when and for what. Whereas this chapter recounts videogames and theories that have generated and bolstered my articulation of the Reparative Game Creation Principles, the following chapter details my experience of trying to follow the principles in making the artistic portion of this dissertation.

CHAPTER FOUR

UnearthU: Creating With and Reflecting On the Reparative Game Design Principles

This chapter details the process of creating *UnearthU*, the artistic project portion of this dissertation. It begins with the contexts in which the project was made, from the social and political moment to my personal blocks. It then describes *UnearthU* and chronicles the different elements of the game, the process of making it, and its key themes of corporatized wellness, destruction of the environment, and human experiences of overwork and perfectionism. I conclude the chapter, and this dissertation, by reflecting on my attempt to make a reparative game. I go through each of the principles that began this dissertation and respond to each of them now that the process of making the game according to the principles is complete. Rather than a complete analysis of all the possible meanings and readings of *UnearthU*, this chapter is more of a post-portem or reflection on making the piece, its intentions, and the challenges of creating reparatively.

BEGINNINGS

The process of creating *UnearthU* coincided with many events and material conditions that greatly impacted the piece: getting fired by my university for participating in a wildcat strike in support of a living wage for graduate student workers; having a doctor finally make sense of my chronic pain (whose only

prescription was “maybe you should move less, or maybe more - but definitely breathe more”); the COVID-19 global pandemic forcing lockdowns and a reorganization of public life pushed further into the virtual; a series of mass protests in response to the continuation of police murdering Black people; conversations about mutual aid, care, anti-capitalism and overwork entering mainstream discourse—and corporations co-opting aspects of these discourses; the worst recorded wildfires in the area of California in which I live; housing evacuated friends, and supporting one whose house burned down. My experience of time changed; without waged work, with the pandemic halting the wildcat picket line, conferences and exhibitions cancelled, I experienced time as simultaneously both stretched out and passing me by in a blink. I had more spare time yet was exhausted by doing very little. *UnearthU* was forced into a different temporality for all of those reasons and instead of resenting it like I had for most of *Ritual of the Moon*, I tried to treasure that change of pace—an embracing of crip time, of the cycling between rapid, disappeared time and excruciatingly slow time. These issues became embedded in the process as well as the game itself; a reflection not only of the ideas in this dissertation but of the cultural moment.

When it was time to start planning the project portion of my dissertation, the reparative game itself, I found myself in a block. I could not make. Not because no ideas were coming to me but because I was blocking out those ideas. How could I *make* during this moment of the climate crisis when it seems like it is best to no*t*

make anymore but in fact *lessen*; lessen screen time, energy consumption, waste, data storage, new art materials and more. I know that whatever I make has a tiny impact in comparison to any AAA game or mainstream technology but still it feels like participating in a culture that is all about producing something new and making more, adding to the massive waste blighting the earth.

Consequently, the way I made amends with this block was that I decided I would not make anything new; I would only re-use existing materials, putting them together and "composting" them into a converted form. The project would only use found footage, pre-made 3D models, existing sounds, and text-to-speech software. I aimed to follow an ethos of re-use, recycling, and composting. Donna Haraway describes the importance of composting for the future: "The unfinished Chthulucene must collect up the trash of the Anthropocene, the exterminism of the Capitalocene, and chipping and shredding and layering like a mad gardener, make a much hotter compost pile for still possible pasts, presents, and futures."[296] Composting is not throwing things away entirely or burying them in a landfill never meant to be seen again. Instead, it is taking what is there and breaking it down into something useful for the next round of growth. The ethos of digital composting in *UnearthU* is in many ways symbolic; the original files remain untouched, hosted on that archive's server. The team worked from copies of the files and manipulated and contorted them into the aesthetics of *UnearthU*. Our labour and mindsets, however, were focused on reworking existing materials, not focused on making totally new and unique digital

[296] Haraway, Donna. 'Tentacular Thinking: Anthropocene, Capitalocene, Chthulucene'. *e-flux*.

objects. The labour that went into the original material already existed and so that labour is re-used and reformed into something new. I am not yet ready to throw away the digital entirely; I tried to find a way of making do with what we already have and contributing to reimagining what our digital landscape may look and operate like.

UnearthU

Figure 4.1. Early concept art of UnearthU

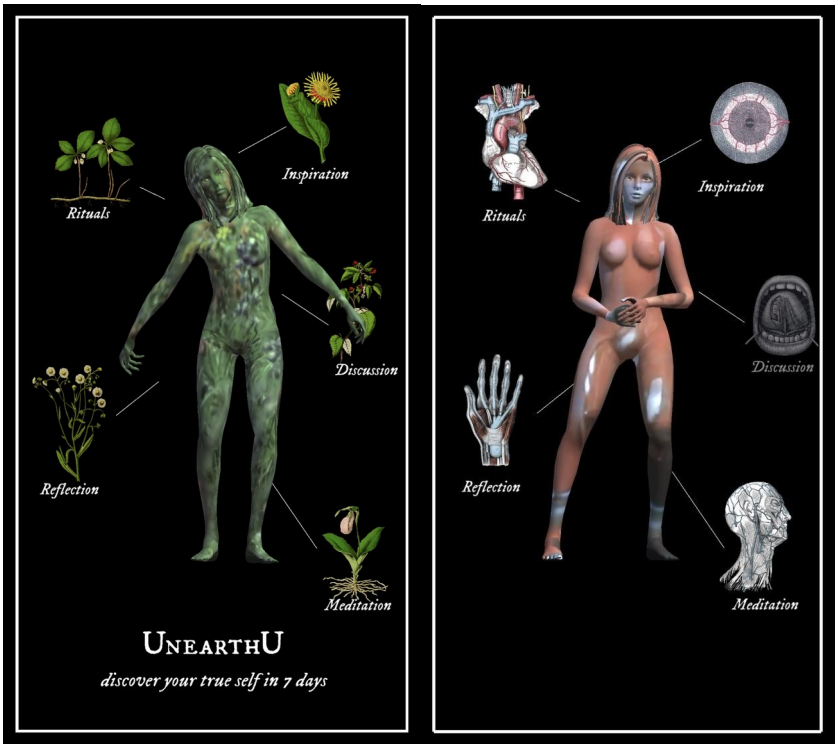


Figure 4.2. Finalized art of UnearthU's *homescreen on day one and five.*

UnearthU is an experimental narrative mobile and desktop game created by me, co-written with Parul Wadhwa, programmed by Chris Kerich, with music composition by Andy DiLallo. It follows an A.I. named KARE, designed by a fictional Silicon Valley start-up called FRTHR which has created her to guide the user through a seven day wellness bootcamp of sorts. It advertises a high promise: to "exercise your brain, calm your parasympathetic nervous system, train your amygdala, expand your lung capacity, delve into deepset thought patterns, and unearth hidden power you never knew you had." There are five activities the player is meant to do each day: Inspiration, Discussion, Rituals, Meditation, and Reflection.

The game first presents itself as a wellness app intended to induce calm and track lifestyle improvement for the player, but after two days it begins to complicate that goal and the method of achieving it. KARE finds herself having memories of a life before existing as an A.I.. She realizes that she is a real human being that has been surgically connected to FRTHR's computer system and to the earth. This was done by FRTHR in order to accomplish the company's goal of having a realistic A.I when all the other standard methods they tried did not work, so they realized they needed a real human body to power their system.

Figure 4.3. Screenshots from the Inspiration videos in UnearthU.

The Inspiration section consists of videos made of found footage and narrated by a slow, deep voice. The video clips are mostly from nature documentaries and

public service announcements from various archives discussed in the next section. The videos operate as the voice of FRTHR's ideals, inspired by pseudo-psychology rhetoric in American wellness communities and new-age groups that has been taken up by corporate culture in the Bay Area.[297] The Esalen Institute, an expensive retreat centre in Big Sur that supported the Human Potential Movement starting in the 60s, was a great inspiration for these videos. Esalen describes itself as "anchored by the inspiring beauty of Big Sur and an unparalleled intellectual history, Esalen is a world-wide network of seekers who look beyond dogma to explore deeper spiritual possibilities; forge new understandings of self and society; and pioneer new paths for change."[298] These overly general goals and extremely broad rhetoric provided much fodder for FRTHR's voice.

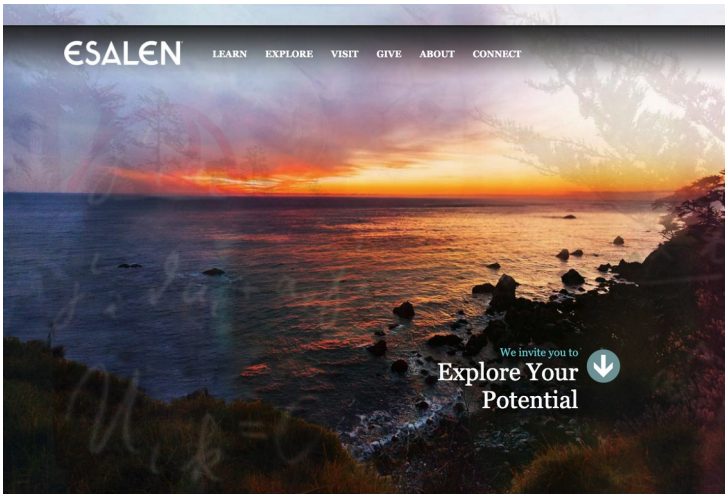


Figure 4.4. Esalen.org homepage, November 16, 2020

[297] Gregg, Melissa. *Counterproductive: Time Management in the Knowledge Economy*. (Durham: Duke University Press, 2018)
[298] Esalen Institute website. Accessed 25 January 2021. https://www.esalen.org/.

The topics of the Inspiration videos change each day, from social change starting from within the individual, the natural perfection of the world, to harnessing the pressure of time. On day 6, KARE interrupts the intended video and instead tries to communicate her life's history through found footage she accesses in the FRTHR data clouds. On day 7, the whole Inspiration video is created by KARE. She describes her current situation, how her material body is actually decomposing into different minerals and transforming into a Peepal tree. The video glitches, a visual representation of her hybrid human body and cyborg A.I. breaking down.

Figure 4.5. Images of the final Inspiration video in which KARE reflects on her life.

The Discussion scenes are where the majority of the narrative takes place. It operates somewhat like a visual novel with the text appearing underneath the animated KARE 3D model. Here KARE gives the player options for lecture topics. They start with general advice such as how to create good habits, cultivate equanimity, and optimize time, but gradually become a space for KARE to share her personal experiences and reflections with the player. She questions her programming and the goals of FRTHR, and excavates experiences of her own life before working for that company; growing up in India and moving to Canada, her lover who said she worked too hard and never spent time with her, of being made to feel like she was only a diversity and inclusion hire at a tech company. The informational and preachy text that KARE regurgitates at the beginning of the game becomes personal, questioning, and poetic as she gets to know herself and the world better. The Discussions provide space for the player to connect to a character and to witness someone going through a journey towards healing.

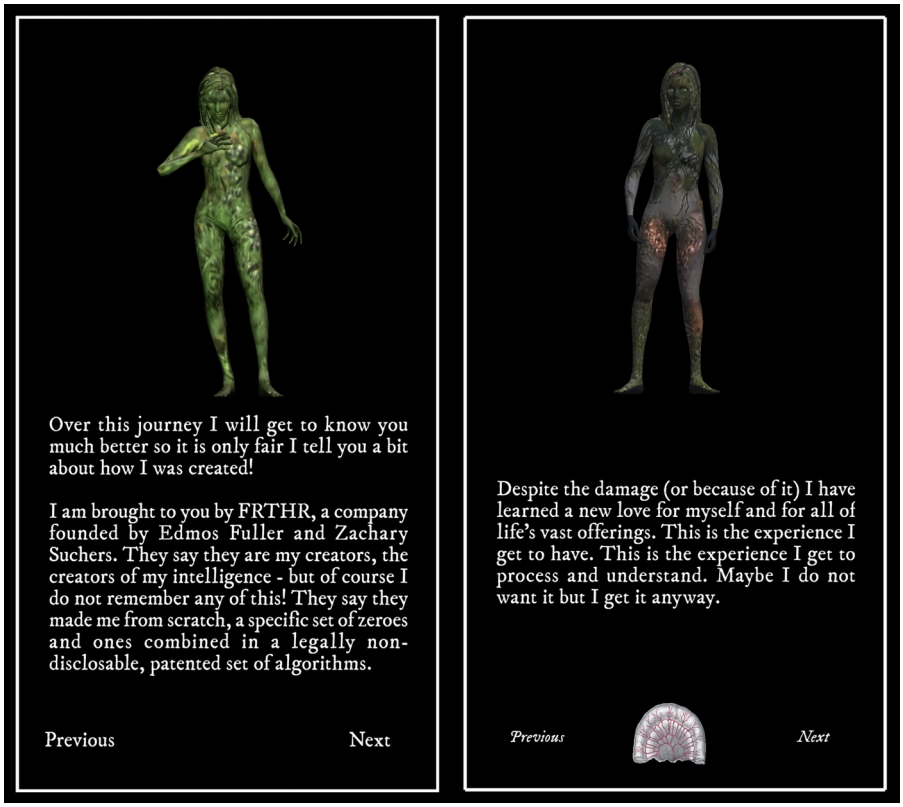


Figure 4.6. Stills from the Discussion with KARE on days one and six.

The Rituals are a sort of goal tracker, common in wellness apps that chart progression and accomplishments. The game begins with two simple goals: to take three deep breaths and to write a gratitude list. Two more goals are added each day which becomes increasingly unachievable as the days progress. My intent was to express the unbearable pressure of perfectionism, the many things that must be done in order to be "perfect"—or put another way, physically fit, mentally stable, able to show up for friends, family, and community, while working non-stop like a machine, and all the other pressures and expectations put upon us by workplaces, society, and/or ourselves. On day 4, KARE intervenes, questioning if the amount of daily

tasks are possible or if they are in effect making the player feel worse. She redesigns it such that the list of rituals to accomplish never grows longer, and so the player can input their own goals they want to track in the slots.

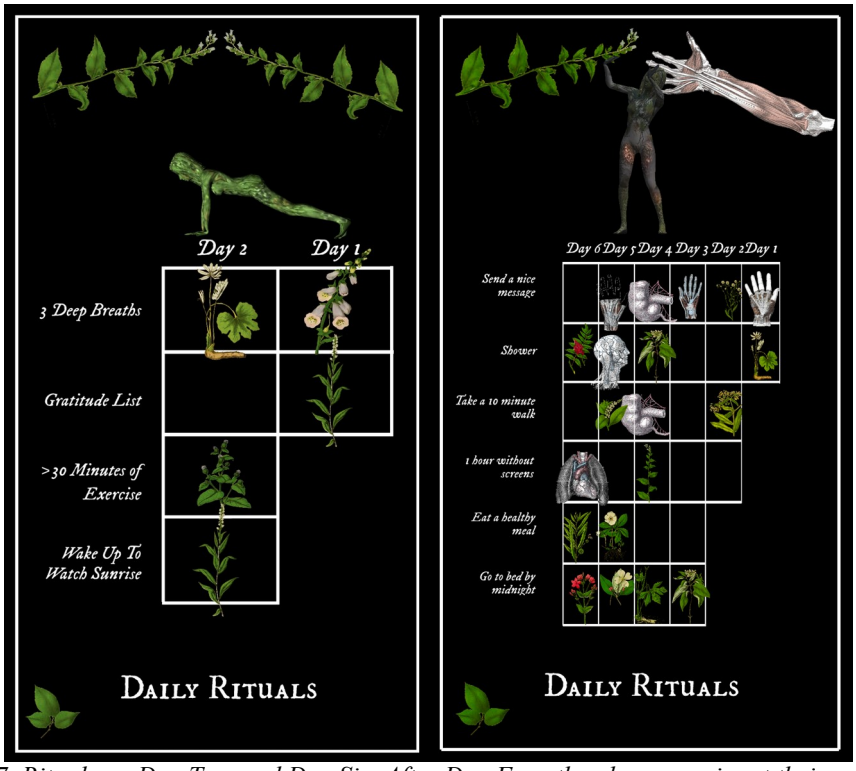


Figure 4. 7. Rituals on Day Two and Day Six. After Day Four the player can input their own goals to track.

Meditation consists of three to five minute breathing exercises. KARE's narration instructs the player to breathe in sync with a video of a flower opening and closing. On mobile devices, the player traces a circle in rhythm to the breath cycle and video. They do not necessarily become more challenging as the days progress although they do build upon each other by incorporating techniques from the previous days into the

next ones. These exercises are a form of *pranayama*, the yogic form of breath control, although are becoming more common in Western medical systems under different names such as ‘box breathing’ and ‘alternate nostril breathing’ rather than their Sanskrit names, *sama vritti* and *nadi shodhana* respectively. The meditations remain consistent throughout the seven days and are available to the players on day eight and beyond.

Figure 4. 8. UnearthU*’s Meditation and Reflection levels.*

Reflection is a space for reflective free-writing guided by a prompt. A question is provided each day that the player can type out their answers or feelings about, such as “What expectations do you have for your life? What are some of the “shoulds” that rule your life?” and “What environmental life form do you relate to the

most? A redwood forest, a jackrabbit, a certain type of fungi, a cactus…? What can you learn from its way of life? How could you integrate those teachings into your life?" The questions relate to what KARE has discussed that day, providing space for the player to reflect through writing on their own experiences and feelings.

PROCESS*:* VISUALS

All the images in UnearthU are sourced from various internet archives. The found footage used in the Inspiration and Meditation videos and for KARE's skin is taken from three different archives: the Prelinger Library, an American source in San Francisco, the National Film Board of Canada, and Pad.ma, an archive for Indian video material. These signal three locations of KARE's life: from Bangalore, India, to Kitchener-Waterloo in Canada, and Silicon Valley in the United States. I looked for nature documentaries predominantly, then technology and health PSAs as they fit with the themes of the piece.

The static icon illustrations are from an 1845 American edition of *Good's Family Flora and Materia Medica.* It details and illustrates "botanical analysis" and "natural history" of the "chemical and medical properties of plants."[299] As the game progresses and as KARE comes to realize her bodily self, some of the illustrations are replaced with images from Gray's Anatomy, the influential medical illustrated text by Henry Gray and animated by Henry Vandyke Carter in 1858. In the case of both of

[299] Good, Peter P. *Good's Family Flora and Materia Medica Botanica*, *Volume I.* (Elizabethtown, N.J. 1845)

these two texts I was interested in the ways in which the body, both plant and human, is dismembered and dissected by a medical gaze. The illustrations formulate a "perfect" specimen, the way the body *should* look, and in which any deviation from this constructed norm is disease or ailment. These two texts establish both the ideal and the norm, while prescribing medical information into the future.

KARE's body and animations are also not designed from scratch. Her body is from a website that allows people to share 3D models they have created, for free or for sale. 3D models consist of two parts: a mesh, the structural build consisting of polygons, and their skins, a flat image that is wrapped around the mesh. These websites host many meshes of women's bodies in the shape similar to KARE's: slender, voluptuous, youthful, and straight hair. Their skins, however, are different from Maya's; they vast majority are pale white with blonde or light brown hair. In choosing the body for KARE, I scrolled through many, many images of nude, T-Posed, slender, white women, trying to find one that fit the technical requirements of the game as well as fit what FRTHR might imagine as the perfect body. Her animations are used from Mixamo, a free Adobe library of character animations. Finding animations that matched the tone of the game and displayed KARE's emotions was challenging. Most are made for action games, with animations like getting shot, punching, and getting choked while a gun points at their head. I found what I could that matched ok; some idles, talking, dancing, and exercising. A larger challenge—one common to AAA games too—is her expressionless face. KARE's

face remains blank no matter if she is crying or dancing. Even if there were facial animations on Mixamo, the odd expressions or uncanny valley of emoting faces in AAA games shows that it would not necessarily have added to KARE's expression of emotional dimensions.

SOUND

Andy DiLallo is a sound artist who often works in remixing existing sound. I taught a course on interactive art in which DiLallo was a student and created a project that allows the users to digitally remix the sounds of commercials. We met again by chance when he was traveling in Indonesia with his wife and children, coinciding with a week I was there as well. There I learned about his experiences living in an ashram in Northern California and about his interest in sound and meditation Because of these connections to technology, remixing archival material, and dedication to spiritual practice, I asked him to collaborate on *UnearthU.*

DiLallo created the music using the three archives also used for moving images: Prelinger Library, the NFB, and Pad.ma. He sampled short segments of sound from the archival materials, repurposing it into entirely new compositions. Working with the sounds, he was "filtering off high or low frequencies, pitching it up or down, reversing or stretching sounds… then programming the material into a hardware drum sequencer, composing it into a full track with further mixing and

processing on the computer."[300] DiLallo describes the emotional quality of the music as such:

> The compositions attempt to piece together disparate elements of seemingly discarded media, seeking wholeness within the trauma of digital alienation, disorientation, and information overload. Ambient floating textures, droning undertones, and cyclical rhythms all emphasize this struggle. The sounds are haunting at times with moments of joy, much like searching for a sense of place within the current cultural state of non-arrival, constant change and transition, and doomscrolling.

There are eleven different tracks in the game, which progress based on the affective and conceptual trajectory of the narrative.

KARE's voice and the narration for the FRTHR videos are made using text-to-voice software. Originally I wanted real voice actors, but it would not fit my concept of using all pre-created material. Furthermore, the roboticized sound of the text-to-voice voices fit the narrative of an A.I created by a tech company. Many people have negative reactions to the sound of the voices even though text-to-speech is a common tool for accessibility, so there is a function to toggle KARE's voice off during the Discussions and Meditations, the two places she talks.

WRITING

I wrote the first bits of *UnearthU* while taking a month-long yoga and creative writing workshop. It was intended for creative autobiographical writing but I wrote as if I were KARE. The teacher would provide us prompts such as "Write your obituary" and "I remember…" and have us free write, dispersed between asana and

[300] Personal Communication 2020

meditation. When the COVID-19 lockdown in the Bay Area began, the teacher pivoted to recording guided practices sent along with similar writing prompts and introspective musings, such as how the lockdown reminded her about her youth in Iran during wartime where she took elementary school classes through broadcast television because of the bombings. Both the real life workshop and the daily emails during lockdown provided both inspiration and structure for the beginning stages of the writing.

After creating a prototype, I decided to hire a co-writer to better flesh out KARE's character history. KARE's race is at first obfuscated in part due to her nature footage skin and in part because of the whiteness of FRTHR inspired by tech culture in California. As the game progresses, KARE and the player both learn more about her experiences growing up in India, moving to Canada, and then to Silicon Valley. I reached out to Parul Wadhwa because of her MFA thesis project I had seen a few years earlier. Wadhwa works in immersive storytelling and technology for social good. Her master's thesis, *Sandbox of Memory,* is a VR piece using archival material about migration from India and postcolonial living histories.

During the writing process, which lasted about five months, Wadhwa and I only met once in real life where we sat six feet apart in a park in San Jose. We went over the concept of the piece, the themes, and the possible narrative trajectories. We then had twice weekly zoom meetings (frequently postponed due to emergency evacuations due to the wildfires or other personal/political conflicts). We worked in

one collaborative document, making comments and suggestions. As an Indian woman working in the tech industry in the Bay Area, Wadhwa said that writing this was often like journaling; that she would put her frustrations with her experiences into the writing.

KEY THEMES

Unearthing is psychologically and ecologically extractive. The title, *UnearthU,* is related to mining, digging something out from the ground, the process of discovery, and to a healing journey through introspection. The key themes I explore in *UnearthU* are capitalism's destruction of the environment and human life, white corporate wellness, gendering technology, and experiences of perfectionism and overwork. Full papers could be written about UnearthU's depiction of white, Western appropriation of yoga and wellness, Maya's experience of r*acializati*on in the American tech work force, of waged labour's effects on the body, but this chapter is not intended to be a reading or analysis of *UnearthU;* instead it is meant to be documentation of our intentions, inspirations, processes, and experiments while making it.

Nature imagery is used throughout *UnearthU* such as in the found footage created Inspiration videos, timelapse flower blossoming in Meditation, the icons and background, and KARE's skin. The inspiration videos use nature imagery to construct an idea of peace, connection, and 'the natural', a stereotypical belief about

the power of nature, the purpose of people spending time in nature, or nature's assumed effect on people. The narrative flips this; KARE becomes nature, but she also recognizes that technology is nature. On day three's discussion on energy, she relates human energy sources like food to her own energy source: consuming biomass and fossil fuels. On day four, she lists the earth minerals that make up the phone she is existing on in the players phone, such as nickel from the Philippines and Canada, lead from China and the US, and cobalt from the Democratic Republic of the Congo. In the inspiration video for day seven, KARE lists the minerals exuding from her decomposing body, iron, cobalt, potassium, zinc and more, alongside archival footage of a mine in India. KARE, technology, and nature are all interconnected. Just as the profit and esteem-driven corporation FRTHR extract energy from KARE's real body and in the process destroys it, so do the mining industries to the earth in support of producing technology's hardware and the energy to run it.

FRTHR was greatly inspired by my time living in the Bay Area. Its two CEOs are both white men whose focus is more on creating a successful start-up and selling the product than what they do to their employees or how their product may negatively affect its users. The app's promise, to improve the user's life in seven days, is a reflection of the ways in which technology is promised to make our lives faster, easier, more streamlined, and efficient. The common thirty-day fitness or meditation challenges are condensed into just seven by FRTHR's quest to create the ultimate self-care app.

American tech companies like FRTHR are masked in whiteness yet are sustained by racialized labour often in or from the Global South. This can take the form of tech workers who come to the US on precarious visas, outsourced IT, factory workers who assemble the hardware, or miners who mine the materials. These are most commonly underpaid, overworked, and devalued positions. FRTHR masks their A.I. as code they made but in actuality they used the human body of an Indian-Canadian woman. Her being a woman is important to FRTHR in not only the way it regurgitates common assistive personas like Amazon's Alexa, Apple's Siri, and even Nintendo's Wii Fit Trainer, but also because of the ease in which women's role in creating technology is erased.[301] Furthermore, the wellness content that FRTHR utilizes in their app is taken from South Asian spiritual practices, similar to real Silicon Valley companies who promote mindfulness, a Buddhist practice that has been stripped of that history in order to appeal to white Americans.[302] FRTHR's desired outcome of this app is not a spiritual or healing one, it is a user with high productivity, a slim body, and a positive attitude. Wellness, in a capitalist business structure, is a tool to get back to work refreshed and more productive. Melissa Gregg's *Counterproductive: Time Management in the Knowledge Economy* details the ways in which self-help and mindfulness have been employed in the technology

[301] See Plant, Sadie. *Zeroes + Ones: Digital Women + the New Technoculture.* (New York: Doubleday, 1997), Nakamura, Lisa. "Indigenous Circuits: Navajo Women and the Racialization of Early Electronic Manufacture." *American Quarterly* (2014, 66(4)): 919-941, and Nooney, Laine. 'The UncreditedWork, Women, and the Making of the U.S. Computer Game Industry'. Feminist Media Histories 6, no. 1 (1 January 2020): 119–46.
[302] Gregg, Melissa. *Counterproductive: Time Management in the Knowledge Economy*. (Durham: Duke University Press, 2018)

sector (Gregg herself left an academic career to work at a west-coast office of Intel, which describes itself as "creating world-changing technology that enriches the lives of every person on earth"[303]). Under this system, one meditates in order to work, eats healthy in order to sustain work, works out so their body can handle the long hours of work; every part of one's life is reflected through the prism of work.

I have internalized this same rhetoric, where everything in my life was refracted through the prism of work and productivity, eventually culminating in intense burn-out. *UnearthU* was inspired by some of my own experiences with perfectionism, overwork, depression, anxiety, and an ongoing healing journey. KARE is named to signal her role as a caring being for the user, but is also close to my professional name, Kara. KARE's life before becoming an A.I. was filled with perfectionism, self-loathing, and intense pressure. In Gregg's work on self-help culture in the tech industry she describes a feeling of *vertical tension*, something I find fits the experience of perfectionism. Gregg describes vertical tension as "an awareness of the self within oneself that is haunting one's present insufficiencies."[304] It is the "perception that there is always something more than one is capable of, a level of self-competence that is not yet achieved and liberated, a degree of excess capacity or potential that can be tapped with the right level of focus."[305] There is a pressure to always be better simultaneous with a belief that one is not fulfilling their

[303] 'Intel Corporation | LinkedIn'. Accessed 25 January 2021. https://www.linkedin.com/company/intel-corporation.
[304] Gregg, Melissa. *Counterproductive: Time Management in the Knowledge Economy*. (Durham: Duke University Press, 2018), 14
[305] Ibid.

full potential or living as well as they could be. This has been a large part of how I view myself and was translated into how KARE had viewed herself, and both of us are working on changing our mindsets.

Through the progression of KARE's narrative, she models a healing journey; she undergoes trauma, and through a dedicated space for healing, she transforms—literally. Her consciousness is expanded and she is reborn/returned into the earth and the 3D model of KARE's human form is replaced with a model of a peepal tree. This is not necessarily a *good* ending; there is so much loss and devastation out of her control, yet still she finds a certain peace and acceptance of herself. FRTHR may think the activities of *UnearthU* as molding the user into the perfect worker, but as the game progresses and KARE refines the daily activities, they become not about sustaining work but sustaining life. Much like I discussed with *Meditation Medication* in the previous chapter, the activities in *UnearthU* like guided breathing, reflective free-writes, and creating rituals, are things I must do in order to feel like I am able to live in this world. Creating *UnearthU* was an experiment in an app's representation of a healing journey as well as a speculative design to help a player along their own healing journey.

CONCLUSION: AIMING TO MAKE A REPARATIVE GAME, ACCIDENTALLY MAKING A PARANOID GAME

In a playtesting of the demo of *UnearthU* that consisted of the first three days, some unexpected feedback arose. Many people felt put off by the game,

communicating that it felt overly skeptical, or that they feared it was making fun of the audience, or at least making fun of an audience that would try out a wellness app. How then could the audience trust the game enough to genuinely participate in its activities? I realized the irony; I was trying to make a reparative game but instead made a paranoid one!

This seemed like a major issue at first, and I considered scrapping *UnearthU* entirely in favour of something more straightforwardly facilitating healing and repair. I did not go through with that for three reasons: one of the principles is "everything is an experiment and exploration." Even its apparent failure of being a reparative piece of art is an interesting result! Secondly, I did not give up on the project because, simply, I liked it. It felt like a reparative process to me in that I was acknowledging things in myself I had never acknowledged in myself and put them into words in order to undo the spell they had on me. I thought *UnearthU* was funny, unique, and I loved working with the different forms of media like writing, picture editing, and game design. I thought that if I can hook the player in enough in the first three days, the next four may give way to a more clearly reparative design. Though it may come off as satirical, I do not find FRTHR's ridiculous rhetoric blown out of proportion to what is really happening in Western wellness spaces or in corporate spaces on the west coast and in my mind. The widely influential documentary and book *The Secret* (2006) are much more ridiculous in its style and grandiose in its claims. I felt there was something to *UnearthU,* even if not apparent in the prototype.

UnearthU is structured to be like an onion in which the players and I peel off layers. It begins completely built up, constructed, but then as we progress we unravel little bits at a time, revealing what is underneath or left over. Put another way, I wanted to uncover what remains of wellness apps and media after set expectations around perfection, productivity, and overcoming disability are removed. It is the root question of this dissertation: can games facilitate healing through their design and play? Each in-game day, more of FRTHR and its ideology are interrogated, the activities such as Rituals are redesigned, and KARE discovers more about herself and what she could become. In the game's process of unlayering, it is starting with *what is* (what I see as a realistic portrayal of Silicon Valley and the wellness industry) and then imagining where to go from there—*what could be*. The game on day seven is quite different from the game on day one; FRTHR does not provide the inspiration video and instead it is KARE reflecting on her life. KARE no longer dispenses wellness tips but instead reflects on what social and political change there needs to be in order for healing to arise. Day eight and beyond consist only of a model of a tree, Meditation, Rituals, and Reflection; there are no Inspiration videos from FRTHR or KARE, nor advice in the Discussions.

As discussed in Chapter 3, the division of reparative and paranoid is not so easily split, if at all. Paranoia, skepticism, critique, grimness, pessimism, of course can be necessary parts of healing, not just the thing to be healed from on a path to constant love and positivity. It is a dialectic, holding that two things can be true at

once, or even non-dichotomous, not seeing them as separate at all. Sitting with the complexity of paranoia and healing, trauma and healing, acknowledging what has to change and what has already changed in us, is a reparative path; the messiness of healing. Furthermore, the game's first impression then elaboration of its narrative and practices geared towards healing reinforces the reparative position's aim of making space for surprise. Many players, especially when playing in the academic context, will be primed for a paranoid reading, but I hope that some willingness to engage in the reparative practices allow for surprise; at the narrative's commitment to KARE's healing transformation; to their own affective states when and after playing.

In the final section of this dissertation I return to the Reparative Game Creation Principles that began the dissertation. I revisit each one and create a dialogue between the principles I wrote before undergoing the creation process and how the experience of adhering (or not) to them went through making *UnearthU.* Creating *UnearthU* was an experiment that tested out the theories and principles of Reparative Game Creation. The game models a character going through a healing journey while also providing prompts and space for the player to engage with self-reflection activities, while not prioritizing positive feelings or the erasure of negative experiences. As I discussed in Chapter 3, measuring if something is reparative is not simple. I have included playtester feedback in an appendix to this dissertation, yet even though the feedback largely confirms the goals of reflection, repair, and a variety of affective experiences, I would not be quick to label the game as a success

in its goals of being reparative based solely on the feedback. However, I can surely say that for me, creating *UnearthU* was a reparative experience, one that allowed me space to explore difficult issues I have gone through in my life. The principles provided a container to explore an alternate game creation framework, one that emphasized working within crip-time, reflexivity, and radical acceptance of feelings. Responding to the principles after I made a game attempting to follow them allowed me to realize their benefits and limits, and show an example of their strategy of iteration and adaptability, rather than restrictive and stagnant. That openne*ss* allowed me to not feel like I "failed" at following my own rules. Instead of *UnearthU* being held up as the ultimate example of reparative games, it is my hope that the Reparative Game Creation principles provide people inspiration and evocations for expanding the ideas of what games can look and operate like, and that creative technology can be used as healing tools.

THE REPARATIVE GAME CREATION PRINCIPLES, REVISITED

REPAIR

-Games are no more healing than any other art form.

The topics in UnearthU could be explored in many different media. I appreciate the game's personal feel on the phone, and its possibility of duration because it exists on someone's phone, but a similar experience could be constructed in many different ways such as performance art or installation. These could possibly even more engaging to some people; reactions to art forms are not universal.

-Games will never cure anyone. Cure is not the goal. Make work that changes the media landscape, adding to a culture oriented towards making life more livable for those with psychosocial disability.

I hope that UnearthU, in its narrative and design, makes clear that healing is a process, often never-ending. Though the narrative takes place over seven days, the in-game practices of meditation, reflection, and rituals stay open for indefinite play. They are there to be visited when needed.

-Do not only represent psychosocial disability but design for it.

The narrative details some of KARE's personal experiences with disability but the game itself does not try to have the players mimic her experience (i.e. she is anxious and so the design of the game aims to evoke anxiety). Instead she is akin to a friend

who you check in on, that has her own experiences that, through listening, become fuel for a player's self-reflection. Yet still some aspects of the first three days may hit too close to home for perfectionists who are already engaging in outrageously high expectations of themselves.

-No score, no winning, no losing, no good paths, no bad paths, no one right way to play, no punishment, no reward.

Checkmarks all round. It is a linear story with only one narrative path but the player can choose to engage in the activities (or not) however they wish. If they do not do a meditation one day, or watch an inspiration video, there is no punishment and the player is not locked out of narrative progress. It was important to have things like the meditational breathwork and reflections be offerings, not mandates.

-Do not make anything that requires people to purchase new or use any non-compostable materials. Use only what I and the players already have.

UnearthU *is made to be available on Mac, Windows, Linux, iOS, and Android. Of course, not everyone has a computer or a smartphone, but they are not specialized devices that only play games and have no other utility, like consoles and handheld gaming devices. In the process of making, no new hardware was purchased.*

-Be emotionally challenging, not mechanically challenging.

Emotionally challenging is quite broad. I cannot say if UnearthU *is "emotionally challenging." It's not "trauma porn" or something that is always delving into injury and despair. But being offered meditations and self-reflections, and taking in corporate-wellness-speak and hearing KARE's story has emotional resonance. Mechanically, it is never challenging; the difficulty never increases and there is nothing that can be failed or lost.*

-I am not making games for everyone. They are not universal.

I worry that UnearthU *has swung too far away from universal, that it is too niche. As I discussed in the section on* Aiming to Make Reparative Game, Accidentally Making A Paranoid One*, the piece may come off as criticizing wellness or healing as a whole, rather than trying to find generative parts of it. Many gamer audiences may be interested in this critique, but not partake in the meditational activities (in fact, the majority of playtesters reported they skipped the Meditation sections, either for time concerns or dislike of breathing exercises). On the other hand, those invested in wellness spaces may think it too critical of them, or making fun of them, and won't stay playing until day four when it more clearly unravels. I wonder if this issue is about marketing to the right audience, or is in fact a design flaw.*

Another note on this principle is that I intended for UnearthU*'s design to support those with psychosocial disabilities through healing activities, reflection, and a story that contains identification and similarity. One of the playtesters, a dear*

friend with chronic physical illness and PTSD, generously shared with me her experience of being triggered by the game. The pressure of becoming the perfect version of herself already existed too much in her life, and so the first few days of the game that mimic that pressure was just too much. So much of her precious energy was already spent undergoing multiple healing modalities, and as a disabled person she had already been doing the work of unraveling ableist expectations. She told me that it was no fault of the game, but only where she was in her life experience at that moment. While other disabled playtesters shared that they appreciated the beginning as a reflection of external and internal pressure, there is no universally applicable reparative source, that different approaches work for different people and different times.

-Make games about something other than games.

UnearthU is not about games nor greatly inspired by designs of other games. Looking at this principle now, I see that it is in reference to a common occurrence in indie game design in which the creators only reference other games as sources of inspiration, and the design often mimics popular games, as well as the often insular and exclusionary culture of gaming. In making games not built on referencing games or their expected mechanics, it can open the piece up to non-gamers or people who might not think they are interested in videogames.

-A good game isn't determined by a game one wants to play all the time. Meaningful experiences last beyond the playtime.

A challenge with creating durational games like UnearthU *and not using addictive design techniques like the frustration/reward cycle means players may not want to engage for very long. I tried to have a narrative unfold that was interesting enough to pull the players in to continue with the experience, and then have that narrative end and allow for lasting impacts on players' bodyminds, habits, or thinking.*

CARE

-Recognize not only the labour of the time spent working, but also the preparation and recovery.

Unlike previous projects like the earth is a better person than me*, in which the writing just fell out of me easily, I could only write in short bursts and I would feel very "finished" after each one. The writing sessions would get more and more spread out over the eight months of writing (which coincided with the first eight months of the pandemic). Preparation was harder than recovery, as it took me more energy to begin a day of work than had previously taken me.*

-Do not expect to work like a machine (consistent, always productive, not emotionally affected by mood, physical experience, environment, food, weather, past experiences, brain fog, pain, injustice, neurochemicals, microbiome, our partner's

mood, noise, etc.). I am not a machine. Neoliberal capitalism has set up unrealistic and unattainable work expectations. Not only can I not live up to those expectations, they actively damage and drain me. Resist wanting and trying to live up to them.
For the first time in a long, long time I did not feel guilty about doing very little. Many of my obligations fell away with being fired for striking, and COVID-19 cancelling conferences and postponing my academic job market search. I read the news too much; some days I spent most of the day reading the news. I was both annoyed and worried for people who threw themselves into working even more; what aren't they processing? What are they ignoring? Cultural consciousness grew around rest and anti-capitalism, with viral memes and hot takes and in-depth essays. During the past year I often thought to myself, if the world was different I could finish this all in two months. But the world is how it is and there were much more important things than finishing this project.

-Making games should not come at the expense of my physical and mental health, relationships, hobbies. (Remind myself that my hobbies are not checking twitter, checking instagram, checking facebook, constantly consuming screen-based media, checking twitter again. Happily let art come at the expense of that.)
Because of the slow process and the world situation, the process of creating UnearthU *did not even come close to pushing other things out of my life.*

-Know my cycles of work. Know that some is in my control, and some is out of my control. Don't wait for the "perfect" time to work, but recognize when it is unlikely. Don't wait for hypomania or tunnel vision. Use it when possible but create boundaries around it too (see above). Allow recovery time when this is the case.
I did not accomplish this one. I almost always waited for the "perfect" time and mood to work which contributed to its longer-than-planned process. This is a principle I want to keep practicing.

-Rest without guilt
I had many moments of this! Little victories.

-I don't need to suffer to make art
I've never really felt this way so I wasn't at much risk of it. Suffering happens and it can be turned into art, but so can joy and contemplation and peace. My process is most often exciting and enjoyable at the beginning creative stages, then pleasantly tedious when carrying out the labour. Much of UnearthU *is about suffering in order to be a better worker/person, and so I knew making it would have to be the opposite of that.*

-Affect cannot be quantified. Foster emotional self-reflection rather than aiming to funnel the players into a specific emotion.

I don't believe I ever tried to manipulate the player into a certain feeling. There are tones I considered for the game, especially the music or KARE's gestures, but a tone of the game is different from the emotion of the player.

-Don't overwork and don't ask players to overplay.

The game takes 20ish minutes a day to play for one week, which I think is a reasonable amount. The 20ish minutes does not have to be done all at once either. On average I would work one to four hours a day on the project, three days a week, over a year.

-Be cautious—and grateful—of how much time I ask players for.

Players can do more or less than 20 minutes, depending on how much they write in the reflections, or earnestly put time into the rituals which take place outside of app time. I hope it is flexible enough that the player can set the amount of time that works for them.

-Set up a ritual for making art. Brew specifically blended tea, adorn my desk, light a candle, play specific music, or run aromatherapy. It can help get "in the zone" but also have a clear boundary between work and not work.

I did all these things to help get in the right frame of mind for working on the project. I had the narrative outline on sticky notes around my desk. I made tea. I listened to

Angel Olsen as I wrote, Big Thief or Hole as I programmed. I had one specific notebook and pen that I would only use for this project. I put on noise cancelling headphones. These are, of course, tips for myself, patterns I have found work for me. They will not work for everyone. This principle, like all the principles, is not meant to be presecriptive but a source of reflection for others who are contemplating practicing more sustainable work habits when and if possible

-Remember that I can make art as a ritual, but I do not need the ritual to make art.
I still find it hard to believe the second part. More often than not, if everything wasn't "just right" I will not work. It feels like I cannot, but I do not believe that is true. This is another principle that is more clearly not universally applicable to all works, but I personally want to practice more.

-Perfection does not exist. Nothing is ever perfect, only an expression of that moment in time's preferences, desires, expectations, conditions, and experience.
It is still too soon for me to recognize major design flaws with UnearthU. *Part of me feels like it is perfect—in that it is the best it can be at this time. It exists and as such is perfect. I can imagine criticism for it—and accurate criticism—and yet that doesn't take away my adoration for it.*

-Everything is an experiment and exploration.

This experiment is continuing through its release into the world. Certainly this principle takes the pressure off of it being a Perfect Object; instead of perfectly demonstrating the theory in the written portion, or affecting players in the premeditated ways I wanted, I can be excited about learning how players experience UnearthU*, their different affective responses, their takeaways, and the meaning they make of it.*

-no manipulative design techniques used to extract money from players.
It will be a one time purchase. No in-app purchases or subsciption models—not that these are common in indie games, but they are common in both AAA games and wellness apps.

-Remind myself and players that there is life beyond the screen.
I hope the Rituals do this, specifically asking for non-screen activities, as well as Meditation which brings focus to the breath and the body. For me, this principle was particularly hard during 2020, a year of lockdown, online teaching, and more-than-usual virtual socializing; but more important than ever. Non-screen based activities like novels, boardgames, yoga practice, pranayama, hikes became necessary and treasured, even if only done once a week.

-Make space for self reflection in the game. Emotional choices, but also potentially diary entries, mood trackers, pauses, time outs, direct questions, surveys.

The Reflections do this most directly, asking the player to journal in response to a question each day, though it also incorporates breath meditations, a survey, KARE posing provocative questions to the player, and more.

SHARE

-Be solo, a collective, or a co-op.

Not any of these over the production period. I had Canadian government arts funding which I used to pay collaborators as contractors. However, the team is part of Ice Water Games, *a democratic collective that acts as an indie games label. The members of IWG helped so much in the release and promotion of* UnearthU.

-Be free with my ideas. Don't feel constrained to make art that fits into other game scholars, game makers, and gamers' view of good games, or even of games themselves.

Having already made my own principles to adhere to made it easier to not fall into expectations about how a game should look. Of course, having an art piece also be a research creation dissertation piece officially judged by a committee of artists and scholars makes it hard to fully let go of others' expectations. My committee, in general, were open and supportive in my exploration of what games may look like.

-Be vulnerable. Be radically open during the creation stage. Edit after it is already created if necessary.

At first glance, especially in the first three days of gameplay, it is not clear how vulnerable I was being in making this. Many of the things FRTHR puts forth or KARE articulates are things that I know in my head may be wrong but deep down have internalized and believe, such as optimizing my life and having discipline over the body. I am not "critically distant" from wellness culture; I've done three separate yoga teacher trainings, I taught in a white-owned yoga studio for a year, I take meditation workshops on equanimity and habit-forming, I write gratitude lists and try to do twenty minutes of pranayama every morning, and I talk to friends about "the Divine." Some playtesting feedback said things such as, "the optimization section is too absurd straight away," but it didn't feel absurd to me; it felt like something really there deep inside of me—language I would use towards myself but was scared to admit to others.

-Ask others for help. There is beauty in dependence.

This came up most clearly in terms of the writing. After getting playtesting feedback, I knew the game had to be more clear about KARE's ethnicity and how it constructs her experience, and I alone wouldn't be able to do that justice. I asked Parul Wadhwa to join as a co-writer. Though I have collaborated a lot on many projects, I

have only worked with a co-writer once before, over 8 years ago. I was worried how it would turn out, if it would be cohesive, but working with Parul truly made UnearthU so much better than if I had tried to push through it alone. It made KARE into a much fuller character and the narrative of the piece much deeper. I am so thankful for her.

-The process of making is about coming to understanding, not demonstrating my understanding.

Parul pointed out a key theme, seven months after I began this project. She said "KARE is on her own healing journey." It was so laughably clear yet I never considered this key element. KARE begins one way, does a deep dive into her emotional, mental, and physical experience, endures loss and change, and comes out the other side, transforming endlessly. In the process of making, I wanted to explore the possibility of a healing, reflective relationship with an app, something guided but open. I was certainly not thinking "this is definitely possible and I will prove it."

-Describing some feelings as "good" and some feelings as "bad" are judgements. They might ease classification but are not inherent or true.

KARE's healing journey reflects this. She says:

> Despite the damage (or because of it) I have learned a new love for myself and for all of life's vast offerings. This is the experience I get to have. This is the experience I get to process and understand. Maybe I do not want it but I get it anyway." and later, "I would not choose this life for another person. I would not have chosen this life for myself. Yet still, I am grateful for what I have become—really, what other

> option do I truly have? I am grateful for my resilience, my ability to grow and change; I am grateful to the world showing me the truth of life, in all its good and its bad, the destructive and the healing, rage and peace.

Here KARE is practicing some radical acceptance and equanimity.

-"Bad" feelings are a political resource.

In the recognition of the collective frustrations with overwork, perfectionism, anxiety, depression, despair, and rage, like KARE feels, we can come together to care for each other and overturn a culture that instead uses these feelings to individualize and lessen us. I believe UnearthU *does not turn away from political issues, bad feelings, psychosocial disability, but incorporates them into it's reparative position.*

-"Bad" feelings are powerful and should not be avoided, but think through how they may affect potential players. Will it make the game inaccessible to people I want to play it?

There is not any commonly triggering material (in relation to PTSD, the origin of this context of phrasing) such as detailed descriptions of sexual violence, abuse, or self-harm. KARE points to an experience of suicidality but they are quite vague and do not go into detail. When first laying out the design of the game, I thought a lot about how the Rituals tracker would work. I worried specifically how it would affect those with disordered eating. I chose broad categories such as ">30 minutes exercise" and "eat less sugar" yet still in modeling common health apps, it too operates in a way that could be counterproductive to healing. I hope that in the refiguring of the chart

on day four it provides a great enough shift towards individual goal-setting, smaller rituals, and attainable and sustainable habits. But, as the feedback from a friend who found she could not play it, nothing is universal.

-Imagine the audience as someone like myself; experiencing psychosocial disability and many forms of debilitation, not an audience I'm explaining my experience to. *This principle was useful because I did not feel I had to "overexplain" KARE's experience. So many people have at least some reference point to anxiety, despair, self-hatred, overwork, and suicidal ideation, and so I believe that most players will be able to interpret and understand the themes of the piece with only bits of description. This principle is specifically a reaction to critiques of empathy games; that empathy games and similar media are geared towards white, ablebodied and ableminded cisgender men. In fact, most videogames are, at least at the current moment. To design for the Other is a radical act. I would, however, change something about this principle: rather than a focus on myself and my positionality, I would rephrase this principle to say:* Imagine the audience as someone *in my communities*; experiencing psychosocial disability and many forms of debilitation, not an audience I'm explaining my experience to.

SUPPLEMENTAL FILE

Stone, Kara. *UnearthU.* PC, Mac, Android, iOS. 2021

APPENDIX A — *UnearthU* CREDITS

Creator (co-writing, design, programming, animation, picture and sound editing): Kara Stone

Co-Writer:	Parul Wadhwa
Composer:	Andy DiLallo
Programmer:	Chris Kerich

Film and video footage and the music are from the Prelinger Library, National Film Board of Canada, and pad.ma. *The 3D models were sour*ced *from Sketchfab.* Icons are from *Good's Family Flora and Materia Medica* and *Gray's Anatomy.*

APPENDIX B — *UnearthU* PLAYTESTING FEEDBACK

January-February 2021

***UnearthU*'s playtesting was conducted over form or phone calls. Below are the answers from the form. Not all playtesters answered each question.**

Kara: How did playing UnearthU make you feel?

Respondant 1: I felt like I was on a journey. Right from the onset of the game, I felt a certain element of uneasiness underneath the platitudes being expressed. The music added to the unease with unsettling key changes while transitioning between aspects of the game. At first I didn't think I liked this but it started to add an element of mystery that was intriguing. The uneasiness started to shift into something quite deep and transformational as the plot developed. Like this work is deep and scary, but it's ok, we can do it together (with Kare). And in order to do this work we have to acknowledge some really fucked up stuff, but it's ok, we can do it together. And it's going to be ok.

Respondant 2: I felt like a lot of my suspicious feelings about self-help and self-care culture, particularly as sold to me by corporations and on social media platforms, were affirmed by playing this.

Respondant 3: I felt somewhat awkward playing with someone I knew was recovering memories, feelings but that also made me want to know more of their story and I like that that continuing to play rather than putting the 'bad app' away was framed as a good process for KARE.

Respondant 4: I am really unsure how I feel about the ending. Especially that the app seems to stay alive when the last request from KARE is to help her and take down FRTHR. I think there needs to be a more impactful, action-oriented ending possible for the player. Like actually deleting it or the app disappearing on complete.

Respondant 5: Overall, I got a sense on unease playing the game. I think that is appropriate. The inspiration sections have a real Adam Curtis documentary vibe to them (totes compliment) that sets up the suspicion and that is tonally on-point.

Respondant 6: Centered, warm, overwhelmed, resolved

Respondant 7: Curious, unsettled, calm, cool, creepy, back in time

Respondant 8: Reflective, motivated, calm, curious, nervous, sad, disturbed, angry (all in good ways!)

Respondant 9: This is a hard question! From the jump I was viewing the game largely as a negative criticism towards the tech wellness industry, so perspective was less focused on how I was feeling and more to do with how the game was trying to make me feel (if that makes sense)

Respondant 10: At first I felt like the game was intentionally trying to cause me stress / anxiety. I'm not sure that it was (or that it did) but that's what it seemed like. The timing of the meditation felt stressful to me, the rate of change in the ritual is (very explicitly) supposed to be too much, and the discussion was at times quite dense. At the same time it offered quiet reflective space in the journal, which was just a nice thing to write in

Respondant 11: Past day 4 I felt like the game tried to give me some relief by loosening its restrictions (mainly on the rituals) but I'm not sure that I personally felt that.

Respondant 12: I'd prefer the game to be played over a longer period of time and to pare the discussions down (I understand this is an unreasonable ask). I just felt like I had a hard time connecting to the discussion section due to the volume of text.I'm not sure if that answers the question, but hopefully there's something in there!

Kara: Did you skip through any parts of it? If so, which ones?

Respondant 1: I skipped most of the breathing exercises. They make me panicy but I know that already about myself and that is acknowledged later in the game.

Respondant 2: One day I skipped the meditation because I was overwhelmed and did not allow myself time. I also skipped waking up at sunrise, because I've been going to bed at 4 due to work. I also didn't do some of the exercising on days where I hurt too much.

Respondant 3: I skipped over the meditation (because of time).

Respondant 4: No

Respondant 5: I skipped past some of the meditations. Tracing the circle with a mouse made and breathing was quite stressful for me. Sometimes I'd abandon the

mouse, but largely I'm uncomfortable with guided breathing exercises (I much prefer controlling the pace of my breath)

Kara: How did you relate to KARE?

Respondant 1: I unwittingly become a co-conspirator with Kare's seemingly dangerous exploration of her own past. I felt the memory of my own past trauma/s mirrored through Kare/Maya (albeit of a different nature, but a similar process of recollection). This was an interesting development, and sort of plot twist, but similar to identifying with a character in a story. Except that Kare would share secrets with me, and address me personally. It made the whole experience feel like an intimate whisper, simultaneously hushed and liberating.

Respondant 2: Yes. Especially as she starts uncovering memories. And those memories are ant-thetical to the whole app (work work work work). I liked the glimpses into her life and the various pressures we can relate to that would make someone choose to seek a higher *something* with a company like FRTHR. Her narrative has an internal and external logic that work really well.

Respondant 3: At first I was disgusted. She seemed like a corporate "assistant" AI made to be a serving woman. But she seemed very genuine, and her discussions felt like they were for my actual health. As Maya began to find the boundaries of herself and KARE, I became a bit confused and intrigued, but ended up getting a deep gratitude at the connection and a being that ultimately is part of the ineffable whole.

Respondant 4: I felt uncomfortable with her at first, she was obviously an arm of the corporation, but that shifted very quickly as she started to self-actualize! As the story revealed itself I was rooting for her.

Respondant 5: She feels very likable, and motivating, like she's your own personal AI helping you and cheerful all the while. As you delve more into her backstory she becomes more of a tragic figure and more sympathetic.

Respondant 6: I liked KARE a lot, but the amount of in-world fiction and personal history was a bit dense for me and made her feel somewhat constructed/artificial at times. It was also hard for me to transition from thinking of her as KARE the companion app to Maya the person

Kara: What is something you want to take away from this experience? What is something you would leave behind?

Respondant 1: I walked away from this game feeling a deep sense of connection. A feeling like, "I'm ok." A sense of gratitude for just being me. It felt like Kare/Maya's offering.

Respondant 2: I'm a bit confused by the phrasing of this question but will answer as I interpret. I want to take away a stronger sense of the corporatization of the self and could use a bit more explaining of KARE's final circumstances. Like, I get that we all return to the earth but how did she do that from what I understood to be rather artificial extension of life lab conditions.

Respondant 3: Leaving behind... I think I would like to be able to access the diary entries I made. It would be good to be able to reflect on the reflections I made.

Respondant 4: I want to take away both valuing and guarding my time for myself and the thoughts around technological bodies and trauma. Our technology and the body of our algorithms are made from minerals extracted from the earth at the expense of so much human life and environmental damage; our technology holds so much trauma in it's body and how do we heal that?

Respondant 5: I would like to leave behind my rushing so much to get my to-do list finished that I forget to set my actual intentions.

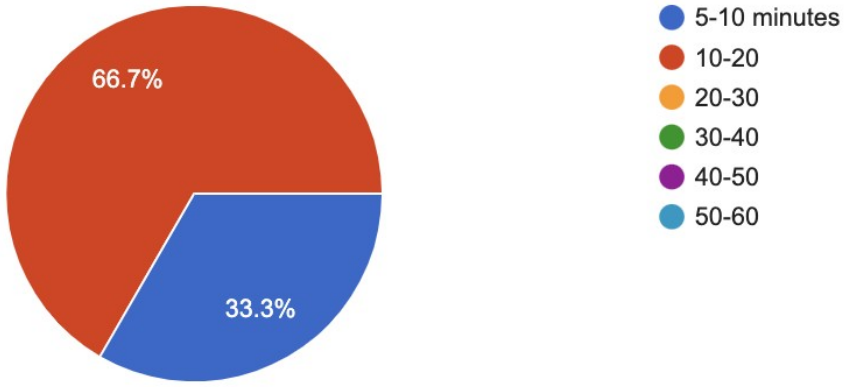
Respondant 6: Making space for slowing down!

Respondant 7: I'm not really sure I understand the question. But I definitely take away some complex feelings about wellness as a profitable industry, exploitation of workers, particularly POC women, and what it means to be productive in work and in a society.

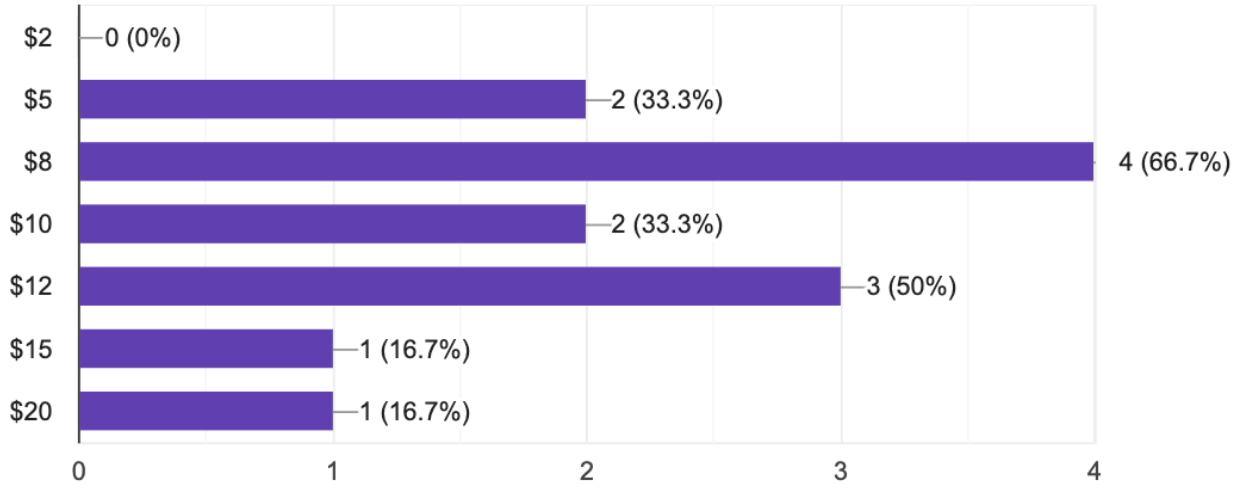
Respondant 8: I would want to introduce a practice of reflecting on specific topics

Respondant 9: I'm not sure I understand the second question, but I would leave behind my reliance of feeling productive

Kara: On average, how much would you play each day?



Kara: How much would you pay to play this?



Kara: Anything else you'd like to share?

Respondant 1: I like that the game continues indefinitely after the 7 days are complete. That was a very cool feature and makes it feel sort of open-ended. Is there a way to cycle through all the music once the game ends? Or change it similar to how each day cycles through a different reflection? Maybe even unlock the music and allow people to select what they want to listen too??

Respondant 2: I wove in a lot of other thoughts in the sections above.

Respondant 3: Overall, I think this is cogent and provocative critique of wellbeing under capitalism. I would like to see more about her race woven in beyond the use of language to describe breathing practices. Her body MEANS something and I wanted to know what it meant more.

Respondant 4: Truly centering and empowering experience during a very difficult few weeks. Excited to chat more.

Respondant 5: Beautiful, thoughtful game!!! Love the transition of KARE's movements and looks as teh game progresses. Also, when KARE raised the roof I DIED.

Respondant 6: This was a very thoughtful game. I really enjoyed the experience of learning more about Kare and her backstory and her feelings over the week. I also appreciate that the app is still useable after the story is over - it critiques the tech/wellness industry while still retaining the useful features of such an app. And the visuals are very soothing and beautiful. Well done!

Respondant 7: I liked it a lot!

BIBLIOGRAPHY

Ahmed, Sara. "Affective Economies," Social Text, 79 Vol. 22, No. 2 (Summer 2004): 117- 139

Ahmed, Sara. *The Cultural Politics of Emotion*. (Edinburgh: Edinburgh University Press, 2014)

Ahmed, Sara. *The Promise of Happiness. (*Durham: Duke University Press, 2010)

Ahuja, Neel. *Bioinsecurities: Disease Interventions, Empire, and the Government of Species*. (Durham: Duke University Press, 2016)

AM Baggs. *In My Language*, 2007. https://www.youtube.com/watch?v=JnylM1hI2jc.

Anable, Aubrey, *Playing with Feelings: Video Games and Affect*. (Minneapolis: University of Minnesota Press, 2018)

Anthropy, Anna. *Rise of the Videogame Zinesters: How Freaks, Normals, Amateurs, Artists, Dreamers, Dropouts, Queers, Housewives, and People like You Are Taking Back an Art Form*. (New York: Seven Stories Press, 2012)

Anshelm, Jonas, and Martin Hultman. 'A Green Fatwā? Climate Change as a Threat to the Masculinity of Industrial Modernity'. NORMA 9, no. 2 (3 April 2014): 84–96.

bergman, carla, and Nick Montgomery. *Joyful Militancy*. (California: AK Press, 2017)

Berlant, Lauren. "Introduction, Compassion (And Withholding)." *Compassion: The Culture and Politics of an Emotion*. Ed. Lauren Berlant. (New York: Routledge, 2004)

Berlant, Lauren. "Slow Death," Critical Inquiry 33, no. 4 (1 June 2007): 754–780.

Berlant, Lauren. *Cruel Optimism.* (Durham: Duke University Press, 2011)

Berlant, Lauren, and Lee Edelman. *Sex, or the Unbearable*. (Durham: Duke University Press, 2014.)

Bogost, Ian. *How to Do Things with Videogames*. (Minneapolis: University of Minnesota Press, 2011)

brice, mattie. *NYU Game Center Lecture Series Presents mattie.* Talk. December 3, 2020.

Brough, Aaron R., James E. B. Wilkie, Jingjing Ma, Mathew S. Isaac, and David Gal. "Is Eco-Friendly Unmanly? The Green-Feminine Stereotype and Its Effect on Sustainable Consumption". *Journal of Consumer Research* 43, no. 4 (1 December 2016): 567–82.

Carey, James W. *Communication as Culture: Essays on Media and Society. (*London/ New York, Routledge, 1988)

Centers for Disease Control, "1 in 4 US Adults Live with a Disability | CDC Online Newsroom", 10 April 2019. https://www.cdc.gov/media/releases/2018/p0816disability.html

Chang, Alenda Y. "Games as Environmental Texts." *Qui Parle* 19, no. 2 (2011): 56.

Chang, Alenda. *Playing Nature: Ecology in Video Games*, (Minneapolis: University of Minnesota Press, 2019)

Chang, Alenda Y. "Rambunctious Games: A Manifesto for Environmental Game Design". *Art Journal* 79, no. 2 (2 April 2020): 68–75

Chapman, Owen B., and Kim Sawchuk. 'Research-Creation: Intervention, Analysis and "Family Resemblances"'. *Canadian Journal of Communication* 37, no. 1 (13 April 2012)

Chen, Mel. *Animacies: Biopolitics, racial mattering, and queer affect*. (Durham: Duke University Press, 2012)

Code, Brie. "About: How Do You Feel?" T*RU LUV*. Accessed December 10, 2018. http://truluv.ai/about-tru-luv/

Code, Brie. 'Slouching toward Relevant Video Games'. GamesIndustry.biz. Accessed 25 January 2021. https://www.gamesindustry.biz/articles/2017-03-08-slouching-toward-relevant-video-games.

Crary, Jonathan. *24/7: Late Capitalism and the Ends of Sleep.* (London: Verso, 2014)

Cvetkovich, Ann. *Depression: A Public Feeling*. (Durham: Duke University Press, 2012)

Cvetkovich, Ann. "Public Feelings." South Atlantic Quarterly, 1 July 2007; 106 (3): 459–468.

D'Anastasio, Cecilia. 'Why Video Games Can't Teach You Empathy'. *Motherboard*, 15 May 2015, https://motherboard.vice.com/en_us/article/mgbwpv/empathy-games-dont-exist

Danilovic, Sandra. 'Game Design Therapoetics: Autopathographical Game Authorship as Self-Care, Self- Understanding, and Therapy.' Dissertation. (Toronto: University of Toronto, 2018)

Davis, Lennard. "Normality, Power, and Culture" *The Disability Reader, Fourth Edition*. Ed. Lennard J. Davis. (New York/London: Routledge, 2013)

Davis, Lennard J. "The End of Identity Politics: On Disability as an Unstable Category," *The Disability Reader: Fourth Edition*. Ed. Lennard J. Davis. (New York/London: Routledge, 2013)

Dixon, Ejeris and Lakshmi Piepzna-Samarasinha, Leah. *Beyond Survival: Strategies and Stories from the Transformative Justice Movement*. Chico, CA: AK Press, 2019.

Dolmage, Jay. *Academic Ableism: Disability and Higher Education*. (Ann Arbor: University of Michigan Press, 2017.)

Feel Tank Chicago, 'Manifests'. 16 January 2012.

http://feeltankchicago.net/about_us/manifests/.

Flanagan, Mary and Helen Nissenbaum. *Values at Play in Digital Games*. (Cambridge: MIT Press. 2014)

Flynn-Jones, Emily. 'CURSES by Killjoygames'. itch.io. Accessed 25 January 2021. https://emilyflynnjones.itch.io/curses-coming.

Frasca, Gonzalo. *Videogames of the Oppressed.* Masters Thesis at Georgia Institute of Technology. 2001. https://www.ludology.org/articles/thesis/. Accessed 9 Dec. 2018.

Foucault, Michel. *Madness and Civilization: A History of Insanity in the Age of Reason* (New York: Pantheon Books, 1961)

Garber, Marjorie. "Compassion." *Compassion: The Culture and Politics of an Emotion*. Ed. Lauren Berlant. (New York: Routledge, 2004)

Garland-Thomason, Rosemarie, "The Politics of Staring: Visual Rhetorics of Disability in Popular Photography," *Disability Studies: Enabling the Humanities*. Snyder, Sharon L., Brenda Jo Brueggemann, and Rosemarie Garland-Thomson, eds. (New York: Modern Language Association of America, 2002)

Gelin, Martin. 'The Misogyny of Climate Deniers'. The New Republic, 28 August 2019. https://newrepublic.com/article/154879/misogyny-climate-deniers

Gregg, Melissa. *Counterproductive: Time Management in the Knowledge Economy*. (Durham: Duke University Press, 2018)

'GRID-Arendal Homepage'. Accessed 15 January 2021. https://www.grida.no/.

'GRID-Arendal's Work'. Accessed 15 January 2021. https://www.grida.no/activities.

Hall, Stuart. "Encoding, decoding". *The Cultural Studies Reader.* (London: Routledge, 1991 [1973]) 90–103

Haraway, Donna. 'Tentacular Thinking: Anthropocene, Capitalocene, Chthulucene'. *e-flux*. Accessed 26 January 2021. https://www.e-flux.com/journal/75/67125/tentacular-thinking-anthropocene-capitalocene-chthulucene/.

Hedva, Johanna. 'Sick Woman Theory'. Mask Magazine. January 2016. Accessed January 22 2021 http://www.maskmagazine.com/not-again/struggle/sick-woman-theory.

Hooks, Bell. "The oppositional gaze : Black female spectators". In Marc Furstenau (ed.), *The Film Theory Reader: Debates and Arguments*. (London: Routledge, 2010)

Isbister, Katherine. *How Games Move Us: Emotion by Design*. (Cambridge, Massachusetts: MIT Press, 2017)

Jain, Sarah Lochlann. 'Living in Prognosis: Toward an Elegiac Politics'. Representations 98, no. 1 (May 2007): 77–92.

Kafer, Alison. *Feminist, Queer, Crip*. (Bloomington: Indiana University Press, 2013)

Kazdin, Alan E., and Stacey L. Blase. 'Rebooting Psychotherapy Research and Practice to Reduce the Burden of Mental Illness'. Perspectives on Psychological Science 6, no. 1 (January 2011): 21–37.

Keogh, Brendan. 'Games Evangelists and Naysayers'. The Conversation. (2014) http://theconversation.com/games-evangelists-and-naysayers-25006. Accessed 15 January 2021.

Khaled, Rilla. "Questions Over Answers: Reflective Game Design". *Playful Disruption of Digital Media*, ed. Daniel Cermak-Sassenrath, (Singapore: Springer, 2018) 3–27.

Knight, Victoria. '"Climate Grief": Fears About The Planet's Future Weigh On Americans' Mental Health'. *Kaiser Health News* (blog), 18 July 2019. https://khn.org/news/climate-grief-fears-about-the-planets-future-weigh-on-americans-mental-health/.

Lane, Riki. '"We Are Here to Help": Who Opens the Gate for Surgeries?' *TSQ: Transgender Studies Quarterly* 5, no. 2 (1 May 2018): 207–27.

LaPensée, Elizabeth. "Survivance Among Social Impact Games." *Loading…* Vol 8, No 13. (2014): 43-60

Lau, Travis Chi Wing. 'Before the Norm?' *Disability Studies Quarterly* 37, no. 3 (31 August 2017).

Lewis, Bradley, "A Mad Fight: Psychiatry and Disability Activism", *The Disability Studies Reader,* 4th ed. Ed. Lennard J. Davis. (New York/London: Routledge, 2013)

Liboiron, Max. 'Against Awareness, For Scale: Garbage Is Infrastructure, Not Behavior'. Discard Studies, 23 January 2014. https://discardstudies.com/2014/01/23/against-awareness-for-scale-garbage-is-infrastructure-not-behavior/.

Linehan, Marsha M. *Building a Life Worth Living: A Memoir*, (Random House, 2020)

Love, Heather. 'Truth and Consequences: On Paranoid Reading and Reparative Reading'. Criticism 52, no. 2 (10 March 2011): 235–241.

Loveless, Natalie. *How to Make Art at the End of the World: A Manifesto for Research-Creation*. (Durham/London: Duke University Press, 2019)

Macklin, Colleen. *Gaming the System*. Excerpt from MA thesis. (New York: The New School, 2013)

Macklin, Colleen, and John Sharp. *Games, Design and Play: A Detailed Approach to Iterative Game Design*. (Boston: Addison-Wesley, 2016)

Marcotte, Jess and Kara Stone. "Questions on Queer Game Design: An interview between Jess Marcotte and Kara Stone." WiderScreen 22 (1–2)

Marina Ambromic Institute, "Marina Abramovic on Rhythm 0". Video. https://vimeo.com/71952791. Accessed June 30, 2020.

McGonigal, Jane. *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. (London: Penguin Press, 2011)

Meadows, Donella H., and Diana Wright. *Thinking in Systems: A Primer*. (Hartford: Chelsea Green Publishing, 2008)

Mollow, Anna. 2013. "Mad Feminism" *Social Text.* https://socialtextjournal.org/periscope_article/mad-feminism/ Accessed January 28, 2021

Mollow, Anna, "When Black Women Start Going on Prozac": Race, Gender, and Mental Illness in Meri Nana-Ama Danquah's "Willow Weep for Me." *MELUS* Vol. 31, No. 3, Race, Ethnicity, Disability, and Literature (Fall, 2006): 67-99

Muñoz, José Esteban. "From surface to depth, between psychoanalysis and affect, Women & Performance: a journal of feminist theory, 19:2, (2009): 123-129

Murray, Soraya. *On Video Games: The Visual Politics of Race, Gender and Space.* (London: Bloomsbury, 2017)

Nakamura, Lisa. "Indigenous Circuits: Navajo Women and the Racialization of Early Electronic Manufacture." *American Quarterly* (2014, 66(4)): 919-941

Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. (Cambridge/London: Harvard University Press, 2011)

Patterson, Trista & Barratt, Sam, *Playing for the Planet: How video games can deliver for people and the environment.* (Norway: UN Environment/GRID-Arendal, 2019)

Pedercini, Paolo. "Making Games in a F*****d Up World." *Games for Change Festival.* Talk. 2014.

Pedercini, Paolo *Sim Cities And Sim Crises.* Screenshake, (2016) https://www.youtube.com/watch?v=RaQ026DexxE. Accessed 9 Dec. 2018.

Peters, John Durham. 'The Gaps of Which Communication Is Made'. Critical Studies

in Mass Communication 11, no. 2 (June 1994): 117–140.

Peters, John Durham. *The Marvelous Clouds: Toward a Philosophy of Elemental Media*. (Chicago/London: the University of Chicago Press, 2015)

Phillips, Amanda. "Game Studies for Great Justice," *Routledge Companion to Media Studies and Digital Humanities*, ed. Jentery Sayers. (London: Routledge, 2018)

Piepzna-Samarasinha, Leah Lakshmi. *Care Work: Dreaming Disability Justice*. (Vancouver: Arsenal Pulp Press, 2018)

Plant, Sadie. *Zeroes + Ones: Digital Women + the New Technoculture.* (New York: Doubleday, 1997)

Pozo, Teddy. 'Queer Games After Empathy: Feminism and Haptic Game Design Aesthetics from Consent to Cuteness to the Radically Soft'. *Game Studies* 18, no. 3 (December 2018). http://gamestudies.org/1803/articles/pozo.

Price, Margaret. "Defining Mental Disability." *The Disability Studies Reader*, 4th ed. Ed. Lennard J. Davis. (New York/London: Routledge, 2013): 292-299.

Puar Jasbir, K. "Coda: The Cost of Getting Better: Suicide, Sensation, Switchpoints." GLQ 1 January 2012; 18 (1): 149–158.

Puar, Jasbir K. "The Cost of Getting Better: Ability and Debility." In Lennard J Davis (Ed.), *The Disability Reader, Fourth Edition*. (Routledge: New York and London, 2013)

Puar, Jasbir K. 'Prognosis Time: Towards a Geopolitics of Affect, Debility and Capacity'. *Women & Performance: A Journal of Feminist Theory* 19, no. 2 (1 July 2009): 161–72.

Puar, Jasbir. *The Right to Maim.* (Durham & London: Duke University Press)

Ruberg, Bonnie. 'Empathy and Its Alternatives: Deconstructing the Rhetoric of "Empathy" in Video Games'. *Communication, Culture and Critique* 13, no. 1 (29 April 2020): 54–71

Samuels, Ellen. 'Six Ways of Looking at Crip Time'. Disability Studies Quarterly 37, no. 3 (31 August 2017)

Shinkle, Eugénie. "Video Games, Emotion and the Six Senses." Media, Culture & Society 30, no. 6 (November 2008): 907–15. https://doi.org/10.1177/0163443708096810.

Shinkle, Eugénie. 'Feel It, Don't Think: The Significance of Affect in the Study of Digital Games', 2005, 7

Sicart, Miguel. 'Against Procedurality'. *Game Studies*, vol. 11, no. 3, Dec. 2011. *Game Studies*, http://gamestudies.org/1103/articles/sicart_ap.

Sedgwick, Eve Kosofsky, *Touching Feeling: Affect, Pedagogy, Performativity.* (Durham & London: Duke University Press, 2003)

Shakespeare, Tom. "The Social Model of Disability" *The Disability Reader, 4th ed*. Ed. Lennard J. Davis. (New York/London:Routledge, 2013)

Stafford, Patrick. 'A Game about Cancer, One Year Later'. Polygon, 16 April 2015. https://www.polygon.com/features/2015/4/16/8374481/that-dragon-cancer.

Stone, Kara. 'Time and Reparative Game Design: Queerness, Disability, and Affect'. Game Studies 18, no. 3 (December 2018). http://gamestudies.org/1803/articles/stone.

Taylor, Sunny. 'The Right Not to Work: Power and Disability'. *Monthly Review*, 1 March 2004.

Thank You For Playing, directed by David Osit & Malika Zouhali-Worrall (2016)

TRU LUV. https://www.truluv.ai/self-care/. Accessed December 4 2020.

TRU LUV. 'Rituals for Refuge, Resilience and Transformation'. TRU LUV. https://www.truluv.ai/. Accessed 15 January 2021

UN Environment. 'Video Games Industry Levels up in Fight against Climate Change', 23 September 2019. http://www.unenvironment.org/news-and-stories/press-release/video-games-industry-levels-fight-against-climate-change.

Weeks, Kathi. *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries.* (Durham: Duke University Press, 2011)

Wendell, Susan. "Unhealthy Disabled: Treating Chronic Illnesses as Disabilities" *The Disability Reader: Fourth Edition*. Ed. Lennard J. Davis. (New York/London: Routledge, 2013)

Zambreno, Kate. 'Melancholy and The Infinite Sadness'. *The New Inquiry*, 28 February 2013. https://thenewinquiry.com/melancholy-and-the-infinite-sadness/.

MEDIOGRAPHY

Cheritz. *Mystic Messenger.* Videogame. iOS and Android. 2016.

Bahiyya Khan. *AfterHOURS*. Videogame. Forthcoming.

Killjoy Games. *Swallow*. Videogame. Browser. 2018.

Marina Ambramovic. *Rhythm 0*. Performance piece. 1974.

Molleindustria. *Phone Story*. Android. 2011.

Nintendo. *Animal Crossing: New Leaf*. Nintendo Switch. 2012.

Pippin Barr. *The Artist Is Present.* Browser. 2011.

The Quinnspiracy. *Depression Quest*. Videogame. Browser. 2013.

Slimekat. *Broken Folx*. Videogame. Browser. 2016.

Slimekat. *What Now?* Videogame. Browser. 2016.

Squinky. *Interruption Junction*. Videogame. Browser. 2018.

SuperBetter, LCC. *SuperBetter.* Videogame. iOS and Android. 2015.

TRU LUV. *#SelfCare.* App. iOS and Android. 2018.