

**Computers Can't Get Wet:
Queer Slippage and Play in the Rhetoric of Computational Structure**

by

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This dissertation takes up the argument that computers are rhetorical structures that can be queered. Using cross-disciplinary methods, it examines the interplay that occurs between the layers of the computational stack – focusing in particular on the slippage between materiality, code, interface, and the resulting software – and analyzes the narratives that each layer perpetuates individually and in tandem. It applies a multi-faceted approach to queer theory in order to reveal the ways in which anti-normative computer users critique, resist, and subvert these narratives. When computers are approached as always already queer, the possibilities for disruption that exist within their limits materialize and present themselves as opportunities for intersectional exploitation. Praxis is at the heart of this project. In it, the author strives to interact with, build, and embody the technology that also serves as the object of study.

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Dedication

For Davey PHX, Briony Maeve, and the I-10 that unites us through the desert.

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Together, we write worlds.

1.0 Introduction: Computers Can't Get Wet

This dissertation takes up the argument that computers are rhetorical structures that can be queered. Using cross-disciplinary methods, I examine the interplay that occurs between the layers of the computational stack – focusing in particular on the slippage between materiality, code, interface, and the resulting software – and analyze the narratives that each layer perpetuates individually and in tandem. I then apply a multi-faceted approach to queer theory in order to reveal the ways in which anti-normative computer users critique, resist, and subvert these narratives. When computers are approached as always already queer, the possibilities for disruption that exist within their limits materialize and present themselves as opportunities for intersectional exploitation. Praxis is at the heart of this project. I strive to interact with, build, and embody the technology that also serves as the object of study.

This introduction establishes the overarching framework in which this project dwells. I begin by taking up scholarship on the stack and computation. I then outline the rhetorical framework that I use to approach each computational object, and posit composition as both a counterpoint to rhetorical critique and a methodological influence on my work. Queer theory functions as the glint of hope throughout these chapters. Because the field is, ironically, heterogeneous, it offers many outlets for interpretation. I take a queer approach to queer theory in that I borrow from many of its (often antithetical) trajectories to find subversive potential within computation. I close with a brief summary of each chapter's content and methodology. While each chapter's case study is unique, the project is unified through its connection to the stack.

The concept of a stack has a specific, localized meaning in the history of computer architecture. In principle, stack computing is the “simplest way of saving information in a temporary storage location for such common computer operations as mathematical expression evaluation and recursive subroutine calling.”¹ It is conceptually structured as a vertical array in which blocks of data are stacked. As the last block of data is placed on “top” of the stack, it is always the first to be retrieved. Stacks “only allow access to the top element in the data structure.”² This model relies on the operations “push” and “pop.” Pushing refers to adding a data block to the top of the stack, and popping refers to retrieving the data block from the top of the stack. Let’s consider a basic inventory system in a computer role-playing game. The script depicted in Figure 1 declares three functions for stacking items in an inventory system. If the player, for instance, picks up a coffee, then the push function is called. If they pick up a second coffee, the push function is called again, and the second coffee is stacked on top of the first. If the player uses a coffee, the pop function is called, and the second coffee is retrieved. The clear function allows the player to delete the items in the stack. Why begin this endeavor with an account of a computational process to which we likely shall not return in depth? Apart from an interest in computational etymology and the desire to foreshadow an artifact that will feature heavily in this project, it is to make the point that while humans are messy, when they interact with computers, this interaction always occurs on the computer’s terms.

¹ Philip Koopman, *Stack Computers: the New Wave*, (Chichester: Ellis Horwood, 1989): 16.

² Ibid., 17.

```

1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5
6  public delegate void UpdateStackEvent();
7
8  public class ObservableStack<T> : Stack<T>
9  {
10     //event that is raised when we push something
11     public event UpdateStackEvent OnPush;
12
13     //event that is raised when we pop something
14     public event UpdateStackEvent OnPop;
15
16     //event that is raised when we clear the stack
17     public event UpdateStackEvent OnClear;
18
19     public ObservableStack(ObservableStack<T> items) : base(items)
20     {
21     }
22
23
24     public ObservableStack()
25     {
26     }
27
28
29     public new void Push(T item)
30     {
31         base.Push(item);
32         if (OnPush != null)
33         {
34             OnPush();
35         }
36     }
37
38     public new T Pop()
39     {
40         T item = base.Pop();
41         if (OnPop != null)
42         {
43             OnPop();
44         }
45
46         return item;
47     }
48
49     public new void Clear()
50     {
51         base.Clear();
52         if (OnClear != null)
53         {
54             OnClear();
55         }
56     }
57 }

```

Figure 1 The Pittsburgh 10 Observable Stack Script

When I refer to the stack throughout the remained of this work, I'll be speaking of a much broader term encompasses not only temporary memory but also the entirety of the

computational assemblage. The stack, in this sense, includes voltage, magnetics, hardware, code, interface, software, users, publics, networks, et cetera. The logic of the vertical array is still present, if abstracted. In addressing the layers of the stack, Benjamin Bratton observes, “each is considered on its own terms and as a dependent layer within a larger architecture”³ Indeed, when I attempted to isolate and write about each layer in order to discuss its interplay with the layers adjacent to it, I found it could not be separated practically or conceptually from the rest of the system. Even trickier to distinguish is the line between the mechanical and social layers of the stack. While sociotechnical analysts argue, “the social is something that happens ‘after’ and ‘over’ the technical,” sociocultural analysts “are skeptical of the technological determinism at the heart of those analyses and see technological arrangements as always already social.”⁴ Paul Dourish pushes back against these generalizations and suggests that, while the role of the social must be acknowledged, the technological arrangements must also be examined in detail. In this project, I seek to locate the points at which the queer-as-social intervenes in the details of the technical. Bratton remarks, “to be clear, this figure of The Stack both does and does not exist as such; it is both an idea and a thing; it is a machine that serves as a schema as much as it is a schema of machines.”⁵ The schema of the stack works effectively for structuring this dissertation; in using it, I draw attention to the ways particular layers interact within their mechanical and social contexts.

³ Benjamin H. Bratton, *The Stack: On Software and Sovereignty*, (Cambridge, Massachusetts: MIT Press, 2015): 11.

⁴ Paul Dourish, “Protocols, Packets, and Proximity,” In *Signal Traffic: Critical Studies of Media Infrastructures*, edited by Lisa Parks and Nicole Starosielski, (Urbana: University of Illinois Press, 2015): 187.

⁵ Bratton, 5.

As this work progresses through the stack, it circles back again and again to the layers that it has already passed. Within this ebb and flow, it lights upon certain textual renderings of the layers as its touchstones. When discussing hardware, I return to Friedrich Kittler and Matthew G. Kirschenbaum. The former notes that, without human meaning making, software is only a complex representation of the voltage fed into the machine.⁶ The latter differentiates between “forensic materiality,” which can range from the resources used in electronic engineering to the labor involved in creating, cataloguing, using, and disposing of computing machinery, and “formal materiality,” which refers to the symbolic systems (e.g. bits, bytes, and binary) used to sustain a digital environment.⁷ Both acknowledge social’s influence on the technical.

When addressing the interplay between code and interface, I return to Alexander Galloway’s claim that code is the only executable language, and Wendy Chun’s observation that a result of this execution is the process by which interfaces interpellate users, or hail them into subjectivity.⁸ Conjunctionally, I assume and contest Steve Holmes’s assessment that interfaces that are transparent about their programs exhibit good rhetoric, while those that obfuscate them exhibit bad rhetoric.⁹ Upon moving up the stack to evaluate digitally networked publics, I draw

⁶ Friedrich Kittler, “There is No Software,” *CTHEORY* (1995), <http://www.ctheory.net/articles.aspx?id=74>.

⁷ Matthew G. Kirschenbaum, *Mechanisms: New Media and the Forensic Imagination*, (Cambridge: MIT Press, 2008): 10 –11.

⁸ Alexander Galloway, “Language Wants To Be Overlooked: On Software and Ideology,” *Journal of Visual Culture* 5, no. 3 (2006): 322, doi:10.1177/1470412906070519; Wendy Hui Kyong Chun, *Programmed Visions: Software and Memory*, (Cambridge, MA: MIT Press, 2011).

⁹ Steve Holmes, “Can we name the tools? Ontologies of Code, Speculative Techné and Rhetorical Concealment,” *Computational Culture* 5 (2016).

on Alice Marwick, danah boyd, and J. Van Dijck to distinguish digital publics from their traditional counterparts and identify the particular challenges their subjects face in terms of surveillance, privacy, and context collapse.¹⁰ Finally, I use video games to exemplify the functionality of computational systems. Considering my own game as an artifact, I draw on the aforementioned theories to consider its manifestation of the stack. I also utilize Ian Bogost's notion of procedural rhetoric and Bonnie Ruberg's articulation of "no fun" gaming to evaluate the rhetorical stance it makes as a whole. Computational layers are rhetorical, individually and in aggregate.

Chaïm Perelman and Lucie Olbrechts-Tyteca's explanation of the rhetorical strategy of dissociation offers a useful means of conceptualizing the rhetorical interplay and slippage that emerges between the layers of the stack. Dissociation is a rhetorical tactic that entails the speaker deconstructing a unified concept into two apparently contradictory notions. Perelman and Olbrechts-Tyteca state that is used to address inconsistencies and contradictions in human experiences and beliefs and assert that, in order to cope with this tension, humans reconceptualize these points of discrepancy as "appearance-reality pairs" in which the notion of "reality" is privileged over that of "appearance."¹¹ For instance, in addressing an unjust law, a

¹⁰ J. Van Dijck, "'You Have One Identity': Performing the Self on Facebook and LinkedIn," *Media, Culture & Society* 35, no. 2 (2013): 199–215, doi:10.1177/0163443712468605; Alice Marwick and danah boyd, "I Tweet Honestly, I Tweet Passionately: Twitter Users, Context Collapse, and the Imagined Audience," *New Media & Society* 13, no. 1 (2010): 129, doi:10.1177/1461444810365313.

¹¹ Chaïm Perelman and Lucie Olbrechts-Tyteca, *The New Rhetoric: A Treatise on Argumentation*, Transl. by John Wilkinson and Purcell Weaver, (Notre Dame: Univ. of Notre Dame Press, 1969): 415; James Jasinski, *Sourcebook on Rhetoric: Key Concepts in Contemporary Rhetorical Studies*, (Thousand Oaks, CA: Sage Publications, 2001), 175-177.

speaker might distinguish and critique the law as a corrupted “appearance” of justice and set it against the “reality” of the ideal of justice, though the two might typically be equated in public thought. The layer of appearance is that which can be manipulated, whereas that of reality is the goal toward which a rhetorician must strive.

Andreea Ritivoi further impresses the importance of this separation on the way in which we view the world; while contradictory ideas can occupy the realm of appearance, it is vital that reality maintains coherence.¹² Though contradictory laws can be just or unjust, the ideal of justice must remain stable. Working through Alan Gross and Ray Dearin, and Edward Schiappa, she reveals the tactic’s complicated relationship with truth. While the former argue for the necessity of truth as an argument’s *telos* as a means of ensuring its contribution toward the creation of knowledge rather than its potential for manipulation, the latter asserts that such an understanding presupposes “an existing true or absolute meaning,” which he claims is philosophically suspect.¹³ I find it productive to read the principles of structural linguistics through this framework. Reality, or truth, stands in for the transcendental signified, and signifieds, which continuously refer back to it even as they refer to one another, function as layers of appearance. When this approach is read in accordance with the stack, it becomes possible to identify the layers and their influence.

I use the structure of the “appearance-reality pairs” to both articulate a model in which each layer of the stack signifies the one “above” it and to queer to this model. Essentially, code both operates as the signified, or appearance, as it represents the shifts in voltage organized by a

¹² Andreea Ritivoi, “The Dissociation of Concepts in Context: An Analytic Template for Assessing its Role in Actual Situations,” *Argumentation and Advocacy* 44 (2008): 186.

¹³ Ibid., 187.

logic table and as the signifier, or reality, as it produces the interface with which the user interacts. A queer approach to this system works in accordance with Ritivoi's skepticism regarding the association between telos and truth as it skews the alignment between the bottom of the stack and a conceptual transcendental signifier. A developer can queerly design an interface to produce an alternate argument from that made by an interface designed to transparently reflect its underlying processes. An example I use to illustrate this in my fourth chapter is that of the enemy health bar in my Role-Playing Game (RPG). While in a traditional RPG, the bar diminishes upon each strike against the enemy, reflecting a basic mathematical subtraction function, I designed the interface to create the illusion of the bar filling up, suggesting an addition function. An instrument of being and becoming, queerness both reveals the fallacy of signification teleology and acts as disruption of this trajectory. Beyond argumentation, computation is also prone to rhetorical criticism.

Michael Calvin McGee's approach to the interplay between text and context in 1990 critiques the practices of the field of rhetorical criticism at the time, while participating in the growing trend of situating these concepts in relation to post-structuralist theory. McGee argues that, because in contemporary rhetorical theory, texts operate as fragments, a scholar must take the interplay and overlap of the text and context into account when performing any act of interpretation. Notably, he draws on Saussurean structural linguistics, reminiscent of the truth-value's alignment with its proximity to the transcendental signified, to render a model for this fragmentation. Explaining, "the fragment is a sign that consists of a signifier (the whole discourse it represents) and a signified (the meaning we are urged to see in the whole discourse)," McGee gestures to the risk of slippage and arbitrariness that looms between

discourse and meaning.¹⁴ Specifically, he examines the significance of the fragment through three structural relationships: that between a finished discourse and its sources, that between a finished discourse and culture, and that between a finished discourse and its influence.¹⁵ While all texts are fragments, they emerge from specific cultural and historical contexts to which they are not exclusively bound. Analyzing McGee, Campbell notes that a text's context is neither stable nor holistic but as emergent as the texts that it produces; thus, text and context are perpetually becoming rather than being.¹⁶ Texts are interconnected by virtue of intertextuality, but their meaning in relation to one another and to their culture continues to adapt in relevance in accordance to the socio-political climate in which they are created and referred.

Subversion occurs from within a system's limitations. In terms of subjectivity, Judith Butler provides a post-structuralist model for subversion within governance: "A subject will emerge in relation to an established order of truth, but it can also take a point of view on that established order that retrospectively suspends its own ontological ground."¹⁷ A subject cannot escape an established order, but can critique the order through the reflexive process. Similarly, Jacqueline Rhodes extends a model for subversion within the linguistic limitations of this rhetorical system of order. Rhodes claims, "The material of a queer text dances in the openness

¹⁴ Ferdinand De Saussure, *Course in General Linguistics*, (New York: Philosophical Library, 1959); Michael Calvin McGee, "Text, Context, and the Fragmentation of Contemporary Culture," *Western Journal of Speech Communication* 54, no. 3 (1990): 280, doi:10.1080/10570319009374343.

¹⁵ Ronald Walter Greene, "Another Materialist Rhetoric," *Critical Studies in Mass Communication* 15, no. 1 (1998): 33, doi:10.1080/15295039809367031.

¹⁶ John Angus Campbell, "Between the Fragment and the Icon: Prospect for a Rhetorical House of the Middle Way," *Western Journal of Speech Communication* 54, no. 3 (1990).

¹⁷ Judith Butler, "What Is Critique? An Essay on Foucault's Virtue," *Kritik*, (2001).

of the margin between Signifier (Sr) and Signified (Sd).”¹⁸ Like McGee’s understanding of the interplay of text and context, Rhodes’ rendering of the queer text cites Saussurean structural linguistics in order to locate the semiotic points where a text’s meaning begins to reveal its own arbitrary construction. Moreover, by evoking the language of the “margin,” she refers to Jacques Derrida’s process of deconstruction, which concentrates on the slippage not at one point but at infinite points along the chain of signifiers that continuously approaches but never ensnares an unstable center, or transcendental signified.¹⁹ However, I am most concerned with the imagery produced through her use of the verb “dances.” Similar to Derrida’s concept of play, Rhodes’s invocation of dance suggests the instability of queerness. Within and against an established order, it is not a static identity, nor even a fixed set of rules; it is instead a fluid “material” that weaves along this slippery chain, interrogating each rupture within the logic of signification as it does so.

McGee’s model is not without its flaws, and Darrel Wanzer’s critique of it points to other practical possibilities for subversion when critiquing the rhetorical structures of computation. Wanzer states that fragmentation is not a uniquely post-modern phenomenon but one that has affected the Other, the exterior world since the colonial emergence of the “modern world” in the sixteenth century. “First world” inhabitants are only now experiencing the fruit of the labors they have wrought upon Others. In order to remedy such a condition, he proposes the anti-colonial method of speaking and listening rather than the Western primacy of written and visual texts. By

¹⁸ Jacqueline Rhodes, "Homo Origo: The Queertext Manifesto," *Computers and Composition* 21, no. 3 (2004): 385–88.

¹⁹ Jacques Derrida, "Structure, Sign, and Play in the Discourse of the Human Sciences," *A Postmodern Reader* (1993).

listening to voices that have been silenced and identities that have been erased, he suggests that we can recontextualize post-modern fragmentation in a way that both repairs the fragmentation enacted upon the marginalized and decenters a predominately Western, logocentric stance.²⁰

By rendering the computational stack as a text, I discern the fragmentation, queerness, and sociopolitical properties within its layers. Just as a written text is a fragmented reference to its textual influences and its cultural context, each layer of the stack within a computational object is a fragmented reference to the layers that maintain it and to the technological community that developed it. There exists a possibility for queer slippage between these layers, especially when the stack is construed as an assemblage. Jasbir Puar's understanding of the term allows for connections to be made between ontologies, epistemologies, affective stances, et cetera., thus generating more complex conversions than those allowed for by traditional identity categories.²¹ If a queer programmer uses industry-standard software to develop a computational object with queer intent, the resulting assemblage (including the developer, their intent, and the technological layers at play) is distinct from that composed by a mainstream tech developer using the same software to a capitalistic end. This reading must still account for Wanzer's critique. Cynthia and Richard Selfe, Safiya Noble, Tara McPherson, and others comment extensively on the racist agendas perpetuated by the hardware and software that we have come to

²⁰ Darrel Allan Wanzer, "Delinking Rhetoric, Or Revisiting McGee's Fragmentation Thesis through Decoloniality," *Rhetoric and Public Affairs* 15, no. 4 (2012): 647-657.

²¹ Jasbir K. Puar, "Queer Times, Queer Assemblages," *Social Text* 23, no. 3-4. (2005).

recognize as standard.²² It is important to be aware of the narratives that we are silently validating and erasing when using mainstream tools to subversively compose.

Despite this dissertation's inception in an English composition program, its approach to the topic of composition deviates somewhat from the field. I begin with Bruno Latour who views composition as a method to combat the academy's general fruitless embrace of the postmodern. Essentially, he claims that we must use it to build the world we wish to see from diverse textual materials and competing ideologies.²³ It is nearly a direct response to the critique that Derrida – post-structuralism's poster boy – posits of Claude Lévi-Strauss's description of bricolage. If all texts are a result of bricolage – lacking a center and divorced from their mythopoetic context – and we are all bricoleurs – displacing engineers and authors alike – then writing is cast into a state of freeplay.²⁴ This play is important as it opens up the non-teleological opportunities for meaning-making, but it cannot last. We must build things that have meaning. Writing about computers and building computational objects requires both succumbing to the state of freeplay and uniting ideologically antagonistic fragments. Computers must be isolated from their sociohistoric backgrounds in order to make them palatable to subversive composers. Ultimately, you are grappling with an object that structurally reproduces capitalistic and militaristic logic on

²² See: Tara McPherson, "U.S. Operating Systems at Mid-Century: Intertwining of Race and UNIX," ed., by Peter A. Chow-White, in *Race After the Internet*, edited by Lisa Nakamura, (New York: Routledge, 2012); Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism*, (New York: New York University Press, 2018); Cynthia L. Selfe and Richard J. Selfe, "The Politics of the Interface: Power and Its Exercise in Electronic Contact Zones," *College Composition and Communication* 45, no. 4 (1994), <https://doi.org/10.2307/358761>.

²³ Bruno Latour, "An Attempt at a 'Compositionist Manifesto,'" *New Literary History* 41, no. 3 (2010).

²⁴ Derrida, "Structure, Sign, and Play."

principle through flexible approaches to marketing and targeting, command and control tactics, blackboxing, et cetera.²⁵ However, in recomposing them – materially and textually – with subversive intent, we imbue them with alternative narratives than the ones they perpetuated before the process of deconstruction. In this dissertation, this narrative is intentionally queer.

But a composer shall not live by Latour alone. Indeed, his manifesto comes as something of an affront to a field that had already laid claim to the name and produced a great deal of scholarship in accordance with it. Although composition rarely presents a unified front in this dissertation, the ways in which it dovetails with the digital humanities inspire much of the experimentation it addresses. Steven Hammer’s work on glitch art is foundational in my thinking on the slippage inherent to computational systems. His observation that “media and systems—and certainly humans—exist and perform as much in terms of failure as in terms of function” conveys the paradoxical ethos of the glitch, which symbolizes a failure in my own game but a function in a speedrun.²⁶ Similarly, his collaborative essay with Aimée Knight methodologically shapes my own mechanical composition process.²⁷ Refashioning hardware manipulation as play allows for bugs and crashes to be as productive as a finished project.

Composition intervenes at each layer of the stack, and it is especially suited to the realm of code. Annette Vee lucidly reads programming languages through the linguistic framework J.L. Austin’s speech act theory, stating, “code and text both have audiences, intent, and effects,

²⁵ Rebecca Slayton, *Arguments That Count: Physics, Computing, and Missile Defense, 1949-2012*, (Cambridge: MIT Press, 2013), 12–13.

²⁶ Steven Hammer, “Writing (Dirty) New Media / Glitch Composition,” *Technoculture* 4 (2014).

²⁷ Steven Hammer and Aimée Knight, “Crafting Malfunction: Rhetoric and Circuit-Bending,” *Harlot* 14 (2015), <http://harlotofthearts.org/index.php/harlot/article/view/261/173>.

which play out very differently between the two symbolic writing systems.”²⁸ I portray this structurally and visually in *Pittsburgh 10*. In the game’s code, I am writing to both the machine, instructing it to run the designated procedures, and to other programmers, informing them of my choices to subvert the logic of traditional RPGs through naming conventions. I also illustrate it on the interface, modeling the interpersonal interactions with the Others in the game (graphic reproductions of algorithms themselves) using speech acts. Continuing in the vein of Austin, composition, in my case, is less about what to do with words and more about how to do them.

My work channels composition most authentically in its orientation. Although I rarely name it outright, within these chapters I’m often playing Peter Elbow’s believing game. He explains, “in the believing game the first rule is to refrain from doubting the assertions, and for this reason you take them one at a time and in each case try to put the others out of your head. You don’t want them to fight each other. This is not the adversary method.”²⁹ His approach to classroom discussion is not unlike Latour’s stance against criticism. Both have moved beyond the deconstructive impulse and champion a method of accepting, believing, and reworking textual data into a new composition. Although produced within a recognizable ethical framework, this dissertation is not driven by a single ideology. Instead, I play the believing game as I play with computers, taking each theory, method, and computational product in turn and establishing points of cohere between them. I’m the first to admit that I’ve abused composition as a vehicle through which I could develop this project, but I come by it honestly.

²⁸ Annette Vee, *Coding Literacy: How Computer Programming Is Changing Writing*, (Cambridge: MIT Press, 2017), 114.

²⁹ Peter Elbow, “The Doubting and Believing Game: An Analysis of the Intellectual Enterprise,” in *Writing Without Teachers* (New York: Oxford University Press, 1998).

My personal trajectory toward the field of composition has been wobbly at best. Although I had been working at the St. John's University Writing Center for three years, I hadn't given composition much scholarly attention until I had the opportunity to present at the 2013 Conference on College Composition and Communication in Las Vegas, Nevada. My talk featured a rhetorical analysis of synchronous online writing tutoring sessions, and in addition to surveying writing center specific literature, I engaged with work such as Cynthia Selfe's collaborative considerations of the ways in which class differences were thrown into sharp relief by the advent of computers in the English composition classroom.³⁰ Selfe's relentless attention to the marginalization that occurs at the intersection of writing and technology still guides much of my research. My experience at the conference was enlightening enough to inspire me to reconsider pursuing a PhD in modernist literature (thank God); I delayed my grad school application process by two years in favor of a brief career in writing center administration.

While I was cultivating my practical pedagogical skills in tutoring and teaching English, I was also beginning to explore the gay, gay world of digital publics. When I stumbled Zach Blas's work on *Queer Technologies* and his tongue-in-cheek project transCoder, a "Queer Programming Anti-Language," the pieces clicked into place.³¹ I knew what writing could do, but this was what writing was for. I drafted a project proposal about the rhetorical development of queer online communities. It was integral for me to stay in an English department; I was familiar

³⁰ See: Gail E. Hawisher and Cynthia L. Selfe, "The Rhetoric of Technology and the Electronic Writing Class," *College Composition and Communication* 42, no. 1 (1991): 55, <https://doi.org/10.2307/357539>; Charles Moran and Cynthia L. Selfe, "Teaching English Across the Technology/Wealth Gap," *The English Journal* 88, no. 6 (1999): 48, <https://doi.org/10.2307/822187>.

³¹ Zach Blas, "Queer Technologies," Zach Blas Info, 2012, <https://zachblas.info/works/queer-technologies/>.

with the field's theories and methods and trusted its intentional concern with inclusion, intersectionality, and experimentation. Composition offered me the flexibility to craft a cyborg of a dissertation that is still recognizable as an English project. It has provided me with not only a space to compose but also to queer composition.

As a field, queer theory's development and composition has been anything but stable. Indeed, at each moment when it appears to find some semblance of definitional footing, it spawns another manifestation that, at least partially, contradicts this iteration. While each wave is not completely reactionary, as it borrows elements from that to which it is responding, it seeks to adapt to the ever-shifting concept of normativity and find new, productive ways to question and challenge the systems that govern our lives. "Queerness," by definition, thus runs the course from being to absence, identity to theory, verb to noun, and all manner of spectrums, networks, and other visualization tactics in between. For instance, Alexander Doty indicates that queerness is always already present in a text, claiming that even texts that appear normative on the surface contain that potential for queer reading. However, José Esteban Muñoz suggests that it is ever only on the horizon.³² Similarly, while Teresa de Lauretis's original academic definition – still bound up in its activist roots – refers to an inclusive, intersectional term for the LGBTQIA+ community, those in the anti-normativity camp claim that the term can be employed as a tool "to define (homo)sexual identity oppositionally and relationally, but not necessarily substantively,

³²See: Alexander Doty, *Making Things Perfectly Queer: Interpreting Mass Culture*, (Minneapolis: University of Minnesota Press, 1993); José Esteban Muñoz, *Cruising Utopia: The Then and There of Queer Futurity* (New York: New York University Press, 2009).

not as a positivity but as a positionality, not as a thing but as a resistance to the norm.”³³ Likewise, while anti-normativity devolves off into an anti-social circle jerk (fun and exciting, yet with a tendency to spiral into a void), championing failure, the death drive (and its livelier cousin, the pleasure principle), and the obliteration of the institution of marriage, as well as the promise of futurity wrapped up in the figure of the child toward which it is continuously propelled.³⁴ However, those arguing from a standpoint of anti-anti-normativity indicate that just as “normativity” does not operate as a homogenous force – and indeed, even some heterosexuals face multi-faceted layer of systemic oppression – queerness similarly cannot be understood through the blanket statement of “oppositional to the norm,” as doing so erases the nuanced struggles and experiences of those situated at different positions in relation to the norm.³⁵

In order to remedy its tendency toward oversimplification when defining the complex notion of normativity against which it is ever striving, queer theory has turned somewhat away from the realm of ephemeral theory and striven to ground itself in lived experience. Operating in the vein of anti-anti-normativity, Janet Jakobsen assumes this position’s more traditional

³³ David M Halperin, *Saint Foucault: Towards a Gay Hagiography* (New York: Oxford University Press, 1995); Teresa de Lauretis, “Queer Theory: Lesbian and Gay Sexualities. An Introduction,” *differences* 3, no. 2 (1991): iii–xviii; Erin Rand, *Reclaiming Queer: Activist & Academic Rhetorics of Resistance*, (Tuscaloosa: The University of Alabama Press, 2014).

³⁴ See: Lee Edelman, *No Future: Queer Theory and the Death Drive* (Durham: Duke University Press, 2004); Judith Halberstam, *The Queer Art of Failure* (Durham: Duke University Press, 2011); Michael Warner, *The Trouble with Normal: Sex, Politics, and the Ethics of Queer Life* (New York: Free Press, 1999).

³⁵ See: Cathy Cohen, “Punks, Bulldaggers, and Welfare Queens: The Radical Potential of Queer Politics?” *GLQ: A Journal of Lesbian and Gay Studies* 3, no. 4 (1997); Annamarie Jagose, “The Trouble with Antinormativity,” *Differences* 26, no. 1 (2015).

intersectional approach when explaining the act of forming alliances between those differently positioned but similarly oppressed by dominant power structures and ultimately posits queerness as something one does.³⁶ Jasbir Puar's understanding of the word finds intersections along less familiar categories, blurring knowing, being, and becoming in her wholly ambiguous, yet valuable model of the queer assemblage as that which "[merges] and [dissipates] time, space, and body against linearity, coherence, and permanency."³⁷ Similarly affective, Sarah Ahmed's queer phenomenology locates queerness in one's orientation towards an object, person, community, trajectory, et cetera.³⁸ For a theory that concerns itself so thoroughly with pleasure, it ends up being a huge pain in the ass (which may, for some, be the point). Thus, I argue operating through any one of these theoretical lenses, or even trying to craft my own, would be disingenuous to the inherently slippery properties of queerness; instead, I choose to borrow from each as the appropriate context presents itself.

Each of these iterations is integral to my work in queering computation. Queer phenomenology lends me the orientation that I assume while composing hardware. Queer failure and anti-normativity provide me with an alternate way to perceive the glitches, bugs, and crashes that I encounter in playing with and developing software. An intersectional angle reveals the similar structural oppression that minority groups (e.g. sex workers) face within networked publics. The model of the assemblage enables me to compose queer cyborgs from unlikely

³⁶ Janet Jakobsen, "Queer is? Queer does? Normativity and the Problem of Resistance," *GLQ: A Journal of Lesbian and Gay Studies* 4, no. 4 (1998).

³⁷ Puar, "Queer Times, Queer Assemblages."

³⁸ Sara Ahmed, "Queer Phenomenology," *GLQ: A Journal of Lesbian and Gay Studies* 12, no. 4 (2006), <https://doi.org/10.1215/9780822388074>.

alliances – anarchists and microchips, corporate entities and speedrunners, amateur developers and advanced game engines, etc. The concept of queer utopia as a worldmaking method allows me to digitally simulate the process that I strive to enact in my own community. Always, however, I must return to bodies and politics. Queer theory is really fun, but it's also really serious – not unlike play. In each of the following chapters, I strive to return to the identities and communities upon which it rests.

Using Latour's understanding of composition, my first chapter, "I'm a Cyborg, but that's Passé," examines the slippage between hardware and meaning. The chapter is theoretically framed through a reading of composition as a mode of bringing together unlike parts and ideologies to create an assemblage that is fit to survive in a fragmented, post-modern world. It takes up phenomenology to argue that this assemblage can assume a queer orientation. Structurally, it is built around two personal narratives. In the first, I reflect on the near field communication (NFC) and radio frequency identification (RFID) microchips I had implanted in my hands and how I used the former to connect to my video game studio website. From this story, I am able to discuss the cyborg as a literal figure in biohacking communities and a metaphorical one in humanities scholarship. In both iterations, I conceive of it as an icon of queer play and a disruption of the continuum of the norm. In the second, I discuss my failure in building a PC using a Raspberry Pi kit. Although in many ways, DIY computers structurally perpetuate traditional narratives, they can also be used to resist the black box of the mainstream tech industry by merit of acting as a channel for computational epistemology. I close read a project that I see having the potential to do so. Ultimately, I conclude, hardware is both an operational mechanism and a text upon which people and communities project meaning and power.

Methodologically, this chapter relies on auto-ethnography and composition. The former is integral to my way of composing. I embody the topics covered in this work through my own identity and through the affective connections I have to my community. I've been told that I too frequently incorporate my non-academic interests into my research. As a result, I'm not sure where I end and this dissertation begins. The latter is a concept that I initially rejected. I spent many years in this program claiming that my tent was pitched firmly in the rhetoric camp and that composition was an unfortunate corollary to my degree. However, after reorienting myself to the practice by way of Latour and reflecting on my own career in the field, I realized that I've been composing this whole time. Together, they function as a methodological outset and a touchstone to which I return throughout the following chapters.

In the second chapter, "Ocarina of Impeccable Timing," I take a critical approach to the practice of speedrunning, or the act of completing a game within the shortest amount of time, typically through the use of glitches. Throughout the work, I ground my analysis in the example of the *Ocarina of Time* run performed by Narcissa Wright, a champion transgender speedrunner, at the 2013 Awesome Games Done Quick convention. I begin by reading hers and others' runs through Perelman and Olbrechts-Tyteca's strategy of dissociation and claim that, in the process, the game's code is allocated to the position of the "real" while its interface is cast into the role of "appearance." I then use post-structuralist and intersectional queer theory to consider the glitch as an avenue toward queering the network as a whole, reconfigure the game's code as a penetrable and malleable assemblage, and reframe the resulting interface as a temporally fragmented narrative. Lastly, I concentrate on the tension between the speedrunning community's rejection of queer bodies and identities and the "textual wink" transgender players

signal to their audiences. I conclude by advocating for a return to queer politics in conjunction with queer methodology.

Although this chapter works predominately with rhetorical analysis as its method, it also strives to model an appropriate scholarly use of queer theory. Queer theory should not be divorced from the bodies, identities, and communities that produced it. It is not an apparitional thought experiment that can be selected and employed at will. It is a way of being. Embodiment is a struggle, but it is also a real and tangible part of queer theory and computational practice.

My third chapter, “Sex in Networked Publics,” examines how vulnerable populations experience and resist policing within Social Networking Sites (SNS).³⁹ It centers on an IRB-approved qualitative study of the rhetorical and technological strategies that site users who are involved with or adjacent to sex work communities use to self-identify, as well as the cyber security tactics they employ to preserve their privacy within and between disparate digital publics. I consider the sites Facebook and FetLife, reading their approaches to authenticity and data collection through the literature on networked publics and counterpublics. I then discuss each website’s policy regarding sex work in accordance with the domestic legislation regarding to sex work insofar as it relates to offline and online spaces. Through the results of the study, I expand the conversation surrounding digitally networked publics, locate and examine the intersection between online sex work, surveillance, and privacy as it exists within these publics, and provide a detailed account of the methods online sex workers use to manufacture and manage their personal and professional identities within and between these publics. In addressing these strategies, I highlight the necessity of marginalized individuals using informed cyber security practices both to combat surveillance and to protect themselves and their communities.

³⁹ See: S.L. Nelson, “Sex Work and Social Media,” *Lateral* 8, no. 1 (2019), <https://doi.org/10.25158/l8.1.4>.

The methodology of this chapter is a testament to my foray into the social sciences. It began as a close reading of social networking site policy. After observing that many of these publics actively discriminated against sex workers, I decided to conduct further research. In a sociology graduate seminar, I learned the essentials of qualitative questioning and analysis. I worked closely with Pitt's IRB office, as well as my contacts at each of the survey distribution sites, to ensure that my research methods were ethical. I submitted the article version of this chapter to the cultural studies journal, *Lateral*, and received extensive feedback regarding data presentation and contextualization. Because of these influences, the resulting chapter is necessarily collaborative and interdisciplinary.

The final chapter of this project, "Pittsburgh 10," is comprised of two parts: a digital artifact and a process paper that further works to situate the artifact within the emerging field of queer game studies. The artifact is a video game. It's a two-dimensional RPG that examines interpersonal interaction, mutual aid, and neoliberalism in a bizarre town called Pittsburgh. You can play it in your browser at <https://desertwifigames.itch.io/pittsburgh-10>. In fact, I'd encourage you to do so. The artifact is also a fake independent game studio called Desert WiFi Games, an Instagram account with over one thousand followers, and a line of questionable merchandise. It's also an IRB-approved survey, conversations with friends, and a series of parties thrown, in part, to impress girls. A network emerges. The chapter that accompanies the artifact assumes the challenge of arguing that the game is the unifying principle between the previous three chapters. In it, I discuss the material tribulations I encountered during development, the ways that the game's interface subverts the procedural rhetoric of traditional RPGs, and procedures by which the game's narrative simulates the process of queer worldmaking through acts of mutual aid. See what I did there – wraps up neat, don't it?

The purpose of the methodology parallels that of the content. The game development process is a return to composition as method, and the written portion methodologically unites the approaches taken in each of the previous chapters. I composed the game as a queer assemblage. It's stitched together from YouTube tutorials, open source game art, and the lived experiences of those around me. The chapter itself is a similar monstrosity. In it, I use auto-ethnography to reflect on my composition process, rhetorical analysis to analyze the slippage between the game's code and its interface, and qualitative research to flesh out the narrative world simulated by the game. In many ways, *Pittsburgh 10* has become metonymic for the dissertation itself.

Computers can't get wet. The human body, however, is predominately composed of water. Sure, the title of this dissertation is a sex joke. It's a queer project, so how could it not be? But it's also a claim about the relationship between people and computers. In a vacuum, a computer is a slab of metal, plastic, magnets, silicon, and a slew of other materials that I'd need an entire separate degree to accurately identify. It's powered by electricity, and when electricity meets water, the result will shock you. Similarly, when people engage with computers, they commit unthinkable atrocities. But they also play.

2.0 Chapter One: I'm a Cyborg, But That's Passé

Negotiating the frontier between bodily and technological autonomy, this chapter examines the (sometimes literal) slippage between wetware, hardware, and software. I begin by reading Latourian composition scholarship in accordance with the rhetorical and material processes of computational composition. I then ground this theory in two interrelated sections punctuated by personal vignettes. In each, I begin with a brief auto-ethnography, move into its theoretical significance, and conclude with its queer potential. In the first, I use transhumanism and phenomenology to discuss the process by which I had a near-field communication (NFC) chip implanted in my left hand and a radio-frequency identification (RFID) chip implanted in my right hand. In the second, I discuss my experience in building and programming a Raspberry Pi computer, using it, in part, to indulge Kittler's claim that there is no software. I conclude by establishing my scholarly orientation towards computers, arguing that intentional composition is necessary when engaging in theoretical criticism.

2.1 Rhetorical Composition of Computing

For Latour, composition is a practical and a theoretical methodology, a possibility that resides in the present and one that can potentially shape the future. He argues, "compositionism takes up the task of searching for universality but without believing that this universality is

already there, waiting to be unveiled and discovered.”⁴⁰ Not unlike Muñoz’s vision of a queer utopia – a point on the receding horizon towards which the anti-normative perpetually strive – Latour’s model of composition operates as the process by which those dwelling in the academy can endeavor to reconstitute a form of scholarship from the ashes of postmodernism.⁴¹ He elaborates, “from universalism [compositionism] takes up the task of building a common world; from relativism, the certainty that this common world has to be built from utterly heterogeneous parts that will never make a whole, but at best a fragile, revisable, and diverse composite material.”⁴² This chapter channels Latour’s spirit of composition-as-bricolage in terms of its form, subject matter, and political slant. It is composed of my experientially heterogeneous brushes with digital technology. Likewise, the objects upon which the case studies focus are serendipitously composed. Ideologically, the chapter aims not to oppose or even unveil the neoliberal framework that governs the production of mainstream technology, but – following Judith Butler’s and Jacqueline Rhodes’s models for subversion within established systems – to build a queer computational common ground within the limitations of this landscape. It is a haphazard composition but one that introspectively locates the purpose within its own randomness.

Latourian composition is reconcilable with traditional rhetorical practices. Composition offers an alternative scholarly position to that of critique, which stained the expanse of postmodern thought. “Critique,” declares Latour, “has all the limits of utopia: it relies on the certainty of the world beyond this world. By contrast, for compositionism, there is no world of

⁴⁰ Latour, ““Compositionist Manifesto,”” 474.

⁴¹ Muñoz, *Cruising Utopia*, 1.

⁴² Latour, “Compositionist Manifesto,” 474.

beyond. It is all about immanence.”⁴³ In accordance with this work’s theme of rejecting teleology, critique orients itself toward utopia as a destination, while composition embodies utopia as a method; critique targets the realm of appearance in an attempt to uncover the real, while composition constructs the real in the slippage between the layers. This construction is by no means apolitical, and rhetorical agency hovers within word, object, and the relationship between them. In their reading of Latour, Paul Lynch and Nathaniel Rivers remark, “indeed, the world can be productively understood as a rhetorical machine fueled by both persuasion and technology, each shaping the other.”⁴⁴ I choose to interpret this observation somewhat literally. While I strive to computationally compose in alignment with the tenants of a queer utopic methodology, the technological text within and between my hands asserts its own claims in context.

In Latour’s paradigm, outlined through his characteristic Actor-Network Theory, humans are not the only actors with rhetorical agency. He states, “for scientific, political, and even moral reasons it is crucial that enquirers do not in advance, and in place of the actors, define what sorts of building blocks the social world is made of.”⁴⁵ The microcosmic social world examined here – that of an imagined digital common ground – is defined by engineers, programmers, and users – human enquirers – and also by shifts in voltage, circuits, microchips, and other material building blocks operating behind the interface. When both humans and computers are cast as actors, the

⁴³ Ibid., 475.

⁴⁴ Paul Lynch and Nathaniel Rivers, “Introduction,” in *Thinking with Bruno Latour in Rhetoric and Composition*, ed. Paul Lynch and Nathaniel Rivers (Carbondale: Southern Illinois University Press, 2015), 5.

⁴⁵ Bruno Latour, *Reassembling the Social: an Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2008), 41.

binary division between the two begins to corrode. Without human intention and meaning, computers remain mechanisms that signify shifts in voltage and magnetic charge; without technology, the human capacity for communication, connection, and control is limited. Together, humans and computers create a cyborg assemblage that is somehow distinct from either party individually. It is, however, necessary to acknowledge and take accountability for unidirectional chain of creation and signification between humans and computers. Humans can exist without computers; computers wouldn't exist without humans.

Though I read Latour generously, I do so with the spirit of productive tension against his embrace of object-oriented ontology. I adopt his effort to deconstruct binaries, but reject the autonomy he grants to inanimate, non-human actors. He argues, “nature is not a thing, a domain, a realm, an ontological territory. It is [...] a way of organizing the division [...] between appearances and reality, subjectivity and objectivity, history and immutability.”⁴⁶ Along these lines, it is tricky to find an exact point of separation between humans-as-natural and technology. In attempting to do so, it is important to ensure that we distribute responsibility where it is due. While we cannot isolate a computer – or really any manmade machine – and regard it as an autonomous being, the spectrum of possibility that emerges when humans come into contact with technology is staggering and political. A person with access to a computer operates as a different type of actor than one who does not. The former has greater purchase on the economic, social, and intellectual systems that structure our globally networked public and assumes the ability to exploit them on a larger scale; however, they are also at greater risk of surveillance and exploitation. The computer changes the person. In this case, as in others, the apparent presence of a binary signifies the possibility of a continuum.

⁴⁶ Latour, “Compositionist Manifesto,” 476.

Latour is obviously skeptical of the artificial divide between human and non-human (natural?) actors, and despite my misgivings, I likewise push back on that which is suggested between humans and computers. Wryly, Kittler remarks, “all code operations, despite their metaphoric faculties such as ‘call’ or ‘return,’ come down to absolutely local string manipulations and that is, I am afraid, to signifiers of voltage differences.”⁴⁷ Although his statement is intended to be reductive, when read in accordance with Latour, a hopeful network emerges. Voltage travels along power lines and manipulates logic tables; code dictates the movement of this voltage and acts as a linguistic system; microchips are embedded in computers, cats, and people. In accordance with McGee’s work, each “text” is imbued with meaning in conjunction with its context.

Systems contain human and non-human actors and are composed by the relationships between them. According to Latour, “the more nonhumans share existence with humans, the more humane a collective is.”⁴⁸ While I oppose the idea that these nonhumans imbue the collective with humanity by virtue of their own authority, I agree that humans can collaborate with nonhumans to this end. Each actor – human and cyborg – can conceivably queer the collective as a whole. Intentional community comprised of alternate relationships than those validated by the State and the acts of mutual aid performed within them are an integral part of queer theory. Lauren Berlant and Michael Warner famously center the queer world making process in the combination of platonic, romantic, and sexual connections that can form beyond the traditional structure of the monogamous (often married) heterosexual, potentially

⁴⁷ Kittler, “There is No Software.”

⁴⁸ Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies*, (Cambridge: Harvard University Press, 2000), 18.

reproductive couple. ⁴⁹Butler similarly critiques the history of kinship as the relationships that have been granted power and meaning by the law and says of alternate modes, “it would seem crucial, then, to understand the assembling operation they describe in light of the thesis that kinship is itself a kind of doing, a practice that enacts that assemblage of significations as it takes place.”⁵⁰ Just as queer utopia is a method, queer kinship is a process of assembling; alternate bonds form and gain significance through the roles the actors play within them. Queer communities are cyborg-like in their drive to compose themselves through intentional and accidental collectivity, and the alternate bonds created and validated between human actors allow, in turn, for meaning to be given to the connections formed between human and non-human actors as well.

Throughout this dissertation, I will gesture to queerness as the paradoxical many-headed hydra that exists and is intentionally implanted in the sticky space between constructed computational binaries. In this chapter specifically, I locate queerness in a phenomenological mode of being and becoming within and between computers and people. The ghost in the machine. Latour remarks, “we need to have a much more material, much more mundane, much more immanent, much more realistic, much more embodied definition of the material world if we wish to compose a common world.”⁵¹ In response to a fragmented world, we must return to the body as the foundation for a common ground. Donna Haraway also champions a similar

⁴⁹ Lauren Berlant and Michael Warner, “Sex in Public,” *Critical Inquiry* 24, no. 2 (1998), doi:10.1086/448884.

⁵⁰ Butler, J. “Is Kinship Always Already Heterosexual?” *Differences* 13, no. 1 (January 2002): 36. <https://doi.org/10.1215/10407391-13-1-14>.

⁵¹ Latour, “Compositionist Manifesto,” 484.

dream but one that accounts for systems of gendered oppression amidst the fragmentation, claiming that her project is “an effort to contribute to socialist-feminist culture and theory in a postmodernist, non-naturalist mode and in the utopian tradition of imagining a world without gender, which is perhaps a world without genesis, but maybe also a world without end.”⁵² Within this utopia, which holds a similar linguistic resonance as Latour’s, the figure of the cyborg emerges as the embodied inhabitant, a being made of composite materials of a previous world that enables its survival in this new world. Haraway’s iteration of the cyborg is inherently queer: “the cyborg is a creature in a post-gender world.”⁵³ When gender is eradicated, alternate forms of queerness emerge. People cease to be classified based on preconceived notions of gender, and this disruption of the norm creates the space for alternate ways of being and relating. It is this figure of the literal and metaphorical queer cyborg that I channel throughout my case studies.

As indicated through my fixation on phenomenology, I draw my predominate interpretation of queerness in this chapter from Sara Ahmed. She writes, “phenomenology can offer a resource for queer studies insofar as phenomenology emphasizes the importance of lived experience, the intentionality of consciousness, the significance of nearness or what is ready to hand, and the role of repeated and habitual actions in shaping bodies and worlds.”⁵⁴ Phenomenology lends orientation and intent. Because it does have a teleological goal, it provides

⁵² Donna Jeanne Haraway, “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century,” In *Simians, Cyborgs, and Women: the Reinvention of Nature*, (New York: Routledge, 2015), 150.

⁵³ Ibid.

⁵⁴ Sara Ahmed, “Queer Phenomenology,” *GLQ: A Journal of Lesbian and Gay Studies* 12, no. 4 (2006): 544, <https://doi.org/10.1215/9780822388074>.

guidelines for ways of being while moving along an undefined path. I acknowledge ad infinitum that technology, beginning with hardware, can and is used for oppressive purposes. However, in these experiments – begotten, in many cases, from the pieces that were closest to hand – I strive to consciously create in a way that lends itself to queer individual and communal development. One of the greatest mistakes we can make is to claim that computers are utterly Other than us; we created them, and they are our responsibility.

2.2 After Two Drinks, I Tell Everyone That I Have Hand Chips

Grounding my analysis in the following anecdote, I discuss the queer, compositional potential of the self as cyborg. I begin by reading the figure in accordance with Latour’s understanding of composition and its relation to DIY ethos. I then examine the figure of the cyborg from both a biohacking and humanist angle, locating the queer, phenomenological assemblage as the point of intersection between the two. Following the rhetorical thread of queer subversion, I consider how the cyborg is a creature of queer play and a disruption of the continuum of the norm. I close this section with a brief review of the ways in which corporations have begun to use the very cyborg technology that I volunteered to adopt to exercise new forms of surveillance and control.

Vignette I. At the crack of dawn on September 22, 2018, I bus out to a warehouse-turned-makerspace on the edge of Pittsburgh to attend Human Augmentation 101, an offshoot of BODYHAX. I’d skimmed the website beforehand, which claimed that these “events are about

bringing introductory human augmentation content to your local community.”⁵⁵ Bit vague. From across the table of free Soylent, however, it becomes apparent that this is one of those quasi-mystical intersections between tech bros, academics, and anarchists. The talk topics range from a panel on biopolitics (complete with the obligatory Foucault citation), wearable tech, synthetic hormones, and the autobiographic account of a man who had injected himself with CRISPR (a family of DNA sequences found in organisms such as bacteria). Not exactly CCCCs territory.

Behind the presentation area, two reps from Dangerous Things occupy a table. The company, which claims to be “the world’s only supplier of the most advanced and rigorously tested consumer RFID and NFC transponder implants,” had been on my radar for a couple of years.⁵⁶ Cyborg shit. A friend and I had looked into implants before, but the issue had always been the installation. Although I know a disproportionately large group of folks who inject themselves with synthetic hormones on the reg, I’d never felt confident about sticking an object the size of a grain of rice into my mortal flesh. But here’s a man with an ambiguous medical/technical background offering to do it for fifty bucks a pop.⁵⁷ When in Rome. When the group breaks for lunch, I wander back to the table and asked a few questions that definitely outed

⁵⁵ “BodyHacking Con.” BodyHacking Con, 2019. <https://bodyhackingcon.com/faq/>.

⁵⁶ Amusingly, this rhetoric manages to be simultaneously edgy yet palatable. “Dangerous Things.” Dangerous Things, 2019. Accessed December 5, 2019. <https://dangerousthings.com/>.

⁵⁷ Enno Park observes, “It is very difficult to find a physician who is willing to implant non-medical cyborg devices into the body. Such operations are regulated by ethical commissions and would contravene the Hippocratic oath in most cases.” As a result, most microchips are implanted either by the individual, at bodyhacking events, or at tattoo/piercing parlors. Enno Park, “Ethical Issues in Cyborg Technology: Diversity and Inclusion,” *NanoEthics*, vol. 8, no. 3, (2014): 306, doi:10.1007/s11569-014-0206-x.

me as a n00b. Can you be tracked using the device? (No.) How would you remove the device? (A friend, a bottle of bourbon, and an X-Acto knife.)⁵⁸ Sold.

I transfer him \$150 via PayPal (a detail that would painfully nullify department reimbursement later on) and sit down. Start with the left. Bang it on the table and avert my gaze. The disinfectant is cold, and then I feel the latex and the needle all at once. The chip pops when it hits home. Rice krispies. He informs me that there's "sand coming out of my veins." Dehydration is an inherent quality in desert creatures. I drink some water and return for round two. The RFID chip hits home, a little deeper, a little closer to the nerve. And it's done.

After coming down from the adrenaline rush and removing the bandages, I evaluate my new hardware. The microchips are properly buried in the tissue, signified only by the slowly scarring scabs that marked the point where they'd entered the skin. Wild. But body horror and fifty cents will get ya a cup of coffee. I had to use the damn things. A deep Google, however, revealed that I'd fucked up. Many of us will recall the siren song of the 2013 Apple interface, and poor, sweet summer child Avey had not been immune to its charms. I have a MacBook Pro and an iPhone 7, and at this point, only PCs and Androids are compatible with NFC and RFID hardware. Bummer. So I do what any self-respecting millennial would in this situation and posted an offer to swap beer for an old Android to my Instagram story. A friend in Baltimore responds that I can adopt their 2015 HTC Desire, so I book a Greyhound ticket out east. The phone is laggy, cracked, and structurally unsound; in short, it's perfect.

⁵⁸ Yetisen details the anatomy of the chip's exterior: "This antimigration cap consists of a porous polypropylene sheath, which promotes the growth of fibrocytes and collagen fibers around the device. Their removal is an invasive process and may result in complications." Great. Ali K Yetisen, "Biohacking," *Trends in Biotechnology*, vol. 36, no. 8, (2018): 746, doi:10.1016/j.tibtech.2018.02.011.

Upon returning to Pittsburgh, I download the necessary applications for the next stage of the case study. First, I install the Dangerous Things NFC app, which allowed me to lock the NFC chip as read/write and password protect it. Then, I get the NFC Tools app, which performs basic NFC Read and Write functions. I have to wiggle the phone around my hand a bit, but eventually it detects the chip, spits out its serial number, and tells me I have 868 bytes of free space still available. It takes me over a year to decide what to store on the chip. I want it to be something good in case (despite my precautions) I accidentally lock it in a read-only position. This “something good” comes to me upon completing development for my video game, *Pittsburgh 10*. I’d named my fake game studio Desert WiFi Games based on a vision I had in Joshua Tree, California and had built a distribution webpage for it through itch.io. I return to the NFC Tools app, and using the “Write” feature, added a record that contained the studio’s URL.⁵⁹ I write the URL on the chip, then read the chip again. Sure enough, the NFC reader takes me to the Desert WiFi Games landing page. The page’s banner features a photo of my brother running across the dunes west of Yuma, Arizona. Technology is messy, embodied, and beautiful.

⁵⁹ Avey Nelson, “Desert WiFi Games,” itch.io, 2019, <https://desertwifigames.itch.io/>.

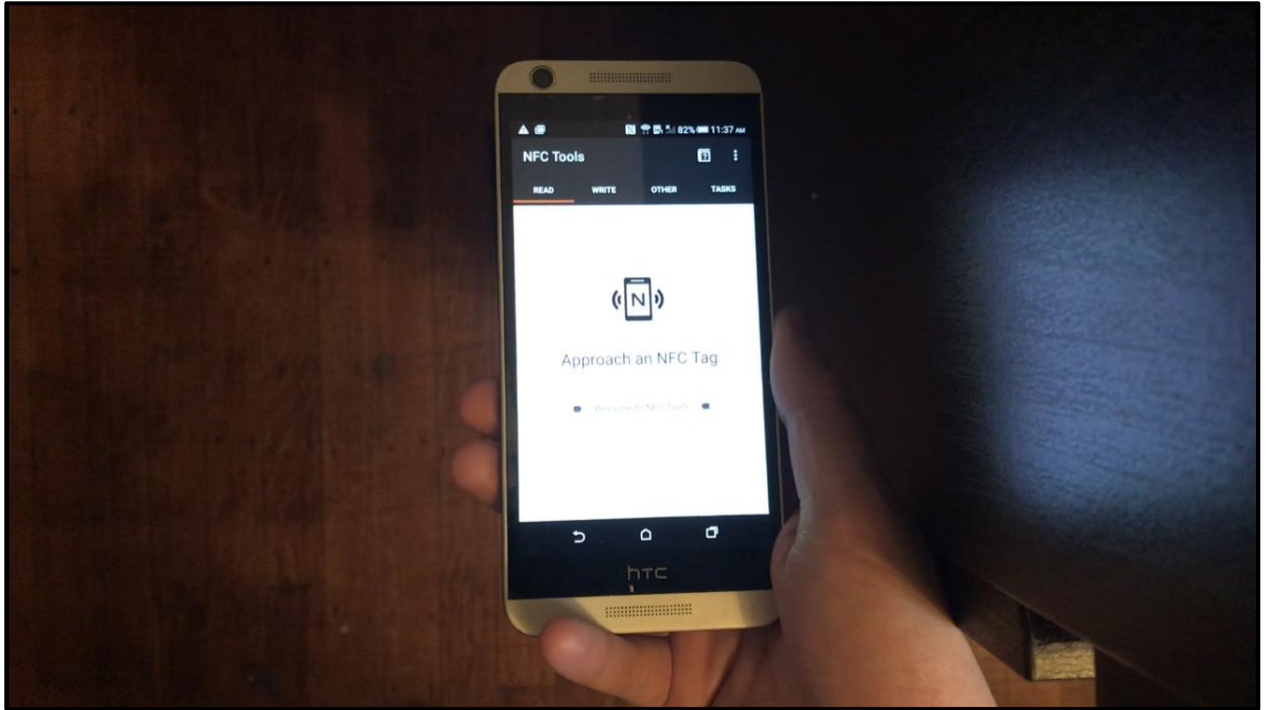


Figure 2 The NFC Tools Application on a 2015 HTC Desire

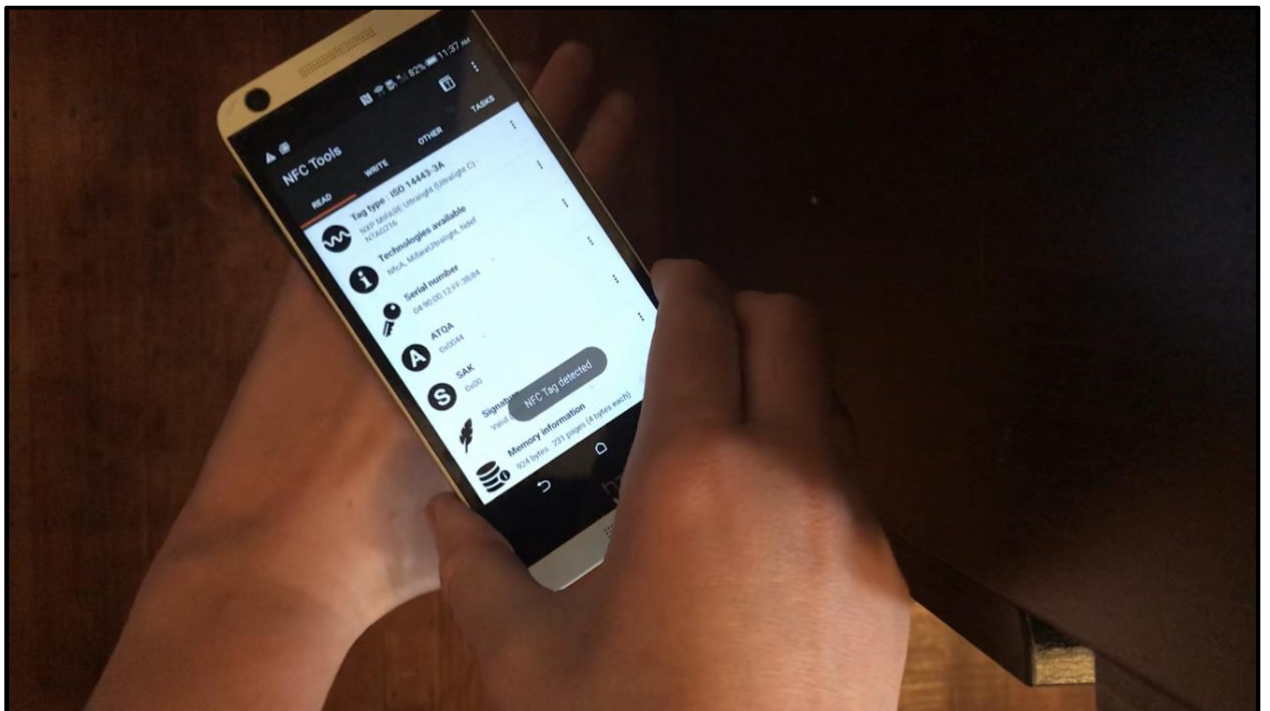


Figure 3 The HTC Desire Reading the Desert WiFi Games Website from the NFC Chip

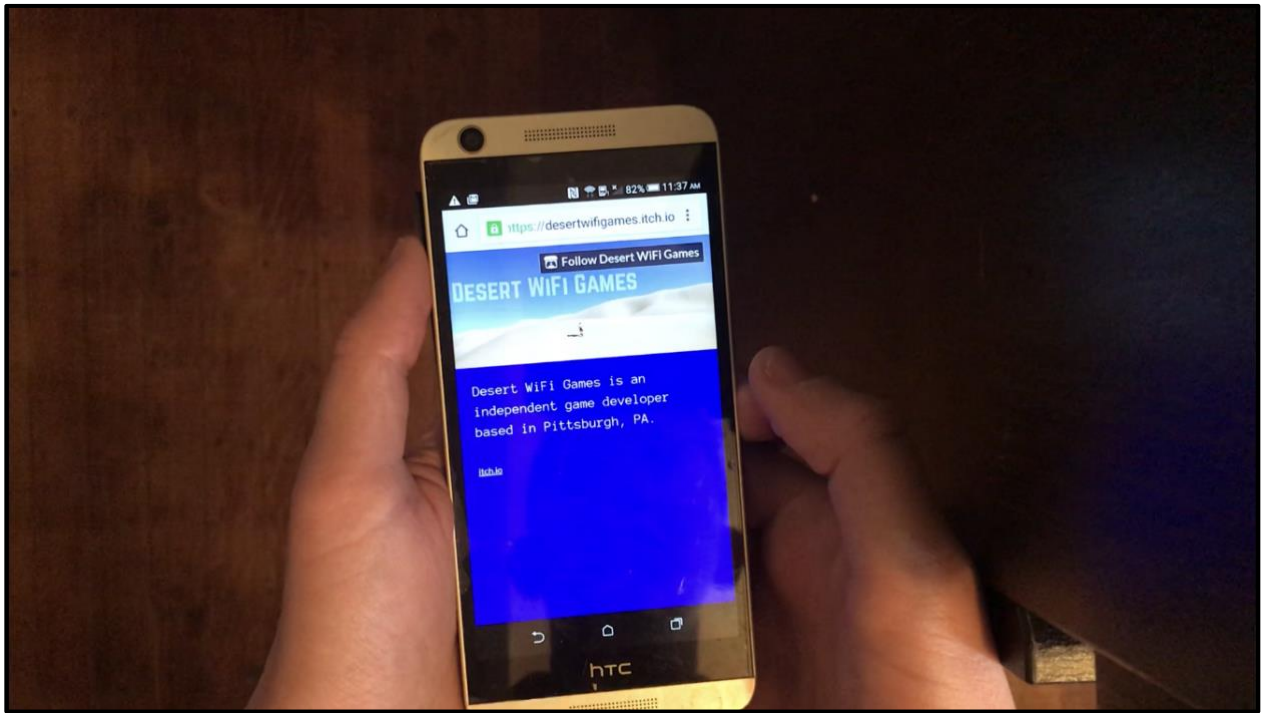


Figure 4 The HTC Desire Routing to the Desert WiFi Games Website from the NFC Chip

Throughout this project, I articulate the layers of the computational stack in terms of the chain of semiotic signification. In a way, the exchange between the NFC chip and the Android phone operates within this paradigm; the data stored in its 880 bytes renders the website on the screen. The hand, however, operates an extraneous flesh layer that moderates this exchange. It is non-essential yet integral. Due to its presence, an alternate rhetorical model is needed to account for the relationships between the organic and non-organic actors in this network. I apply Latour's compositionism as such a model – especially insofar as it speaks to a DIY ethos. In describing the potential contribution of the maker movement to the field of computers and writing, Chet Breaux states: “This form of creative assemblage is also a method of viewing the world. We inhabit the postmodern moment, a pluralist world containing multiple competing ideologies. It is the individual's task of combining and assigning order to these competing ideologies, assembling

and reconfiguring them as needed.”⁶⁰ In a move that is rhetorically, if not intentionally, queer, he advocates for the process of assembling ways – even and especially those that might be counterintuitive – of being and relating that exist beyond the limitations of a singular, normative ideology. Breaux’s approach to the postmodern phenomenon echoes Latour’s; while Latour assumes a theoretical angle in “assembling and reconfiguring” scholarly trajectories in the wake of fragmentation, Breaux functions in the realm of praxis, championing “ad hocism” in art, writing, and technology.⁶¹ Similarly, I combine the theoretical principles of interdisciplinary biohacking scholarship with those of queer phenomenology, while acting as the literal assemblage upon which this cyborg composition centers.

NFC and RFID chips can be slapped in/on just about anything: keyrings, credit cards, phones, wearables.⁶² The technology is in no way innately queer. However, by implanting them in the web of the hand, we can open the experiential door to a potentially queer cyborg phenomenology. Manfred Clynes and Nathan Kline originally coined the term cyborg in 1960 to describe the process of “altering man’s bodily functions to meet the requirements of extraterrestrial environments.”⁶³ While acknowledging the term’s roots, Enno Park expands it to account for disabled people who use incorporate technology into their bodies to expand their

⁶⁰ Chet Breaux, “Why Making?” *Computers and Composition*, 44 (2017): 28, doi:10.1016/j.compcom.2017.03.005.

⁶¹ Ibid., 30, 34.

⁶² Florian Mueller, Zhuying Li, Tuomas Kari, Yan Wang, and Yash Mehta. “Towards a Coming Together of Transhumanism and Play,” *Proceedings of the 2018 Annual Symposium on Computer-Human Interaction in Play Companion Extended Abstracts - CHI PLAY 18 Extended Abstracts*, (2018): 550, doi:10.1145/3270316.3271527; See also: Park, “Ethical Issues,” 303-304.

⁶³ Manfred E. Clynes and Nathan S. Kline, “Cyborgs and Space,” *Astronautics* 14, no. 9 (1960): 26-27.

abilities (specifically focusing on the use of the Cochlea implant by deaf and near-deaf people): “A cyborg is a human being with an electronic device implanted in or permanently attached to their body for the purpose of enhancing their individual senses or abilities beyond the occasional use of tools.”⁶⁴ I am not a cyborg by merit of either of these definitions. Elon Musk has yet to recruit me to *Space X*, and storing a web address in my hand does not exactly grant me superhuman capabilities. However, Florian Mueller, Zhuying Li, Tuomas Kari, Yan Wang, and Yash Mehta conceive of transhumanism both “from a material perspective (“Körper”) and a lived perspective (“Leib”).”⁶⁵ While, materially, I may be a few bolts short of being a true cyborg, experientially, I embrace the identity.

In the humanities, the figure of the cyborg is an extended metaphor as much as it is flesh and wires. Haraway’s cyborg is a textbook example of a compositional assemblage that paradoxically unites postmodern ideology. It is iconic in its deconstruction of binaries, challenging amongst others the boundaries between human and animal, human and machine, organic and inorganic, men and women, and heterosexual and homosexual.⁶⁶ Puar’s concept of the assemblage, which is translated from the French “*agencement*, a term that means design, layout, organization, arrangement, and relations – the focus being not on content but on relations, relations of patterns,” is derived from the cyborg.⁶⁷ Here the material or ideological components

⁶⁴ Park, “Ethical Issues,” 304.

⁶⁵ Mueller et al., “Towards a Coming Together,” 553.

⁶⁶ See: Lara Cox, “Decolonial Queer Feminism in Donna Haraways ‘A Cyborg Manifesto’ (1985),” *Paragraph*, vol. 41, no. 3, (2018): 317; doi:10.3366/para.2018.0274; Haraway, “A Cyborg Manifesto;” Park, “Ethical Issues,” 303; Jasbir Puar, “‘I Would Rather Be a Cyborg than a Goddess’: Becoming-Intersectional in Assemblage Theory,” *PhiloSOPHIA* 2, no. 1 (2012): 56.

⁶⁷ Puar, “I Would Rather Be a Cyborg than a Goddess,” 57.

of the figure are less significant than the relationships between them. Lara Cox further grounds this concept in identity politics, arguing that Haraway's cyborg "[considers] the ways that the cyborg may disrupt gender, and race, and class, and ethnicity, since these qualifiers of identity construct, constitute and inform one another."⁶⁸ The strength of the cyborg lies not in its applicability to these identity categories but in its disruption of them.

Phenomenology offers a valuable way of looking at these patterns of relation, this energy of disruption. Shauna MacDonald outlines the tenets of her understanding of cyborg phenomenology: "first, it relies upon affinity, not identity..."⁶⁹ Echoing the language of Latour's compositionism, Breaux's adhocism, and Puar's assemblage, MacDonald suggests that the fluid relationships that coexist within the cyborg replaces the possibility of a stable identity. In my case, the relationship between my queer, white human identity, the hand chip, the web address, and the game comprise the cyborg figure. She continues, "second, cyborg phenomenology proceeds from the assumption that experiential actors are fleshy beings within a fleshy world that extends beyond that of 'human activity.'"⁷⁰ In a move reminiscent of Latour's Actor-Network Theory, she indicates that while the flesh is integral to the cyborg, the figure is equally interpellated through the world to which it relates. The game is a part of me. She concludes, "third, cyborg phenomenology applies to performative experience anywhere along the perceptual continuum from so-called actuality to so-called virtuality, so long as the experience in question

⁶⁸ Cox, "Decolonial Queer Feminism," 323.

⁶⁹ Shauna M MacDonald, "Cyborg Phenomenology: Performative Inquiry in a Technoscientific World," *Liminalities: A Journal of Performance Studies*, vol. 10, no. 2, (2014): 9.

⁷⁰ Ibid., 9–10.

remains embodied.”⁷¹ The cyborg is the deconstruction of the virtual/IRL binary. My subject position and NFC chip are embodied but refer to a virtual simulation. She advocates for a phenomenology that is oriented toward the cyborg, but channeling Ahmed, I advocate for one that is oriented toward the specifically queer cyborg. Here, I argue for the queer phenomenological potential of the cyborg – locally, through the autonomous play it necessitates and enables, and contextually, through its disruption of the continuum of the norm.

My decision to have the chips implanted was an act of queer play. This claim resonates with Rhodes’s assertion of queerness in the play between signifier and signified.⁷² On a material level, my skin lives between the signifying data on the chip and the signified website on the screen; I am queer play. Mueller et al. claim, “With the xNT [NFC chip], there is currently no highlighting of the opportunity for play.”⁷³ They’re wrong. Flirting mileage aside, I’ve gotten a whole lot of play out of this puppy. I can fiddle with it during class, run the Android across it in an attempt to locate the point of connection between chip and sensor, and of course, use it to access my RPG, about which I write extensively on queer play in chapter four. As a cyborg assemblage, play lingers between the flesh, the chip, and the game. Play is the pattern of relations, the affective connection, the adhoc glue that unites the fragments.

The cyborg operates as a queer figure also through the means by which it disrupts and reorients the continuum of the norm. Although the concept of the norm is articulated differently in disability studies than it is in queer theory, there is a certain amount of crossover. Park argues, “cyborg technologies offer the chance to understand inclusion as a continuum that encompasses

⁷¹ Ibid., 10.

⁷² Rhodes, “Homo Origo.”

⁷³ Mueller et al., “Towards a Coming Together,” 552.

individuals with a wide variety of abilities and disabilities without defining a norm.”⁷⁴ Instead of regarding cyborg technology as a means of “correcting” disabilities, Park suggests that it enables alternate ways of being that do not adhere to traditional norms but dwell beyond them. Such a statement is reminiscent of anti-normative queer theory. Just as Halberstam reframes failure as queer success and Edelman reconstitutes the death drive as queer futurity, the cyborg assemblage offers a queer alternative to being human.

As with all the computational technology discussed in this dissertation, hand chips are not without their dark side. The negative implications of microchips will potentially affect both those who opt into them and those who don’t. Ali Yetisen notes, “the increasing systematic use of personal data surveillance (überveillance) in the investigations or mass monitoring of citizens by law enforcement agencies is a significant concern among biohackers.”⁷⁵ He elaborates, “biohacking also raises questions about the limits of medical data privacy, and it opens up the possibility of cryptography use for medical data storage.”⁷⁶ As I examine in my third chapter, government and corporate surveillance already disproportionately targets already vulnerable populations through the collection and compilation of the data that these groups distribute through social networking sites. As cyborg technology grows in popularity, the focus of data collection practices will predictably expand beyond online behavior and into biometrics.

Perhaps the most dystopian example of this form of data surveillance is the practice of tagging employees with RFID chips. Under the guise of ensuring safety and productivity, companies have been supplying employees with RFID wearables (e.g. name badges, wristbands,

⁷⁴ Park, “Ethical Issues,” 306.

⁷⁵ Yetisen, “Biohacking,” 746.

⁷⁶ Ibid., 746.

etc.) since the early 2000s.⁷⁷ These are frequently equipped with GPS technology, and recently, companies such as Amazon have started experimenting with ways to incorporate haptic feedback into the devices that will give employees what has been described as a “gentle slap” if they are in the wrong location or cease working for too long.⁷⁸ Within the last few years, a limited but growing amount of companies began to offer employees the option to have these chips implanted. While United States law largely prohibits this process from becoming mandatory, Dario Rodriguez notes that, if the practice becomes prevalent, employees will likely “face internal pressure to agree to receive microchips.”⁷⁹ He bleakly observes that “the potential impact on employees’ ability to retain their privacy and ward off intrusions is massive – indeed, employees’ autonomy is undoubtedly minimized through the use of this technology.”⁸⁰ While my decision to have the chips implanted is a reckless act of queer resistance, it is also a grim citation of the suppression of labor rights under neoliberalism.

The RFID chip has started to throb. I might have it removed. Maybe.

⁷⁷ Dario Rodriguez, “Chipping in at Work: Privacy Concerns Related to the Use of Body Microchip (‘RFID’) Implants in the Employer–Employee Context,” *Iowa Law Review* 104, no. 3 (2019).

⁷⁸ Dom Galeon, “Amazon Patents Tracking Wristbands That Spy on Warehouse Workers,” *Futurism*, February 2, 2018, <https://futurism.com/amazon-patents-tracking-wristbands-spy-warehouse-workers>.

⁷⁹ Rodriguez.

⁸⁰ Ibid.

2.3 Squeez'd from Goblin Fruits for You: Or I Broke My Raspberry Pi

While arguably anticlimactic, the following anecdote offers a solid starting point for a conversation about technological autonomy. I begin by establishing an image of the neoliberal tech industry (which this project resists), taking into account its reliance on blackboxed technologies and algorithms. I then outline my methodological motivation for the project, describing the ways in which it fits into English Composition (an application of the term that is slightly less ethereal than Latour's broad "compositionism"). Moving into the slippage between hardware and software, I underscore the impossibility of locating an exact point at which one transforms into the other. I then extrapolate beyond my own failed experiment to account for other models of computational resistance. Returning to the overlap between queer assemblage and a DIY ethos, I argue for the queer subversive potential in a DIY computational assemblage. In a similar concluding move to my previous case study, I end this section with a consideration of the negative implications of this technology, focusing specifically on the labor required to produce computational materials and the e-waste to which they ultimately return. Throughout this analysis, I draw parallels between this section and the previous one by considering the ways in which we relate to the technology that shapes our lives.

Vignette II. When I began this project, I had grand ambitions to build a smartphone using a Raspberry Pi 3 kit. Now, removing my cat (yet again) from a table strewn with cords and bits of silicon and metal, I'm just praying that the thing will work. The instructions promise that the box includes the following:

- Raspberry Pi 3 B+ (B Plus) with 1.4 GHz 64-bit Quad-Core Processor, 1GB LPDDR2 SDRAM

- Dual Band 2.4GHz and 5GHz IEEE 802.11.b/g/n/ac Wireless LAN, Enhanced Ethernet Performance
- Class 10 High Performance Micro SD Card Pre-loaded with NOOBS, USB MicroSD Card Reader
- CanaKit 2.5A USB Power Supply with Micro USB Cable and Noise Filter - Specifically designed for the Raspberry Pi 3 B+ (UL Listed)⁸¹

After a first construction attempt, I'd also purchased an "iPazzPort Wireless Mini Handheld Keyboard with Touchpad Mouse" from that great morally reprehensible marketplace in the sky. With a handful of deadlines approaching, it's time to shoot my shot.

In much the same way as my software development process has been, my foray into the world of hardware operates largely as an informational exchange between my computer and I. I locate a YouTube video that explains the process of attaching the heatsinks to the Broadcom CPU and the Ethernet & USB Controller. From the video, I learn that an overheating system could damage the SD card and an overheating CPU could throttle the throughput, or the processing rate, until the unit cools off.⁸² I follow the instructions, rewinding and replaying to ensure that the sinks are oriented correctly – not sure if it matters. Next, I search for instructions on installing the device into the case. Fitting the chip into the plastic, I panic slightly at a scraping sound as the middle section of the case slips down. I fit the lid into place. Lastly, I insert

⁸¹ "Raspberry Pi 3 Model B Starter Kit," CanaKit, CanaKit Corporation, 2020, <https://www.canakit.com/raspberry-pi-3-model-b-plus-starter-kit.html>.

⁸² Macgyver, "How to Install Heat Sinks for Raspberry Pi 3 Model B+," YouTube, October 27, 2018. <https://www.youtube.com/watch?v=JFarNZ-WTXk>.

the NOOBS imbued Micro SD Card into the slot on the underside of the machine. It's time to bring it to life.

It's a bit of a plug and play.⁸³ I connect the HDMI cable from the Raspberry Pi to my television and the plug in the power cord. The loading screen appears. I am a demigod. I'm suspicious of the iPazzPort keyboard, but I put in the triple As, turn it on, and simultaneously press F1 and F2. It synchs up. I select "Raspbian" as my Operating System and click "Install." Fifteen minutes later, I have a functioning rudimentary PC. I configure my location settings and connect my Wi-Fi. This is about the point where hubris kicks in.

You see, the lit major in me can't shake the thought that it'd be some real neat parallelism, some really choice circular form, if I could play my video game on my Raspberry Pi. I spend the afternoon sorting out a WebGL (HTML 5) build for *Pittsburgh 10* (a process which I detail in the fourth chapter) and post it on my website. I navigate to the website using the device's browser Chromium. When I hit "Play," however, the interface informs me that WebGL is not enabled through this browser. I search for the problem and find a blog that provides me with the remedy.⁸⁴ I open a terminal and type the command: `sudo raspi-config`.⁸⁵ This pulls up an "Advanced Options" menu, through which I'm able to enable the GL driver. Bingo.

⁸³ Marcotte observes the heightened accessibility of software in previous years: "Inventor kits" such as the MakeyMakey and the BBC micro:bit serve as plug-and-play entry points for interested parties to learn about circuits, physical making, and creative interfaces. Jess Marcotte, "Queering Control(lers) Through Reflective Game Design Practices," *Game Studies* 18, no. 3 (December 2018).

⁸⁴ Construct, "WebGL on Raspberry Pi: Easier than Ever," WebGL on Raspberry Pi: Easier than ever - Ashley's blog, Construct, October 3, 2016. <https://www.construct.net/en/blogs/ashleys-blog-2/webgl-raspberry-pi-easier-ever-936>.

I return to the website and hit “Play” again. The Unity loading screen appears, and for a moment, it really looks like it’ll work. And then an error message pops up. I try to exit out of it, but the device completely freezes. Despite trying a handful of surefire key combos that the Internet promised would reset the device, there’s absolutely no response. I pull the power cord (a big off-limits move in the Raspberry Pi world). Anyway, it might be broken now.

The mainstream tech industry relies on the structure of the black box to exercise technological control. This term usually refers to the obfuscation of proprietary algorithms. For instance, ProPublica’s series, “Breaking the Black Box,” begins to reveal the effects of Facebook’s data collection and brokering procedures, the fluctuating price marks advertised to different groups based on demographic profiling, the process by which newspapers use machine learning and A/B testing to determine the most appealing headlines, and (inadvertent) AI racism.⁸⁶ It offers digital tools to combat these maneuvers, but they typically offer mild protection or information rather than destabilization. Both Monea and Noble offer a deep dive of Google’s algorithm. The former describes the process that Google uses to prioritize known, popular results, passing them off as truth, while the latter provides specific examples of the racist agendas the “popular” results reinscribe in the public conscious.⁸⁷ The algorithmic black box mimics the structure of the material layer of hardware common to many computers on the

⁸⁵ From teaching annually at the AFA CyberCamp, I’ve learned that “sudo” sexy as hell – discussed later. It allows the user to execute any command as a “super user.” Pure imperative. Delicious.

⁸⁶ Julia Angwin, Surya Mattu, and Terry Parris Jr. “Breaking the Black Box: What Facebook Knows About You,” *ProPublica*, March 9, 2019. <https://www.propublica.org/article/breaking-the-black-box-what-facebook-knows-about-you>.

⁸⁷ See: Alexander Monea, “Graph Force: Rhetorical Machines and the N-Arization of Knowledge,” *Computational Culture* 5 (2016); Noble, *Algorithms of Oppression*.

market. For instance, while Apple champions the black box, offering software and operating systems specific to its proprietary hardware, PCs and Androids are driven by hardware produced by a wide variety domestic and international semiconductor companies, allowing companies such as Google and Samsung to distribute their proprietary software across myriad devices.⁸⁸ Regardless of the model, the stack behind the product is concealed from the consumer. We can typically only speculate about the inner workings of a black box by observing a device's output. Composition, however, allows us to flip the script. By learning about the computer-as-assemblage through the act of creating, we can work to simulate similar hardware and software with subversive ideological intent.

It's easy to view the mainstream tech industry as an omnipotent monolith. However, every step toward seizing control – ontologically or epistemologically – of the technology upon which we depend is an act of resistance. The inspiration for the projects detailed here was loosely drawn from Steven Hammer and Aimée Knight's writing on the rhetoric of circuit bending. Discussing the practice of short-circuiting electronic instruments (e.g. keyboards) to create discordant noise, they claim that the exercise makes an argument for alternate, even erroneous forms of composing.⁸⁹ They conclude, "rule-based systems are increasingly prevalent in our composing lives. By inviting some malfunction into our teaching and learning practices,

⁸⁸ Gruman, Galen, "As Apple Fiddles, Microsoft Reaches for Apple's Discarded Creative Crown," *InfoWorld.Com* (2016); Steven Max Patterson, "iPhone After 10 Years: Google Overwhelms the iPhone Like Microsoft Overwhelmed the Mac," *Network World (Online)* (2017).

⁸⁹ Hammer and Knight, "Crafting Malfunction."

we craft a different relationship to both our systems and our technologies.”⁹⁰ Bodies and computers are rule-based systems. It’s generally ill advised to open up either and fiddle around with the inner workings. Through malfunctions manifesting themselves as both the throbbing web of nerves surrounding the RFID chip and the frozen Raspberry Pi interface, I’ve learned that meddling with the composition of systems can lead to complications. However, I’ve also learned more about the context of the complications. Abruptly disconnecting the power supply from a Raspberry Pi 3 can result in data loss or SD card corruption.⁹¹ While it is tempting to rhetorically dissociate hardware from software, the latter is ultimately dependent on physical systems.

Hardware makes an argument. Or rather, it operates as the medium through which the engineer, the programmer, or the user makes an argument. Due to its conceivably signifying role in the computational process, it is positioned as a crucial actor from which meaning is derived and upon which it is placed. Elaborating on his declaration that software is merely a signifier of voltage differences, Kittler claims, “when meanings come down to sentences, sentences to words, and words to letters, there is no software at all. Rather, there would be no software if computer systems were not surrounded any longer by an environment of everyday languages.”⁹² Though literally signifying code and interface through magnets and voltage, hardware accrues meaning through human hermeneutics and action. A microchip linked to a video game makes a different argument than one coercively embedded in an employee. A Raspberry Pi makes a different argument than an iPhone. Hayles remarks similarly and succinctly, “materiality

⁹⁰ Ibid.

⁹¹ “Pulling the Power Cord,” Raspberry Pi Forums, 2017, <https://www.raspberrypi.org/forums/viewtopic.php?t=170864>.

⁹² Kittler, “There is No Software.”

emerges from the dynamic interplay between the richness of a physically robust world and human intelligence as it crafts this physicality to create meaning.”⁹³ The uses to which people put computers are as integral to the system’s materiality as the computers themselves. Though not technically embedded in the human body, this Raspberry Pi is cyborg-like through its reliance on certified and third-party input devices – an argument for the perceived necessity of Amazon even amid this DIY venture, its employment of the Raspbian OS – a Linux distribution, and thus a plug for open source software, and its tragic crash in encountering the human-generated command to run a glitchy cyborg artifact (*Pittsburgh 10*). The composition of the computational assemblage unites each of these meaning-saturated components to create a vast rhetorical network.

A poignant example of rhetorical structure along this project’s hardware/software continuum is the UNIX Operating System and its relation to the Raspberry Pi. Tara McPherson accentuates the parallelism between the logics driving the emergence and development of UNIX and those facilitating the cultural and political response to race relations in mid-century America.⁹⁴ She examines lenticular logics, which refers to both a linguistic and computational model that privileges fragments and highlights differences rather than interconnectedness, often hiding one aspect from the other. This model is not dissimilar from that used by a magnetic hard drive to store memory: the differences in magnetic charges (represented as 0s and 1s) are the material “bits” that make up data; these bits, in turn, are compartmentalized into sectors of 512

⁹³ N. Katherine Hayles, Peter Lunenfeld, and Anne Burdick, *Writing Machines* (Cambridge: MIT Press, 2005).

⁹⁴ McPherson, “U.S. Operating Systems,” 21–37.

bytes.⁹⁵ On a societal level, McPherson claims that such a compartmental model highlights the similarities between the obfuscation of code through Graphic User Interfaces in computational systems and the shift from overt to covert systemic racism in American cultural systems. Memory is segmented and categorized; data is recalled to form the illusion of a unified whole in the interface, but the interface obfuscates this and the other processes that constitute computational functionality. The Linux Operating System emerged in the 1990s as a free and open source alternative to UNIX, championing a cooperative method of building and a communal distribution of knowledge. As such, it takes an antithetical ideological stance to that of the proprietary UNIX, but, as its roots lie in the legacy of UNIX, it perpetuates the same structural arguments. Because the pre-loaded Raspberry Pi OS, Raspbian, is a Linux distribution, it too maintains this model. The Raspberry Pi is by no means a queer artifact; it necessitates subversive use and interpretation to be imbued with queer meaning.

I argue for the queer thrust of this project through its phenomenological orientations toward kinky failure and queer structure. Whether it is due to technological ineptitude or the brand of burn out particular to the twilight of a PhD program, the Raspberry Pi project was a failure. However, because it was birthed in an English dissertation, tendrils of queer close reading can be salvaged from the corrupted (SD card) wreckage. Specifically, I'd like to dwell on my orientation to the execution of the "sudo" command. Though writing about queer gameplay, Bonnie Ruberg defines the phrase "kinky disturbance" as moments when "implicitly heteronormative paradigms of failure and success are destabilized by the willing, playful

⁹⁵ Kirschenbaum, *Mechanisms*, 11.

embrace of pain and ‘game over.’”⁹⁶ By typing the sudo, or “superuser do,” command into the CLI, I asserted my dominance over the machine. When the computer responded by enabling the GL driver, traditional paradigms of power, structure, and success were reestablished. However, I experienced a kinky disturbance the moment it hit an error and crashed. In an abrupt exchange of power, the machine usurped my role, destabilized the cyborg network, and forced a “game over” condition. Checkmate. Bit hot, really. In discussing queer failure, or being in a way that conflicts with societal norms, and the accumulation of loss, Halberstam muses, “failure could produce a different outcome than you might expect: some self-motivation or the becoming of something else entirely.”⁹⁷ This experiment wasn’t endgame. In conducting it, I learned a little bit more about my role as a human actor in a computational assemblage. I gained further knowledge of hardware, a new level of confidence in working with it, and the understanding that failure is an avenue to start a new experiment.

I still assert that the mechanism of the Raspberry Pi has the potential to power a queer assemblage. The PirateBox project is a concrete example of this capacity. The website explains that the project helps DIY developers create “offline wireless networks designed for anonymous file sharing, chatting, message boarding, and media streaming,” and links accessible, explicit directions for doing so with a Raspberry Pi.⁹⁸ Ultimately, without ideological orientation, the Raspberry Pi-rateBox is just another cool anarchist project. Just as Kittler and Hayles suggest,

⁹⁶ Bonnie Ruberg, “No Fun: The Queer Potential of Video Games That Annoy, Anger, Disappoint, Sadden, and Hurt,” *QED: A Journal in GLBTQ Worldmaking* 2, no. 2 (2015): 115, doi:10.14321/qed.2.2.0108.

⁹⁷ Bonnie Ruberg, “The Arts of Failure: Jack Halberstam in Conversation with Jesper Juul,” in *Queer Game Studies*, eds. Bonnie Ruberg and Adrienne Shaw (Minneapolis: University of Minnesota Press, 2017): 208.

⁹⁸ Matthias, “PirateBox FAQ,” PIRATEBOX, 2018, <https://piratebox.cc/faq>.

computers accrue the meaning through the purpose to which they are put by their developers/users (a shaky binary at best). Nate Anderson explains that the creator of the project, David Darts, “laments the fact that media on the Internet has increasingly fallen under the thumb of major corporations; [Darts] calls his project ‘a symbolic response to this centralized control.’”⁹⁹ As a reaction to normative, corporate technological control, the PirateBox project is compositionally queer. While most traditional personal computers connect to the Internet through Wi-Fi or Ethernet cables, the PirateBox drifts in the slippage between the two, carving out its own local network for mutual information exchange. This model is similar to that used by queer communities engaging in acts of mutual aid. The project upholds a comparable purpose, as “one of Darts’ main artistic concerns is the relationship between physical space and the community that develops in it.”¹⁰⁰ The PirateBox queers the logic of the mainstream black-boxed computer, shifting its purpose from individualized surveillance and data collection to community development through the collective distribution of knowledge. Moreover, through its emphasis on anonymity, it values the safety of the most vulnerable parties in the network. It is an appropriate project to emulate in my next Raspberry Pi experiment. Breaux observes, “making, in particular, is non-linear. It involves trying multiple strategies to arrive at a solution.”¹⁰¹ I conducted this experiment with the goal of playing my game through my device. I encountered a kinky disturbance and was forced off the path. In my next run, I’ll try to build a PirateBox. Without teleology, there is only possibility.

⁹⁹ Nate Anderson, “PirateBox: an ‘Artistic Provocation’ in Lunchbox Form,” *Ars Technica*, January 31, 2011, <https://arstechnica.com/tech-policy/2011/01/piratebox-an-artistic-provocation-in-lunchbox-form/>.

¹⁰⁰ Ibid.

¹⁰¹ Breaux, “Why Making?” 30.

As much as we'd like to view making as a boundless journey replete with attempts and happy accidents, the trial and error method it necessitates is not without consequence. A broken Raspberry Pi is not only an example of queer logic at best and \$70 down the drain at worst; it is a testament to the final fate of disposable hardware on a massive scale. Safiya Noble advocates for greater visibility regarding the processes by which technology is produced and distributed. Her linguistic portraits of e-waste cities, or sites typically established in developing nations that process and recycle electronic waste at the risk of exposing laborers to high levels of lead and other toxins, highlight the ways in which Western-driven industries exploit developing countries.¹⁰² In response to this knowledge, we must travel further down the stack. Sure, in order to gain autonomy over our technology, we must learn through praxis and failure the ways in which hardware influences software, how both influence systems and networks, and how human intent drives the ideological and embodied essence of the entire process. But these systems do not exist in a void, and we must also acknowledge and strive to remedy the suffering of communities that is obfuscated for the sake of production. We can never really do enough, but we can start by composing.

I turn on the television. I plug in the power cord. The Raspberry Pi —¹⁰³

¹⁰² Noble, *Algorithms of Oppression*.

¹⁰³ Schrödinger's Raspberry Pi

2.4 Conclusion

When talking about software, it's easy to float into the language of the ethereal. We are tempted to regard disembodied algorithms as shadows of ourselves (or even of the corporations that govern us). Kittler is correct in stating that, at their most material, computers only reproduce the electricity that has been fed into them. But we do inscribe meaning – societal, linguistic, and financial – upon this electricity, and that's when the situation gets charged. I did not conduct as thorough an exploit into the world of mechanical and electrical engineering as I would have liked to in this project. However, in my abject failure, I did produce several conduits of possibility. When engaging with hardware, a composition mindset yields productive results. Composing with a purpose is essential, and a queer phenomenological angle leaves space for hopeful subversive outcomes. Cyborg technology can be and is used to oppressive ends. There's no way around it. But it also enables queer play and disruption. Similarly, a Raspberry Pi replicates the same problematic structure as other personal computers. But it can also be used for community empowerment. The situation is more complicated than simply shifting perceptions, but when one begins to work with computers, it's important for them to know why they're doing so. The capitalists certainly do.

I was recently asked about my authentic feelings towards computers. The short answer is they creep me out. They also leave me in awe. I firmly believe that they are not like any other tool that we've created, with the exception, perhaps, of God. They require embodiment, discourse, and an exchange of knowledge. I've started here with their material elements, and as I continue, I'll explore their programs, interfaces, and implementation in society. In a way, this whole dissertation functions as a navel-gazing answer to the age old philosophical question of whether or not you'd fuck an artificially intelligent robot. Let's go.

3.0 Chapter Two: Ocarina of Impeccable Timing: Queer Rhetoric and Politics in the Anatomy of a Speedrun

“The fastest way for me to leave the room is to die.” It’s the 2013 Awesome Games Done Quick (AGDQ) convention. The player is Narcissa Wright, a champion speedrunner, and the video game is *The Legend of Zelda: Ocarina of Time*. The game’s protagonist, Link, faces a giant parasitic armored arachnid called Gohma. Behind him, the stone door slams shut, sealing off the escape route. “So I’m gonna kill Gohma and die at the same time,” Narcissa continues. To anyone familiar with the most basic elements of gaming, the plan appears illogical. After all, when engaging in traditional gameplay, a player does not typically intentionally murder their avatar; in fact, it’s a fate best avoided. In a speedrun, however, character death serves as just another tactic, and in this case, a very effective one. The rules of gameplay are distorted as the player tries to complete the game in the shortest amount of time, exploiting each flaw in the program in order to do so. A moment later, both Link and his opponent collapse to the floor, the death sequence plays, and Link is returned to the beginning of the level. After several additional maneuvers and a glitched-out wall warp, he is then transported to the final boss battle, bypassing the bulk of the game.¹⁰⁴ The run is complete in 22 minutes and 38 seconds.¹⁰⁵

¹⁰⁴ Yay, "[REUPLOAD] The Legend of Zelda- Ocarina of Time Speedrun in 22-38, Live at AGDQ2013," YouTube, October 03, 2016, Accessed July 12, 2018.
<https://www.youtube.com/watch?v=HWr9ABQcS5s&feature=youtu.be>.

¹⁰⁵ Wright’s best time for a run of the game is 18:10, the world record at the time. However, the time has since been beaten, and the record now stands at 17:07. (Speedrun.com, Accessed July 12, 2018, <http://www.speedrun.com/>.)

Computationally, speedrunning is inventive, subversive, and debatably queer, but culturally, it retains a problematic edge. By evaluating the dissociative argument presented by the interplay of interface and code, I examine how Wright locates and manipulates the points of slippage, or “exploits,” between these computational layers in her *Ocarina of Time* (OoT) speedruns. In doing so, she and other speedrunners reject the narrative presented by the interface, and instead construct an alternative narrative using the intentional and accidental affordances inherent to the obfuscated code. Using queer theory, I argue that the strategic contingency upon deconstructing a system from within its limits and the disregard of traditional teleological narrative structure lend the practice of speedrunning to a queer reading. Although I choose to read this practice as tactically queer, it would be disingenuous of me to ignore the speedrunning community's political and cultural orientation toward queerness and queer bodies. Queerness is, at its heart, political, and while it operates as an effective tool for deconstructing normative computation narratives, it is also rendered suspect, and at times, attacked by the very communities that I read as methodologically using it. I devote the final section of this project to an analysis of the community's use of the same dissociative argument in response to Wright publically coming out as a transgender woman in 2015, mitigated only by Wright's textual wink to a silent queer speedrunning audience as indicated by Charles Morris in his writing on the fourth persona. I argue that queering cannot be limited to one intersection of the computational stack but must encompass the other layers as well in order to enact meaningful change.

Through this chapter, I seek to emphasize the importance of the practice of speedrunning, as well as the culture surrounding it, as objects of study within the areas of software and game studies; I suggest that they operate as promising candidates for understanding and critiquing the rhetorical tactics employed by a wider range of computational structures and cultures; I propose

a queer methodology for locating, critiquing, and subverting these arguments. While the practice of speedrunning is largely underrepresented in scholarly work, Boluk and LeMieux notably consider it within the context of “metagaming,” or the philosophy of critically considering the conditions of gameplay while engaging in it, and Rainforest Scully-Blaker conceives of it as a spatial practice in that takes an innovative approach to navigating constructed environments.¹⁰⁶ Both works focus, at least in part, on OoT due to the game’s ambitious design and unique glitches, and Boluk and LeMieux consider Wright’s speedruns of the game specifically due to her informative commentary and consistent rejection of gaming categories.¹⁰⁷ Building on both of these studies through the use of critical theory and mainstream media alike, I hope to not only situate the practice of speedrunning within a rhetorical context but also examine the political implications of doing so. When speedrunning is examined through an academic lens, it operates as a nuanced example of computational rhetoric and queer slippage and play. However, when academia is examined through the lens of the speedrunning community, it is called upon to interrogate its own terminology and methodology: what is it that we really mean when we say we are conducting a queer reading – especially of a community that largely does not identify with the socio-political connotations of the term at best and rejects it at worst?

¹⁰⁶ See: Rainforest Scully-Blaker, "A Practiced Practice: Speedrunning Through Space With De Certeau and Virilio," *Game Studies* 14, no. 1 (August 2014); Stephanie Boluk and Patrick LeMieux, *Metagaming: Playing, Competing, Spectating, Cheating, Trading, Making, and Breaking Videogames*, (Minneapolis: University of Minnesota Press, 2017), 2–3.

¹⁰⁷ Ibid., 41–50.

3.1 We Other Gamers

Though their practice is consistently gaining popularity, speedrunners make up a small subset of the gaming community. As an insular group, it still supports many conflicting opinions regarding what “counts” as a valid run; debates include questions about game versions, whether or not to use glitches, if tool-assisted speedruns (TAS) should be considered cheating, and whether physically altering the hardware counts as “tool-assisted.”¹⁰⁸ The goal of this chapter is not to determine what makes a valid run; doing so would negate the inherent queerness of the genre. Before discussing its theoretical and political implications, however, I will draw on these diverse qualifications to define the practice insofar as it relates to this chapter and discuss the most common categories in which speedrunners participate.

While the spirit of speedrunning is perhaps best summed up by the name of the prominent conference Games Done Quick, the definitions of, possibilities for, and motivations behind the practice are more nuanced. Scully-Blaker painstakingly defines speedrunning as “the practice of players or ‘runners’ attempting to ‘travel’ from a game’s opening state at its first necessary button input to the game’s conclusion at its last necessary button input in the smallest amount of time possible.”¹⁰⁹ At face value, this is not particularly interesting; after all, one does not tap into an alternate narrative by speed-reading a novel. Racquel Gonzales notes, however, that players complete this progression “regardless of the intended gameplay, world exploration,

¹⁰⁸ SpeedRunsLive, “Frequently Asked Questions,” SpeedRunsLive, 2018, Accessed November 03, 2018.
<http://www.speedrunslive.com/faq/>.

¹⁰⁹ Scully-Blaker, “A Practiced Practice.”

and in game accolades.”¹¹⁰ It is through this motivation that the player begins to take a non-traditional approach to the interface; the narrative is stripped of its meaning, the map is refigured as series of obstacles, and goals of the game merely become distractions. Taking glitches into account, Boluk and LeMieux further remark, “the speedrunning community not only changes the way games are played but also questions the very ontology of videogames.”¹¹¹ Challenging the normative limits and expectations encountered by traditional players, speedrunners transform gameplay into a communal, exploratory, and repetitive process. In doing so, they repurpose the structural elements of the game to construct alternate paths, methods, and objectives. When approached with this philosophy, each game presents seemingly inexhaustible options for creative play.

As a means of imposing order in this lawless world, the speedrunning community has established a series of widely used categorical rule sets for competitive runs. These are typically based on completion percentage, glitch usage, and/or tool assistance. In terms of completion, runs are classified as Any%, in which there are no completion requirements (typically considered the default speedrunning category), 100%, in which the player must complete all necessary aspects of the game (e.g. collecting all items, beating all levels, completing all goals, etc.), and Low%, in which the player tries finish the game with a bare minimum completing percentage. Though many categories permit the use of glitches, some will limit their use or prohibit them all together (i.e. “glitchless” runs). “Warpless” runs, for instance, could be considered limited-glitch runs as they forbid players from intentionally dying, restarting the system, or exploiting other

¹¹⁰ Gonzales, Racquel M, "Speedruns," In *Encyclopedia of Video Games: The Culture, Technology and Art of Gaming*, edited by Mark J. P. Wolf, (Santa Barbara: Greenwood an Imprint of ABC-CLIO, LLC, 2012): 616.

¹¹¹ Boluk and LeMieux, *Metagaming*, 43.

means to save time or skip levels.¹¹² 100% runs are typically glitchless, and Any% runs, which Boluk and LeMieux refer to as “the gold standard of speedrunning,” generally permit the use of glitches as it is this “rule that can transform almost any videogame into a complex metagame.”¹¹³ TAS forms its own category as it relies on a recording produced by an emulator to display an optimal speedrun of a game, against which humans playing in real time without an emulator function cannot possibly hope to compete. Emulators can be further used to manipulate a game’s Random Number Generator (RNG), an algorithm that will frequently slow down real time human players who must rely on a luck-based strategy to overcome the challenges and events it incites. Despite the general acceptance of these categories, they are still another way for humans to regulate machines; Wright reminds us, “all categories are arbitrary.”¹¹⁴

In this chapter, I concentrate predominantly on Wright’s 2013 record-setting OoT run. This run falls into the Any% category where glitches are permitted, but emulators are not. Scully-Blaker refers to this type of run as a deconstructive run, “in which the player exploits glitches within the game to break scripted sequences and potentially skip several hours of gameplay altogether,” (as opposed to a finesse run, which “represents the most efficient tour of the gamespace” and “uses no game-breaking glitches”).¹¹⁵ I chose a run in this category because I see queer potential in the “[exploited] glitches,” in the broken and revised “scripted sequences” that occupy the interface, and in the knowledge of the assemblage of code that is required to

¹¹² SpeedRunsLive.

¹¹³ Boluk and LeMieux, *Metagaming*, 43.

¹¹⁴ Narcissa Wright, “all the categories are arbitrary,” YouTube, 2015.

¹¹⁵ Scully-Blaker, “A Practiced Practice.”

complete it. In true queer form, this run defies the game's implicit rules in order to carve out explicit possibility.¹¹⁶

3.2 Legend of Zelda: Ocarina of Time

Released by Nintendo in 1998, *Ocarina of Time* is the fifth game in *The Legend of Zelda* series. Operating as a fantasy bildungsroman, it follows a traditional hero's journey plotline. The player controls the aforementioned elfin character, Link, who is summoned as a child to seek out Zelda, the Princess of Hyrule. Together, they devise a plan to stop the evil King of Thieves, Ganondorf, from obtaining the Triforce, a legendary artifact comprised of three components (Wisdom, Courage, and Power) that will decide the fate of Hyrule. At a turning point in the game, Link acquires the "Master Sword" and is plunged into a deep sleep for seven years, as he is still too young to wield the blade. Awakening as an adult, Link sets out to find Zelda and defeat Ganondorf. After tracking down the Six Sages, who are needed to thwart Ganondorf in the final battle, Link's quest leads him to Ganondorf's Castle, where Zelda is imprisoned. Link defeats Ganondorf and releases Zelda; however, the victory is brief. Using the Triforce of Power, Ganondorf is resurrected as the monster Ganon, who promptly knocks the Master Sword from Link's hand. Zelda helps him retrieve it, Link strikes Ganon down, and the Six Sages seal the

¹¹⁶ Ibid.

King of Evil away. Using the Ocarina of Time, Zelda sends Link back to the past, where he is able to warn the younger princess of Hyrule's fate, and thus prevent it from occurring.¹¹⁷

Gameplay functions through role-playing and puzzle-based elements. In battle, the player relies on a series of weapons – swords, shields, bows, and bombs – to defeat enemies. As they continue through the game, they are rewarded with newer and stronger weapons. In other instances, they must rely on stealth tactics to sneak past guards while solving mazes. The major plot points of the game are organized around a progression of increasingly difficult temples and dungeons that combine both aspects of gameplay. While these are teeming with enemies (e.g. monsters, mini-bosses, and bosses) that the player battles, they also contain a series of puzzles that the player must solve using certain items, reflexes, timing, and frequently, their own powers of observation. The game becomes more complex with the introduction of time (Link can only use certain items as a child and others as an adult, but can travel between the periods) and music (Link learns different songs on the Ocarina of Time that create a magical impact on the game world). Though many of these elements have since been integrated into modern gaming, *OoT* was one of the first games to implement them and is still considered revolutionary.¹¹⁸

Narcissa Wright's run takes a different approach to the traditional plot and mechanics detailed above. The run starts out in a familiar fashion – Link wakes up in his village and embarks on his quest – but quickly ventures into the absurd. Instead of using the joystick to walk and run, Wright skillfully manipulates Link through the world through a series of front rolls and backflips, movements that allow her greater speed. The story lacks cohesion; she doesn't speak

¹¹⁷ Wikia, Inc., "The Legend of Zelda: Ocarina of Time," Zeldapedia, 2018, Accessed October 6, 2018, http://zelda.wikia.com/wiki/The_Legend_of_Zelda:_Ocarina_of_Time.

¹¹⁸ Scully-Blaker, "A Practiced Practice."

to the NPCs that might give Link's quest direction. Instead, she follows a memorized path, one that appears to be random and haphazard until it isn't. As she plays, she tells a different story to the audience: the history of OoT speedruns that made this playthrough possible. She recounts previous runs that allowed the player to get the light arrows early, use the "Bottle Adventure" glitch to write quest items in the inventory, and even warp into the credits (a glitch which forced the community to ask if this still counts as beating the game). Using these tactics, the previous run could be completed in 47 minutes, "Until," she states, "this run came along [...] so that's kinda what this run is going to be, and you're going to see the new fastest way to beat the game."¹¹⁹

As she's talking, she's exploiting glitches. On screen, Link dives into a pool of water while his fairy companion is speaking and instantly warps to a far off village, skipping the first dungeon and several other levels. He begins collecting chickens without triggering a quest that would prompt him to do so in order to obtain a bottle. Wright then "save warps" to return Link to the opening forest and enters the previously skipped dungeon. Circumventing most of the dungeon by catapulting Link off a cliff, through a web, and into the final basement, she directs him to enter the boss battle, and we're back where we started at the opening anecdote. Link respawns at the beginning of the dungeon, but after a few side jumps, he's back in the boss room. Wright then exploits a series of technical glitches, which include releasing bugs and re-catching from the previously acquired bottle, entering the blue warp pad that appeared after Gohma's death where she plays the bottle as an ocarina (using a glitch called "Ocarina Items"), and finally side jumping away from the warp pad and directly into a wall. At this point, she "Wrong Warps" child Link through the wall and to the final temple moments after Ganondorf's death, effectively

¹¹⁹ Yay.

skipping the majority of the child and adult dungeons. Here, an issue seems to arise. Link has never recovered the Master Sword, the only object that can defeat Ganon, and strictly speaking, child Link should not even be able to equip the item. However, during the built-in cutscene in which Ganon knocks the sword from Link's hand, the game generates the item, and child Link is able to pick it up without using the item screen to equip it. Using the logic of the game's code to overcome the logic of its interface and narrative, Wright completes a game that promises 30+ hours of gameplay in a matter of minutes.¹²⁰

3.3 Dissociation in the Rhetoric of Code and Interface

In order to analyze how this run, and by extension others, operates as a model for a queer approach to the rhetoric of the stack, I begin by establishing a theoretical framework using Perelman and Olbrechts-Tyteca's explanation of the strategy of dissociation insofar as it relates to critical work in the field of software studies. I then read the relationship between code and interface through this lens and discuss the broad implications of such a reading. I conclude this section by narrowing my focus to how this reading applies to video games and argue that speedrunners navigate the slippage between code and interface in a way that traditional players do not.

While Perelman and Olbrechts-Tyteca's explanation of the rhetorical strategy of dissociation is useful for visualizing relationships up the stack, I specifically apply it here to the

¹²⁰ Ibid.

relationship between code and interface.¹²¹ When the dissociative argument is applied to the unified concept of software, code typically assumes the position of the “real,” whereas the interface is cast into the role of “appearance.” Structural linguistics again offers the useful metaphor of the signifier as the indicator and the signified as that which is indicated.¹²² Code indicates, and the interface is indicated. This assignation is due to code’s immediate association with computational materiality. Galloway linguistically elaborates on Friedrich Kittler’s definition of coding languages as “signifiers of voltage differences,” stating, “Code is the only language that is executable, meaning that it is the first discourse that is materially affective.”¹²³ Code affects the material functions of the computer, and the interface is generated as a result. I am not implying, however, that either is transcendental. Code is not fixed, and – as I will later explore in depth – it experiences slippage in meaning by virtue of its social construction. Nick Montfort, Patsy Baudoin, John Bell, Ian Bogost, Jeremy Douglass, and Mark C. Marino put it simply: “Code is not purely abstract and mathematical; it has significant social, political, and aesthetic dimensions.”¹²⁴ Because of these cultural dimensions, it falls subject to the same interrogation of interpretation as other languages. Nevertheless, within the chain of computational signification, code precedes and powers the interface, claiming a locus of “real” stability in relation to the other’s manipulable “appearance.”

¹²¹ Perelman and Olbrechts-Tyteca, *The New Rhetoric*, 415.

¹²² Saussure, *Course in General Linguistics*.

¹²³ Alexander Galloway, *Protocol: How Control Exists After Decentralization*, Cambridge: MIT Press, 2004: 165; Kittler, “There is No Software.”

¹²⁴ Nick Montfort, Patsy Baudoin, John Bell, Ian Bogost, Jeremy Douglass, and Mark C. Marino, *10 Print Chr#36;(205. 5+Rnd(1)); : Goto 10*, (Cambridge: MIT Press, 2014): 3.

The interface operates in the realm of appearance both in how it relates to the code from which it is produced and in how it influences the user. Abstractly, interfaces not only emanate from code, thus reflecting its underlying logics, but also conceal code, operating systems, and underlying computational processes.¹²⁵ Holmes evaluates this relationship through the standard of rhetoric as persuasion. He reads interfaces that strive to hide the code and computational processes from the user as “bad rhetoric.” For Holmes, “bad rhetoric” is persuasion used to the end of deception. Whereas, he claims, those that require self-awareness of code and protocol perform “good rhetoric.” In these instances, the argument that “appears” on the surface more truthfully indicates the “reality” of the hidden code.¹²⁶ This bifurcation illustrates Andreea Ritivoi’s elaboration on the dissociative tactic: functioning in the layer of appearance, interfaces can be manipulated to either deceptive or honest ends, whereas the underlying code maintains its coherence.

The rhetorical elements of the interface are executed through their influence on the user. By this, I do not mean *what* the interface displays to the user, but rather *how* the interface acts on the user. Claiming “software is less a vehicle for ideology and more its simulation or model,” Galloway argues that interfaces do not necessarily perpetuate ideological content on principle, but rather exist as allegorical representations of “layered” ideological structures.¹²⁷ Just as in Marxist theory, in which ideology mediates the thinking of individual subjects and the societal publics in which they operate, digital interfaces conceal and facilitate the way users understand and participate in computational processes. They do this by crafting users in their image. Wendy

¹²⁵ Galloway, “Language Wants To Be Overlooked.”

¹²⁶ Holmes, “Can we name the tools?”

¹²⁷ Galloway, *The Interface Effect*.

Chun further notes, “interfaces and operating systems produce ‘users’” through the options they provide, the access they allow, and the interactions they perform, and users uphold these interfaces and systems through their repeated actions.¹²⁸ When read in accordance with Holmes, “good” rhetorical interfaces would articulate the ways in which the presented options relate to the underlying computational processes, present access to these processes, and form a symbiotic relationship between the user’s actions and data and the computational system, whereas “bad” rhetorical interfaces would present options without justification, restrict access without explanation, and manipulate the user’s actions and data to unilaterally benefit the system’s own ends. Again, the concept of the code remains relatively fixed, and the ethical responsibility is placed on the interface.

Video games are software. As such, they adhere to the same principles outlined above. The code establishes the rules of the game, so to speak. Though it can be manipulated to creative ends, it still defines, as Branden Hookway articulates, “the enclosure within which any possible action is already confined or delimited.”¹²⁹ The game’s interface, moreover, refers to the paradoxical bond and barrier between player and the machine.¹³⁰ Game scholars have theorized about the subjectivity of the player in relation to the interface. Echoing Chun, James Ash claims that interfaces extract profit from players (as consumers) by retraining their reactions and behaviors through a feedback loop, and Hookway attests that “a player is the pure subject of a

¹²⁸ Chun, *Programmed Visions*, 66.

¹²⁹ Michael Cook, “Creativity in Code Generating Rules for Video Games.” *XRDS: Crossroads*, The ACM Magazine for Students, June 2013; Branden Hookway, *Interface*, (Cambridge: MIT Press, 2014), 35.

¹³⁰ Benjamin Nicoll, “Mimesis as Mediation: A Dialectical Conception of the Videogame Interface,” *Thesis* 11137, no. 1 (2016): 32.

game.”¹³¹ This type of critique strips the autonomy from the presumed passive player who acts in accordance with the rules designed by the programmer and implemented by the machine. I argue, instead, that speedrunners assume the role of Butler’s critical subject of governance and complicate their own subjectivity as players by operating not only within the limitations of the interface but by engaging with the code that simultaneously constructs and betrays these limitations.

In a speedrun, the artificial divide between those with access to the code (typically the programmer) and those without it (typically the player) is blurred. After all, Montfort et al. observe, “the way code works is not,” as it is so often read, “a divine mystery or an imponderable,” and by understanding and interpreting the code, speedrunners gain access to the mechanical rules of the game.¹³² While, a typical player may very well adhere to the affordances and limitations of the interface to navigate the game world with little regard to the algorithms generating it, deconstructive speedrunners determine patterns and glitches in the code from the logical flaws in the interface, share them with one another, and use them to push the boundaries of the interface and challenge its temporal narrative and ideological structure. Returning to the signification metaphor, they occupy the space between indicator and indication, a space Rhodes reads as queer; they dance between the signifier and signified.¹³³ Following her lead, I extend an analysis of Wright’s speedrun by applying a queer approach to the glitch, the coded assemblage, and the narrative perpetuated by the interface.

¹³¹ See: James Ash, *The Interface Envelope: Gaming, Technology, Power*, New York City, NY: Bloomsbury Academic, 2015; Hookway, *Interface*, 35.

¹³² Montfort et al., *10 Print*, 7.

¹³³ Rhodes, “Homo Origo,” 385-88.

3.4 Queering the Glitch-As-Exploit

The glitch operates as the rhetorical avenue that allows speedrunners to dissociate the interface from the code. Exploiting it allows the player to use the “realness” of the code to perform a seemingly impossible task within the context of the interface’s appearance. I consider the glitch theoretically as an exploit, analyze the “Wrong Warp” OoT glitch as a technically queer maneuver, and discuss the broader implications of this claim.

Reconfiguring the glitch as exploit rhetorically signals its use for creative deconstruction – bugs are problems; glitches are possibilities. The term “exploit,” specifically, is derived from a broader software concept referenced by Alexander Galloway and Eugene Thacker, who explain, “protocological struggles do not center around changing existent technologies but instead involve discovering holes in existent technologies and projecting potential change through those holes. Hackers call these holes ‘exploits.’”¹³⁴ In opposition to the popular myth, hackers do not break computer systems (unlike “crackers,” who specialize in security breaches); instead they operate by identifying the unintentional “holes,” or glitches, within the systems and using them to, as Richard Stallman articulates, “explore the limits of what is possible, in a spirit of playful cleverness.”¹³⁵ Similarly, speedrunners do not seek to break a game – doing so designates a failed attempt – but rather push the machine to the edge of its logical limits. Boluk and LeMieux explain, “the incredible speed and enormous scale of digital media guarantees the emergence of

¹³⁴ Alexander R. Galloway and Eugene Thacker, *The Exploit: a Theory of Networks*, (Minneapolis: University of Minnesota Press, 2007), 81

¹³⁵ Richard Stallman, "On Hacking," *Richard Stallman's Personal Site*, 2014, accessed November 6, 2018. <https://stallman.org/articles/on-hacking.html>.

exploits— recombinatory rules operating outside both the experience of any one player and even the expectations of the original programmers.”¹³⁶ Transcending the developer/player binary, glitches exist beyond what SpeedRunsLive terms as “developer intent.”¹³⁷ They present themselves as unintentional signifiers in the text of the machine, waiting for a player to creatively interpret them within the context of the game to generate new meaning.

By examining Wright’s exploitation of the “Wrong Warp” glitch through the lens of post-structuralist queer theory, I assert that she not only reveals and dissociates the code/interface and developer/player binaries, but also internally resists and subsequently reworks the normative structure of the game to accommodate the tension that emerges. The Wrong Warp glitch dances between the signifying code, which enables the action of warping to the final level, and the signified interface, which obfuscates this possibility. After exploiting the glitch, Wright states, “What that did was, it took me...” she pauses as the audience applauds; Link clearly stands at the top of Ganondorf’s Castle, then continues, “so Ganondorf’s dead now.”¹³⁸ When you step into blue warps, she explains, “You lose control of Link. It plays the cutscene, takes Link up, then it sets the value that there’s gonna be a cutscene and the warp takes you to the correct location. In this case, it should have taken me to Kokiri Forest.”¹³⁹ However, by exploiting a glitch called Ocarina Items, she instructs Link to play the bottle as an Ocarina while the warp is trying to disable player movement, thus maintaining control of Link, and forcing the game’s internal timer to count up until it has reinscribed the blue warp’s destination as Ganondorf’s Castle, and its

¹³⁶ Boluk and LeMieux, *Metagaming*, 45

¹³⁷ SpeedRunsLive.

¹³⁸ Yay.

¹³⁹ Ibid.

cutscene, Ganondorf's death. In this instance, the intended result of blue warp – transportation to Kokiri Forest – functions as the intended narrative prescribed by the interface; the unintended occurrence – warping to Ganondorf's Castle – operates as the alternate narrative permitted by the code; and Wright's maneuvering – first performing Ocarina Items, then counting the beats of the internal clock, and finally Wrong Warping – is, of course, the dissociative, queer dancing. In exploiting this glitch, however, Wright doing more than just dancing: she is challenging and providing an alternative to normative gameplay.

Wright's deconstructive run queers the mechanical network of norms established by the game. Contemplating the act of queerness in relation to an unstable system of norms, Janet Jakobsen claims, "the call to resist the norm effectively refers not to any singular norm but to the network of norms that form a particular normativity or regime of power," and clarifies, "The question of resistance is therefore a complicated one, dependent on the particular norms and normativity that one resists."¹⁴⁰ Strictly speaking, Wright is not toppling the game's mechanical regime of power. After all, SpeedRunsLive justifies using glitches by stating, "the game merely executes the code in the way it was programmed to do. The game is the law."¹⁴¹ By navigating the preprogrammed glitches, Wright is not breaking the law; however, she is resisting the "particular norms and normativity" that strive to conceal them. Boluk and LeMieux explain the glitch's mechanics: "Wrong Warping allows players to write arbitrary hexadecimal values to memory addresses that correspond to cutscenes occurring within each geographic location in the game (in order to warp to unintended locations)."¹⁴² In exploiting the glitch, Wright resists three

¹⁴⁰ Jakobsen, "Queer Is? Queer Does?" 520.

¹⁴¹ SpeedRunsLive.

¹⁴² Boluk and LeMieux, *Metagaming*, 44.

interconnected norms and consequentially alters the network. She usurps the normative role of the developer, the author of the code, by writing a value into the game's memory. She further challenges the limits of the code from within by manipulating its programmed pattern to her advantage rather than letting it play out according to script. Finally, she disrupts the cohesive narrative of the game's interface by generating a non-sequential geographic location. Returning to Galloway and Thacker, the "existent technology" of the game is not changed, but instead Wright "[projects] potential change" through the glitch, queering gameplay as a result.

When exploiting is reconfigured as queering, it renders dissociation as the initial step to isolating, identifying, and subverting each of the norms in order to internally resist the network that they comprise. Both speedrunners and hackers employ this process to enact change within games and a wider range of computational systems respectively. However, working through Michel Foucault and Lauren Berlant, both of whom make similar claims, Jakobsen warns us that such slippage can just as easily result in "slipping discursively" to another normative binary, "thus protecting the network as a whole."¹⁴³ It is not hard to imagine a situation in which the programmer/user and developer/player binaries are reinscribed as hacker/user and speedrunner/player binaries, which are similarly normative as the primary term in each is still predicated on the power derived from access to computational knowledge. However, Jakobsen concedes, "given such networks, our task is not to pull out the "truly" resistant from the "kinda" (subversive or not) but to shift, to queer, the network as a whole."¹⁴⁴ Though perhaps only "kinda subversive," speedrunners' and hackers' exploitation of glitches shifts their subjectivity in

¹⁴³ Jakobsen, "Queer Is? Queer Does?" 520–523.

¹⁴⁴ Ibid., 524.

relation to the system, granting them the autonomy to, but not guarantee of, queering the system as a whole.

3.5 Queering the Coded Assemblage

When a speedrunner dissociates the game's code from its interface by way of the glitch, they assume a unique position from which they can critique and subvert the blackboxed code of the game while crafting their own hidden narrative within it. I begin this section by situating the game within a broader conversation about proprietary software and how it incites the necessity for user and players to find creative ways to access the code. I then consider both the game's code and the runner through Puar's theory of assemblages, and examine more deeply how Wright's run queers this facet of the network. I conclude by extending a theory about the narrative of the code insofar as it relates to the narrative of the interface.

Proprietary software is a salient issue within the field of computation, and Nintendo's stake in the game is particularly illustrative of the tension. While modern computing has its roots in both militaristic and commercial purposes, it was not until after World War II that its industrial uses began to pick up steam. In 1969, IBM began to unbundle hardware from software and charge for the latter, and in 1974, the Commission on New Technological Uses of Copyrighted Works was established and decided that software could be copyrighted.¹⁴⁵ This meant that software was entitled to the same legal protections as other creative works, and video

¹⁴⁵ Burton Grad, "A Personal Recollection: IBM's Unbundling of Software and Services," *IEEE Annals of the History of Computing*, 24, no. 1 (Jan–Mar 2002): 64–71.

games were no exception. In 1985, Nintendo released the NES in the United States, revitalizing the video game market and usurping Atari as the forerunner in the American video game industry. Previously, any developer could create and sell Atari games without the company's interference, which, along with the rise of the personal computer, led to an oversaturation of the game market, and ultimately the video game crash of '83.¹⁴⁶ In response to Atari's failings, Nintendo established a business model that would allow the company to maintain its competitive edge. Not only were the games it developed compatible only with Nintendo machines, any third parties interested in developing Nintendo games "had to be licensed to develop games for Nintendo's system, and Nintendo's licensing terms both prohibited developers from releasing games for other consoles and confined them to releasing just two games a year."¹⁴⁷ To enforce these rules, Nintendo developed a program called 10NES and installed it on each of its games. The program worked as a type of key; the console would "unlock" when it encountered an authorized game, complete with the 10NES code, and fail to play games without the program. Atari tried to reverse engineer the program and succeeded in building a substantially similar program called Rabbit; however, Nintendo took Atari to court over copyright infringement and won, thereby emphasizing the legislative power granted to software companies by US

¹⁴⁶ Annapoornima M. Subramanian, Kah-Hin Chai, and Shifeng Mu, "Capability Reconfiguration of Incumbent Firms: Nintendo in the Video Game Industry," *Technovation* 31, no. 5–6 (2011).

¹⁴⁷ Andrew Cunningham, "The NES Turns 30: How It Began, Worked, and Saved an Industry," *Ars Technica*, (July 15, 2013), accessed November 12, 2018, <https://arstechnica.com/gaming/2013/07/time-to-feel-old-inside-the-nes-on-its-30th-birthday/>.

copyright law.¹⁴⁸ Today, while the NES is considerably outdated, Nintendo games are still not only technologically blackboxed but also protected by a legal precedent.

By theorizing the game's code as an assemblage, I examine the theoretical entry points speedrunners make into the game's otherwise impenetrable program. Borrowing the term from Gilles Deleuze and Félix Guattari, Puar suggests a consideration of the concept of assemblages in addition to that of intersectionality. While intersectionality is concentrated on the subjectivity of identity – not unlike Jakobsen's assessment of the politicization of becoming queer – assemblages emphasize connections and relations. As such, they “encompass not only ongoing attempts to destabilize identities and grids, but also the forces that continue to mandate and enforce them.”¹⁴⁹ Using this model, I reconfigure the subjectivity of the speedrunner in relation to the “forces that continue to mandate and enforce” their identity as a passive player or user. As I've indicated, these forces not only include the relationship between the blackboxed code and the speedrunner but also those between the code and the programmer, the code and copyright law, the Nintendo corporation and the American legislative system, et cetera. Again, speedrunners do not actively disrupt or destroy these connections or the assemblage that they comprise, but in line with Puar's reading of Karen Barad, they do “[interrogate] the practices through which these boundaries are constituted, stabilized, and destabilized.”¹⁵⁰

Wright's run both queers and reveals the inherent queerness of OoT's coded assemblage. Puar's description of the queer assemblage allows for both of these realities to co-exist:

¹⁴⁸ J. Rader, "Atari Games Corp. v. Nintendo of America Inc," *Digital Law Online: Code as Speech*, 2016, accessed November 15, 2018, <http://digital-law-online.info/cases/24PQ2D1015.htm>.

¹⁴⁹ Puar, ““I Would Rather be a Cyborg Than a Goddess,”” 63.

¹⁵⁰ Ibid., 58

The strategy of encouraging subjects of study to appear in all their queerness, rather than primarily to queer the subjects of study, provides a subject-driven temporality in tandem with a method-driven temporality. Playing on this difference, between the subject being queered versus queerness already existing within the subject (and thus dissipating the subject as such) allows for both the temporality of being and the temporality of always becoming.¹⁵¹

In accessing and understanding the game's code, Wright both queers the relationship between the programmer (and Nintendo) and the proprietary software by inserting herself within it, thus becoming part of the assemblage, and also encourages queerness of the game to appear, to be. She demonstrates her knowledge of the intricate blackboxed workings of the game in explaining the Wrong Warp glitch. Specifically, she details the steps involved in freezing the game's internal timer at a specific number by shifting the camera off the blue warp at the right moment, allowing it to tick up a few more frames by repositioning the camera on the warp, triggering the game to load the Deku Tree Basement level by walking through the correct part of the door, indicating to the game that it must load a cutscene in addition to the level with the full knowledge that the Deku Tree Basement does not have a cutscene affiliated with it, and thus forcing the game to use the frames that it would have spent on the cutscene on loading the next area of the game instead. She concludes, "It just so happens that the areas in the game like internally are all kinda in sort of a random order, and it just so happens that the basement of the Deku Tree afterwards is part of the tower collapse, which is past Ganondorf."¹⁵² Whether or not the programmers were aware of this possibility is irrelevant; the queerness already existed in the coded subject, and by applying this method of gameplay, Wright queers the assemblage of the

¹⁵¹ Puar, "Queer Times, Queer Assemblages," 127.

¹⁵² Yay.

game. In doing so, she simultaneously queers the process of creation. Unlike the case of Atari's Rabbit, Wright isn't breaking copyright law. She's not cracking the code, stealing the material, nor profiting off of it. Instead, she is queering the relationship between written code and its intended use by crafting a new narrative within the limitations of the system established and upheld by Nintendo.

Proprietary software, as well as the protections afforded to it, reifies the boundaries between product and consumer, programmer and player, and code and interface, thus establishing the normative network of the game. While a traditional player might adhere to these boundaries, following only the packaged narrative situated in the game's interface, a speedrunner queers and reveals the queerness of the coded assemblage, and produces their own narrative as a result. This narrative is enabled through the runner's understanding of the underlying, typically blackboxed, mechanics of the game, reliant on factors such as internal clocks, frame sequences, and the order in which the levels were built (rather than later arranged). Dependent on the code, however, the interface does not remain fixed. When a speedrunner queers the code, they also queer the narrative presented by the interface.

3.6 Queering the Narrative Interface

The act of dissociation not only reveals the hidden realities of the code, it also changes the appearance of the interface. Accommodating the glitches, the surface narrative becomes temporally fragmented. Maintaining my focus on OoT, I draw on postmodern and anti-normative queer theory to examine how Wright's run operates in line with Jack Halberstam's concept of queer temporality to subvert Lee Edelman's figure of the child and embrace his queer

understanding of the death drive. Considering a broader rhetorical context, I discuss how both this reading and Wright's run hail disparate ideological audiences through a method similar to that Morris proposes in defining the fourth persona.

Speedruns are all about time. While a glitchless run, or what Scully-Blaker terms a "finesse run," may adhere to the temporal and narrative constraints of the interface – it is merely the game played quickly – a deconstructive run, such as Wright's, challenges the narrative sequence in order to produce an alternate, abbreviated temporality. In establishing a theory of queer time, Halberstam explains, "queer subcultures produce alternative temporalities by allowing their participants to believe that their futures can be imagined according to logics that lie outside of those paradigmatic markers of life experience—namely, birth, marriage, reproduction, and death."¹⁵³ Within the context of OoT, these "paradigmatic markers of life experience," or normative milestones, can be reconstituted as the necessary plot points of the game. Wright uses the logic of the glitch to craft another "future" for Link, skipping the majority of the dungeons and areas, the acquisition of necessary affective items (e.g. The Ocarina of Time, the light arrows, and the Master Sword), the opportunity to bond with NPCs, and Link's transition into adulthood. Halberstam further notes, "within the life cycle of the Western human subject, long periods of stability are considered to be desirable, and people who live in rapid bursts (drug addicts, for example) are characterized as immature and even dangerous."¹⁵⁴ Speedrunners play in rapid bursts, and their avatars actualize this type of living within the game world. Instead of overcoming obstacles in order to mature into a man who will both defeat the

¹⁵³ Judith Halberstam, *In a Queer Time and Place: Transgender Bodies, Subcultural Bodies*, (New York: New York University Press, 2005), 2

¹⁵⁴ Ibid., 4–5.

essence of evil and affirm the heterosexual paradigm, the Link of Wright's reality lives a fractured life consisting of collecting chickens, frequent deaths (i.e. the "death warp") and encounters with oblivion (i.e. the "save warp"). Because Link never meets the Princess Zelda, the symbol of his growth from childhood into heteronormative adulthood, her appearance at the end of the run is nonsensical; she exists as merely as a game object used to trigger the final level. Within this queer temporality, the plot points that do emerge are also rendered queer.

Wright's run queers the narrative of a typical human life, one that traverses the path from birth to childhood to adulthood to death. I highlight the particulars of this process by reading the alternate temporality that Wright constructs for Link in conjunction with Edelman's anti-normative theory regarding childhood and the death drive. For Edelman, the figure of the Child represents the promise of heteronormative futurity. He states, "for the Child, whose mere possibility is enough to spirit away the naked truth of heterosexual sex – impregnating heterosexuality, as it were, with the future of signification by conferring upon it the cultural burden of signifying futurity – figures our identification with an always about-to-be-realized identity."¹⁵⁵ What emerges is a normative feedback loop: heterosexuality signifies the Child, which signifies futurity through the reproduction of heterosexuality. However, in Wright's run, Link's prolonged childhood is one of queer fixity. Because he cannot reach adulthood, he lacks the promise of heterosexual reproduction. What's more, in enacting his hero's quest from the standpoint of childhood, he rejects the always already deferred identity and embraces one of queer impossibility. In a traditional playthrough (without the use of glitches), the mechanics of the game prevent child Link from equipping the Master Sword, and by extension, beating the game. The normative narrative of the interface dictates that the game can only be completed

¹⁵⁵ Edelman, *No Future*, 13.

through child Link's transition into adult Link, casting child Link in a perpetual role of becoming, a figure whose identity is determined not by who he is but by who he will be. Wright's use of the Wrong Warp glitch disrupts this trajectory by triggering a cutscene that mandates Link's retrieval of the Master Sword, which he has never acquired. Within Wright's queer narrative, child Link rejects the script that constrains him and embraces the identity that it denies him. His childhood is constituted as queer when it actualizes the potential that it should only signify.

In line with Halberstam's description of queer time, Wright's run values speed over longevity, and if Link's death contributes to this speed, then Link, of course, must die. Frequent deaths and resurrections are inherent to the normative logic of video games, and thus are not intrinsically queer. Queerness, instead, is located in Wright's intentional and pre-meditated execution of Link's death. Edelman associates queerness with the death drive, stating, "as the constancy of a pressure both alien and internal to the logic of the Symbolic, as the inarticulable surplus that dismantles the subject from within, the death drive names what the queer, in the order of the social, is called forth to figure: the negativity opposed to every form of social viability."¹⁵⁶ Within the logic of the Symbolic of the game, insofar as its code signifies its interface, the death of Link is both internal in that it is a possibility programmed into the game's script and alien in that it both results from and represents the failure of the external player (as opposed to that of the internal avatar). In killing Link at the specific moment of Gohma's death, Wright dismantles the subject of the game from within. Link's death without the death of Gohma would only force Wright to restart the battle, whereas Gohma's death without the death of Link would trigger the blue warp, which in turn would transport Link to the next sequential area of the

¹⁵⁶ Ibid., 9.

game. By calculating the specific moment of Link's death, Wright reveals the surplus in the code – the existence of the Wrong Warp glitch – and opposes the viability of the interface's normative narrative. As such, Link's death is absorbed into the queer temporality of Wright's run and is called forth to figure the queer possibility that emerges when normativity fails.

Undoubtedly, the queer reading I have just performed is specifically applicable to OoT. After all, not all games – let alone all software – follow this particular narrative. My method of reading glitches and the code and interfaces that they complicate as queer can be extrapolated beyond this project; however, it is still far from being actualized. Because proprietary programs are blackboxed, most users only have access to their interfaces and the narratives that they reproduce, and while users can interrogate these narratives, at the end of the day, they are forced to accept them if they choose to use the software. As I argue repeatedly, queerness is revealed within or written into the network through the intent of the composer.

Queerness finds queerness in the relationship between rhetor and audience. Charles Morris's writing on the fourth rhetorical persona offers some nuance regarding this process. "The fourth persona," states Morris, "is an implied auditor of a particular ideological bent, presumably one who is sexually marginalized, understands the dangers of homophobia, acknowledges the rationale for the closet, and possesses an intuition that renders a pass transparent."¹⁵⁷ For Morris, every act of passing is a "textual wink" from the rhetor to this necessarily marginalized listener. He goes on to clarify that the fourth persona differs from Black's second persona in that it must "imply two ideological positions simultaneously" and from Wander's third persona in that it uses

¹⁵⁷ Charles E. Morris, "Pink Herring & the Fourth Persona: J. Edgar Hoovers Sex Crime Panic," *Quarterly Journal of Speech* 88, no. 2 (2002): 230, <https://doi.org/10.1080/00335630209384372>.

silence for collusion rather than exclusion.¹⁵⁸ In reading the narrative, as well as the technical aspects of Wright's OoT run as queer, I have modeled the spirit of the textual wink. It's not a perfect adaptation. I am not writing explicitly from the closet, and the queer public I'm hailing is not one condemned to secrecy and silence. However, there is an "ideology of difference" in the style of my argument. While this chapter, and indeed this whole dissertation, is predominately directed at academics in the humanities with the purpose of exemplifying one mode of queer textual analysis, it is also meant for queer individuals – positioned within and beyond the academy – who seek representation in scholarly work, gaming, and the world of computation more broadly. Returning to the matter at hand, transgender speedrunners similarly hail a bifurcated audience. As a result, the speedrunning community acts as a microcosm through which we can analyze not necessarily the absence of queerness, but the active rejection as well as the intentional inscription of it within computational culture.

3.7 Queer Politics and Audience in Speedrun Culture

It would be disingenuous to divorce a queer methodology from queer politics, especially when writing about a community that does not self-identify as queer. In this section, I discuss the gendered demographic and ideology of the speedrun community and how it reflects that of broader computational cultures. I then analyze this community's hostile response to Narcissa Wright coming out as transgender, and argue that it performed a similar tactic of dissociation to rationalize the seemingly paradoxical distinction between Wright as speedrunner and Wright as

¹⁵⁸ Ibid.

transwoman. In a reparative effort, I seek to locate autonomy within Wright's play and within speedrunning community policies, drawing again on the aforementioned fourth persona. I conclude by advocating for a return to queer politics within scholarly queer writing.

A quick observation of Wright's audience at the 2013 Games Done Quick convention reveals that it is predominately comprised of young men. There are relatively few demographic reports concerning the speedrunning community; however, when the statistics that do exist are contextualized in relation to those centering on the mainstream technology industry and the gamer community, they lend insight into the gender disparities and assumptions within computational cultures and subcultures. That there is a gender gap within the tech industry is no secret. In 2015, 74% of adult men and 71% of adult women in the United States owned home desktops or laptops.¹⁵⁹ Moreover, in 2018, 89% of adult males and 88% of adult females in the United States used the Internet.¹⁶⁰ Currently, however, women only occupy 25% of IT jobs and 28% of proprietary software jobs.¹⁶¹ Scholars such as Janet Abbate, Amy Bix, Mar Hicks, and Thomas Misa attribute this imbalance to a web of variables including but not limited to media representation, misogynistic work environments, stereotypical expectations regarding women's

¹⁵⁹ Monica Anderson, "American Demographics of Digital Device Ownership," *Pew Research Center: Internet, Science & Tech*, Pew Research Center, October 29, 2015, www.pewinternet.org/2015/10/29/the-demographics-of-device-ownership/.

¹⁶⁰ Pew Research Center, "Demographics of Internet and Home Broadband Usage in the United States," *Pew Research Center: Internet, Science & Tech*, Pew Research Center, February 5, 2018, www.pewinternet.org/fact-sheet/internet-broadband/.

¹⁶¹ Bob Davis, "Gender Equality: A Trend The Tech Sector Needs To Get Behind," *Forbes*, Forbes Magazine, June 27, 2018, www.forbes.com/sites/forbestechcouncil/2018/06/27/gender-equality-a-trend-the-tech-sector-needs-to-get-behind/#e6de378717bc.

abilities and retention rates, and educational prerequisites that typically exclude women.¹⁶² While a similar gender bias exists within the video game industry, a further discrepancy appears in terms of identity within the gamer community. A 2015 survey from the Entertainment Software Association reports that women make up approximately 40% of video game players.¹⁶³ However, despite the fact “that many women play in the same way their male counterparts do,” Benjamin Paaßen, Thekla Morgenroth, and Michelle Stratemeyer conclude that “men are more likely to identify as gamers and visibly perform their identity, professionally as well as privately.”¹⁶⁴ Considering speedrunning as a hard-core or extreme gaming practice, Paaßen et al. examine video footage from the 2015 AGDQ convention and both the 2014 and 2015 Summer Games Done Quick conventions to gauge female participation. They find, “Of the 153, 136, and 117 runners featured in the events, 3, 0, and 6 runners respectively were women (i.e., less than 2% on average).”¹⁶⁵ Thus, while all women speedrunning teams, such as Girls on Fire, do exist, they are certainly not the norm.¹⁶⁶ Women make up a large part of the computational and gaming

¹⁶² See: Janet Abbate, *Recoding Gender: Women's Changing Participation in Computing* (Cambridge: MIT Press, 2012); Amy Bix, *Girls Coming to Tech!* (Cambridge: MIT Press, 2014); Mar Hicks, *Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing* (Cambridge: MIT Press, 2018); Thomas J. Misa, *Gender Codes: Why Women Are Leaving Computing* (Hoboken: Wiley, 2010).

¹⁶³ Entertainment Software Association, “Essential Facts About the Computer and Video Game Industry,” 2015, <http://www.theesa.com/wp-content/uploads/2015/04/ESA-Essential-Facts2015.pdf>.

¹⁶⁴ Benjamin Paaßen, Thekla Morgenroth, and Michelle Stratemeyer, “What is a True Gamer? the Male Gamer Stereotype and the Marginalization of Women in Video Game Culture,” *Sex Roles* 76, no. 7–8 (04, 2017): 430, doi:<http://dx.doi.org.pitt.idm.oclc.org/10.1007/s11199-016-0678-y>.

¹⁶⁵ Ibid., 242.

¹⁶⁶ “Girls on Fire,” *Twitch*, Twitch Interactive, Inc., 2017, www.twitch.tv/team/girlsonfire.

communities, but they are still thrust into a marginalized position in terms of status and identity; in both of these instances, the programmer/user and speedrunner/player binaries are further divided along male/female lines.

So where does the transgender body fit in? There are very few formal statistics regarding transgender representation in the speedrunning community, but trends in online articles and forums suggest that this population is surprisingly overrepresented and growing. The speedrun subreddit hosts several threads posted within the last year entitled, “[Serious] Why are there so many transgenders in the speedrunning community,” “Genuine question about Trans* runners,” and “Who are some openly LGBT speedrunners?”¹⁶⁷ And while the comments range from hateful and ignorant to curious and supportive, all reflect an influx of queer community members. Discussing AGDQ 2018, Abeni Jones, a writer for the prominent queer online publication *Autostraddle*, states, “about 3% of runners were women this year, which is actually an improvement,” and Jones continues, “what was also cool for this trans woman speedrunning enthusiast was that a bunch of these runners are trans women! In fact, there were so many trans women that it caused controversy among gamers.”¹⁶⁸ Blatant transphobia and ableism disguised as “controversy” is reflected in other accounts of this trend. In an article for *Dangerous*, a far right publication (think “fake news”), Cynthia Yockey claims that AWGQ 2018 was “transjacked,” which she explains as “when transgender-identified people, almost all born male, invade a space to convert it to their purposes and subject participants to their totalitarian dogmas,

¹⁶⁷ "R/speedrun," Reddit, 2018, Accessed November 23, 2018, <https://www.reddit.com/r/speedrun>.

¹⁶⁸ Abeni Jones, "6 Women Speedrunners to Follow After Awesome Games Done Quick 2018," *Autostraddle*, March 07, 2018, accessed November 23, 2018, <https://www.autostraddle.com/6-amazing-women-speedrunners-to-follow-after-awesome-games-done-quick-2018-412698/>.

instead of starting an event themselves.” She further argues that many of the participants are not really transgender but instead are individuals with “autism spectrum disorder [who] may be more susceptible to buying into transgender dogma.”¹⁶⁹ It is this latter treatment of the phenomenon that Narcissa Wright was subjected to when she came out as one of the first and most famous transgender speedrunners.

Considered by many within the community to be the “face of speedrunning” and even the “face of Twitch” (a popular video game streaming site), Wright’s struggles with gender identity, health, and speedrunning over the past three years have been topics of public scrutiny.¹⁷⁰ In 2015, Wright came out as transgender, “a public transition,” Patrick Klepek notes, “that regularly lead to vile harassment.”¹⁷¹ After facing malicious commentary and several DDOS attacks, Wright briefly shut down her Twitch account and later made it subscriber-only.¹⁷² During this time, she also began experiencing pain in her hands and wrist, a result of the hours of gameplay

¹⁶⁹ Cynthia Yockey, “Transgender Activists ‘Transjack’ Popular Speedrunning Event for Gamers,” DANGEROUS, February 26, 2018, Accessed November 23, 2018, <https://www.dangerous.com/41840/transgender-activists-transjack-popular-speedrunning-conference-gamers/>.

¹⁷⁰ “R/LivestreamFail - Narcissa Wright Has Been Indefinitely Suspended,” Reddit, 2018, accessed November 24, 2018, https://www.reddit.com/r/LivestreamFail/comments/8oz0c8/narcissa_wright_has_been_indefinitely_suspended/.

¹⁷¹ Patrick Klepek, “One of Zelda’s Greatest Speedrunners Was Just Banned From Twitch,” Waypoint, May 15, 2018, accessed November 24, 2018, https://waypoint.vice.com/en_us/article/7xm9yd/one-of-zeldas-greatest-speedrunners-was-just-banned-from-twitch.

¹⁷² See: Klepek, “One of Zelda’s;” Nathan Grayson, “One of the World’s Best Speedrunners Can’t Speedrun Anymore,” *Kotaku*, January 11, 2016, accessed November 24, 2018, <https://kotaku.com/one-of-the-worlds-best-speedrunners-cant-speedrun-anymo-1752274907>.

demanding of full-time speedrunners, forcing her to go into partial “retirement.” Instead of documenting speedruns, she began dedicating her Twitch channel to painting, graphic design, coding, and experimental vlogging. Klepek observes, “her streams could go for more than 24 hours, with Wright occasionally letting the camera roll on for hours, while she idled or walked away. She called this a mixture of ‘content’ and ‘non-content,’ a form of experimentation.”¹⁷³ In 2018, Twitch officially issued Wright an indefinite suspension on her account, citing multiple violations including “Nudity or Sexual Behavior/Attire.” For Wright, online streaming is both a way of life and her primary source of income, and she continues to produce content on other sites. As she once put it, “When I’m not ‘online’ I feel like it’s not even real, in a way,” she said. “I’m just like, wired in.”¹⁷⁴

Operating within an overwhelmingly cisgender male paradigm, the majority of the speedrun community enacts the tactic of dissociation on the figure of Wright through a process similar to that which I read Wright performing on the computational stack. Klepek notes, “you can’t read the comments on Wright’s videos without coming across rampant abuse, transphobia, and other toxicity... Many comments cite her lack of speedrunning, wishing she’d return to what she was known for, as justification for their words, but that’s obviously bullshit. It’s just a cover.”¹⁷⁵ For these commenters, the unified concept of Wright as a pre-transition champion speedrunner and Wright as a transgender woman vlogger presents itself as a contradiction. To cope with this, they assign the former figure, often referencing Wright’s deadname as the “reality,” and the latter figure, Narcissa Wright, as the “appearance.” This process is particularly

¹⁷³ Klepek, “One of Zelda’s.”

¹⁷⁴ Ibid.

¹⁷⁵ Ibid.

exemplified within one YouTube user's comment on Wright's OoT run: "Rip [deadname] we miss the real you."¹⁷⁶ This sentiment is reflected throughout the thread. In order to preserve the coherence of the "real" Wright, her fans rhetorically cast "him" as dead, thus situating the contradictory "appearance" of Narcissa Wright in a position for critique.

As Klepek observes, their criticism predominantly centers on the shift in Wright's content from speedrunning to personal blogging; however, this tactic merely operates as a thinly veiled excuse for transmisogyny. One commenter states, "she is totally cruel and egotistical to her viewers now. My dislike of her has nothing to do with her sex change. I would have defended her if she wasnt such a cunt," and another agrees, "doesnt she just do shitty melee vids and shit now though? I couldnt give two fucks less about whatever gender she is, but if shes not speed running, shes pretty much dead afaic.." Through their comments, these users are both justifying their criticism of the women who they see as usurping the role of their male idol and reflecting a larger issue of sexism in gaming. Paaßen, et al. conclude, "female gamers can only be seen as female or as a gamer, reinforcing the belief that being a woman and gaming are fundamentally incompatible."¹⁷⁷ For many in the gaming and speedrunning communities, a male presenting figure still represents a "real" player, and anyone whose identity is incompatible with this norm – whether female or transgender – only "appears" to be playing the part.

An optimistic counterpoint, however, in the image of Wright as an intentional actor. Through the lens of Morris's fourth persona, Wright assumes the authority of a rhetor hailing ideologically conflicting audiences. In the words of Morris, Wright "mirrors the dupes" – or the potentially transphobic community – by "passing" as the problematic yet archetypical image of

¹⁷⁶ Yay.

¹⁷⁷ Paaßen et al., "What is a True Gamer?" 430.

legitimate speedrunner, while sending an embodied wink to the other queer runners and fans in the room.¹⁷⁸ Her primary audience at the convention validates her outward identity; they laud her skill and articulation with no indication of her gender difference. It is unclear whether or not the hidden audience constituted by the fourth persona acknowledges the wink; it must remain silent in order to preserve Wright's public image and its own safety. In the moment of "coming out," Wright is no longer passing and her rhetorical identities collapse. Her publics collapse as well, and their ideological differences collide. This point of contact is displayed textually by the eruption of discourse in the YouTube comments that center not on the details of the run, but on the validity of Wright's gender identity. The antagonistic comments illustrate the "dangers of homophobia" and the "rationale for the closet" to which Morris refers.¹⁷⁹ Her act of coming out, however risky, did and continues to pave the way for vocal change both in the speedrunning community and in academic projects that focus upon it. The fourth persona can speak.

Advocating for a return to queer politics in conjunction with queer methodology is not an original claim. In their theories of intersectionality and assemblages respectively, both Jakobsen and Puar highlight the necessity of analyzing the identities and lived experiences of the subjects they aim to queer. Jakobsen further cites David Halperin, who states "the lack of specifically homosexual content built into the meaning of "queer" has made that term all too handy – not for generating a de-essentialized identity or defining a marginal positionality so much as for multiplying the opportunities for disidentification, denial, and disavowal."¹⁸⁰ In this chapter, I

¹⁷⁸ Morris, "Pink Herring," 230.

¹⁷⁹ Ibid.

¹⁸⁰ David M. Halperin, *Saint Foucault: Towards a Gay Hagiography*, (New York: Oxford University Press, 1997): 64.

have used queer methodology to disidentify the primacy of code from the interface it generates, deny the power of the programmer and the corporation they represent, and disavowal of the normativity of the narrative within one example of a computational structure; however, this does little to queer the realities of those operating within the system. When discussing a community that reacts with rhetorical dissociation and verbal harassment when it encounters the Other within its numbers, I find it necessary to return to the marginal positionality of the transgender speedrunner and propose the potential for queer political change within the spaces that they occupy.

Although comment threads, online forums, and far right articles will likely continue to promote transphobic vitriol for the foreseeable future, real change is being enacted within the speedrunning community. In her account of AGDQ 2018, Jones writes, “In spite of the toxicity that sometimes accompanies being queer, trans, and/or a woman on the internet, speedrunning is a pretty open and accepting community and it was nice to see that reflected in who ran games this year.”¹⁸¹ This push for acceptance and inclusion is reflected not only in the increasing population of transpeople who compete, but also in GDQ’s implementation and enforcement of discrimination policies. GDQ’s website states that its events “have a ZERO TOLERANCE policy in regards to harassment of all kind,” which encompasses acts in relation to both “sexual orientation” and “gender identity, or presentation.”¹⁸²

As the event has grown in popularity – its channel boasting “between 100k–150k concurrent viewers” – enforcing these rules has become progressively difficult, but the

¹⁸¹ Jones, “6 Women Speedrunners.”

¹⁸² Games Done Quick, “Rules,” Games Done Quick, 2018, Accessed November 24, 2018.

<https://gamesdonequick.com/rules>.

organizers consistently make an effort to do so.¹⁸³ In 2017, the convention banned the use of an offensive emote in their stream that some viewers would use whenever a transgender runner was on screen.¹⁸⁴ In 2018, GDQ implemented a subscription-based approach to their Twitch stream, requiring users to make a \$5 payment to watch in an effort to reduce harassment and spam. While some viewed this approach as classist, the creators of the alternate free stream, GDQ_Poverty, argued, “the organization shouldn’t have to deal with racist, misogynistic and homophobic comments from trolls.”¹⁸⁵ At the events, organizers take a case-by-case approach in addressing, reprimanding, and even banning runners and viewers who violate the harassment policy. In order to do so, they consider criteria such as the intent behind the incident, the frequency of occurrence, concurrent violations of other rules, and the situation’s degree of seriousness.¹⁸⁶ While, as GDQ representative Matt Merkle states, “malicious actors are punished swiftly and heavily,” he also indicates that this process is used to correct mistakes and cultivate etiquette rather than to punish all incidents, including accidents, “harshly or unfairly.”¹⁸⁷ GDQ strives to create an environment in which its marginalized members can exist safely.

¹⁸³ Julia Alexander, "Games Done Quick Viewers Upset over Subscription Chat Fee (update)," Polygon, January 08, 2018, accessed November 24, 2018, <https://www.polygon.com/2018/1/8/16863098/games-done-quick-twitch-chat-hosting>.

¹⁸⁴ Heather Alexandra, "AGDQ Twitch Chat Is Tolerable Right Now, But Not Everyone Is Happy," Kotaku, January 09, 2018, accessed November 24, 2018, <https://kotaku.com/1821882319>.

¹⁸⁵ Alexander, “Games Done Quick.”

¹⁸⁶ Heather Alexandra, "As 'Games Done Quick' Gets Bigger, So Do Its Controversies [Updated]," Kotaku, January 19, 2017, accessed November 24, 2018, <https://kotaku.com/as-games-done-quick-gets-bigger-so-do-its-controversie-1791393815>.

¹⁸⁷ Ibid.

Though they do not enact the dynamic structure of the fourth persona as explicitly as Wright, the GDQ policies do operate by hailing audiences that are ideologically at odds. The policies themselves are directed at Wright’s “dupes,” or the majority of the speedrunning public. By establishing these guidelines, the policies linguistically interpellate the members of this public into subjectivity as potential harassers. In doing so, they also hail the audience of the harassed. By naming this conflict as such, they invite these auditors – previously existing as the silent fourth persona – to speak and, as a result, be recognized, validated, and granted protection. As with the process of queering computational structures, the act of queering communities must begin from within.

3.8 Conclusion

“Time?” yells Wright. “22:38,” replies the facilitator. This was in 2013. Like the whole of computational development, speedrunning records are not static. In early February 2020, I received a text from my brother exclaiming that Wright has smashed the record, completing the OoT run in under nine minutes.¹⁸⁸ The inevitable process of toppling records has generated a joke within the community: “Any% is dead.” Based on a comment made by Wright in 2014, members of Reddit ironically post this line whenever a new glitch is found and exploited.

The new run is contingent upon an “Arbitrary Code Execution” (ACE) glitch. The glitch is complicated, but essentially involves corrupting a pointer in the stack to overwrite the rotation data of a specific rock in the game (using a fixed camera and the “Stale Reference Manipulation”

¹⁸⁸ Incidentally, it was my brother who inspired this chapter.

trick) with data from the predetermined file name, which uses Japanese characters. This act, along with a few additional required maneuvers, such as pointing an item like the slingshot or sword in a precise direction, inputs the required numerical value into the memory that allows the player to warp to the credits.¹⁸⁹ Youtuber Glitches0and0stuff explains, “It’s important to realize that there’s no real difference between game code, which is the instructions that the game uses to run and game data, which is the numbers that are used for properties like rotation values and position values. It’s all just numbers in memory.”¹⁹⁰ Runners who attempt to exploit this glitch rely on the slippage between game code and game data. If they are successful, they can trigger the end of the game without ever leaving the Kokiri Forest. At this point, the majority of the run is comprised of cutscenes.

The exploitation of this glitch requires the use of two controllers plugged into the first and third slots in the console. The second controller’s joystick must be positioned at a specific angle, a prerequisite which has inspired runners to carve notches in their controllers and fix the joystick in place with rubber bands and other materials before the run begins. These actions have incited discourse in the community regarding whether or not the run falls into the category of TAS, typically reserved for emulators. The conditions for glitch exploitation blur the lines between hardware and software as both are often manipulated in order to achieve the desired interface effect. As the runs get shorter, the runners get more creative. According to

¹⁸⁹ Glitches0and0stuff, "Reach the Credits from Kokiri Forest using ACE (Ocarina of Time Glitch Explained)," YouTube, January 20, 2020, accessed February 23, 2020, <https://www.youtube.com/watch?v=wdRJWdKb5Bo>.

¹⁹⁰ Ibid.

speedrun.com, a player of the username dannyb21892 holds the record with a staggering eight minutes and twenty-four seconds.¹⁹¹ Any% is dead.

I've read Wright's process between pressing the first and final button of the game as tactically queer. In exploiting glitches, Wright dissociates the rhetoric of the code from that of the interface and subverts the relationship between the two. She further deconstructs the network of the coded assemblage and critiques proprietary software by crafting her own narrative within the game's code. As a result, she queers the normative narrative perpetuated by the interface. However, just as queer theory cannot be dissociated from queer practicality, computational systems cannot be dissociated from the communities that produce and use them. Wright is still a young transgender woman living in poverty in America. She has limited income to pay for hormones and mental health medication and has restricted access to health insurance to treat the injuries she has sustained through speedrunning. While increased representation and harassment policy enforcement indicates a growing tolerance of queer identities within speedrunning and broader gaming circles, the norm still within computational culture still tends toward a cisgender male paradigm, importing its affiliated ideology with it. Ever on the horizon, the process of queering must continue to be enacted along the entire stack – both computationally and culturally.

¹⁹¹ Speedrun.com, accessed February 23, 2020. <http://www.speedrun.com/>.

4.0 Chapter Three: Sex in Networked Publics: Digital Privacy and Online Sex Work

Using the online practices of sex workers as a focal point, this chapter examines how the how privacy is governed and complicated within Social Networking Sites (SNS). I have chosen to concentrate on this demographic because, while for many SNS users, privacy is desired, for sex workers, it is a necessity. I begin by describing the sites used for the study, Facebook and FetLife, and by discussing the affordances and limitations of networked publics and counterpublics, considering each site's approach to data collection. I then provide a review of the domestic legislation regarding to sex work insofar as is it relates to offline and online spaces and an analysis of each website's policy regarding sex work. The bulk of my project centers on a qualitative study of the rhetorical and technological strategies that site users who are involved with or adjacent to sex work communities use to self-identify, as well as the cyber security tactics they employ to maintain privacy and avoid the phenomenon of "context collapse."¹⁹² Through the results of this study, I discuss the theoretical and practical implications of these tactics, considering the scholarship on digital surveillance and privacy.

In this chapter, I make a dichotomous intervention. First, I expand the conversation surrounding digitally networked publics to distinguish between normative publics and counterpublics. Second, I locate and examine the intersection between online sex work, surveillance, and privacy as it exists within these publics. A great deal of scholarly work has considered the ways in which sex workers manufacture and manage their professional identities, and in this chapter, I extend this scholarship to provide a more detailed account of the methods

¹⁹² Marwick and boyd, "I Tweet Honestly, I Tweet Passionately," 122.

online sex workers use to maintain these identities within and between digitally networked publics. In addressing these strategies, I underscore the importance of privacy specifically for vulnerable populations of digital publics.

Within the context of this larger dissertation, this chapter moves further up the stack, seeking to identify the slippage between digital publics and the cultural systems that produce them. In the way that it considers the correlation between site policy and United States legislation, it channels Lawrence Lessig's consideration of the structural similarities between code and law.¹⁹³ Although law precedes computer code, because digital environments frequently shape regulatory practices, the chain of signification is not unidirectional. While this chapter does not draw on queer theory as explicitly as the others, instead examining queer methods, it maintains the ethical and rhetorical thrust of the work in that it considers the ways in which individuals aligned with a marginalized sexual/gender minority subvert the logic of mainstream technology to the advantage of their community. Just as certain transgender speedrunners embody and enact a political claim about their identities in their exploitation of the glitches between a game's code and its interface, online sex workers similarly make an argument for their right to exist safely in their use of employment of privacy and cyber security tactics in the slippage between the digital and non-digital publics that they occupy. In doing so, they carve out the boundaries of their counterpublic.

¹⁹³ Lawrence Lessig, *Code v 2.0 and Other Laws of Cyberspace: Version 2.0*, New York: Basic Books, 2006.

4.1 Site Description: Facebook and FetLife

Individuals involved in online sex work typically maintain multiple profiles across social networking platforms, apart from those specifically dedicated to sex work, for both personal and professional reasons.¹⁹⁴ Here, I provide an in-depth analysis of the sites Facebook and FetLife in terms of their approaches to data collection and the ways in which they regulate and limit expression regarding sex work. I first chose these sites due to their disparate policies and popularity amongst users, and further analyzed them due to the data provided in my survey results.

Founded in 2004 at Harvard University in Cambridge, Massachusetts, Facebook began as a SNS directed at and utilized by students to rate one another's attractiveness.¹⁹⁵ It has since expanded beyond college campuses, and now presents itself as an "open-to-all" site, boasting 2.5 billion active users as of the fourth quarter of 2019.¹⁹⁶ Bridging multiple social circles, it encourages its users to connect with family members as well as friends and acquaintances from different stages and circles in the user's life (e.g. childhood friends, high school and college classmates, individuals with similar interests or affiliations, coworkers, etc.). In 2011, Facebook

¹⁹⁴ Christopher W. Blackwell and Sophia F. Dziegielewska, "Risk for a Price: Sexual Activity Solicitations in Online Male Sex Worker Profiles," *Journal of Social Service Research* 39, no. 2 (2013): 159, doi:10.1080/01488376.2012.744617; Jesse Drucker and Tanya Nieri, "Female Online Sex Workers' Perceptions of Exit from Sex Work," *Deviant Behavior* (2016): 1, doi:10.1080/01639625.2016.1257890.

¹⁹⁵ Niels Brügger, "A Brief History of Facebook as a Media Text: The Development of an Empty Structure," *First Monday* 20, no. 5 (2015), doi:10.5210/fm.v20i5.5423.

¹⁹⁶ Statista, "Facebook users worldwide 2019," *Statista*, 2020, Accessed February 18, 2020, <https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>.

introduced its “Timeline” feature, and switched from what José van Dijck identifies as a database model to that of a narrative model by encouraging users to fill in personal details to construct their own unique stories.¹⁹⁷ Christian Fuchs further observes that, employing web 2.0 surveillance tactics, the site then uses this data to “[tailor] advertisements to the consumption interests of the users.”¹⁹⁸ Demanding information and authenticity from its users, Facebook operates by transforming public identities into marketable data.

Facebook’s interface is an ever-developing amalgamation of fields geared toward collecting data from its users and streams of content based, in part, on user preferences indicated through this data. When registering, Facebook requires users to sign up with “the name they go by in everyday life,” and further clarifies that it should be a name that also appears on the user’s official ID (e.g. a driver’s license, passport, etc.).¹⁹⁹ Though many users choose versions of their names, nicknames, or other aliases as their display name, Facebook must approve all changes. Once the profile is generated, users are prompted to update personal information on their profiles, which includes but is not limited to contact information, employment and education details, past and present locations, political and religious affiliations, and gender and sexual identities.²⁰⁰ Because Facebook is a digital public, it requires networks to function. Once the user begins establishing connections with other users, groups, and pages, the site generates content on

¹⁹⁷ Van Dijck, “You Have One Identity,” 200.

¹⁹⁸ Christian Fuchs, “New Media, Web 2.0 and Surveillance,” *Sociology Compass* 5, no. 2 (2011): 138-41, doi:10.1111/j.1751-9020.2010.00354.x.

¹⁹⁹ Facebook Staff, “What names are allowed on Facebook?” Facebook, 2017, accessed November 10, 2017, <https://www.facebook.com/help/112146705538576>.

²⁰⁰ Facebook, 2020, accessed February 18, 2020, <https://www.facebook.com/>.

their News Feed based on their “connections and activity.”²⁰¹ Essentially, it evaluates the user’s demographic information, networks, and individual feedback (through likes, comments, and other interactions), and produces a specialized experience centered on advertisements, news articles, and status updates to which the user will respond positively. As digital projects such as “Red Feed, Blue Feed”²⁰² have demonstrated, the specificity of Facebook’s algorithms ultimately create an echo chamber effect, trapping users in a cycle of consistently validating content of which the site knows they will approve.

Posing somewhat of a bold antithesis to Facebook, FetLife’s purpose and interface is centered on the expression of user sexuality. Created in 2008 and boasting the tagline “Like Facebook, but run by kinksters like you and me,” FetLife is openly geared towards participants in the BDSM lifestyle, but set itself apart from dating sites by encouraging platonic and community-driven connections as well as romantic and sexual ones.²⁰³ To date, the site hosts over 8.5 million registered user accounts; however, it is unclear how many are active.²⁰⁴ Unlike Facebook, FetLife did not fully switch over to the “narrative model” indicated by van Djick, and it still functions very much as a database, a structure reflected in its interface.

²⁰¹ Facebook Staff, “How News Feed Works.”

²⁰² Jon Keegan, “Blue Feed, Red Feed,” *The Wall Street Journal*, May 16, 2016, accessed November 10, 2017, <http://graphics.wsj.com/blue-feed-red-feed/>.

²⁰³ BitLove, Inc., FetLife, 2020, accessed February 18, 2020, <https://fetlife.com/>; Damien Fay, Hamed Haddadi, Michael C. Seto, Han Wang, and Christoph Kling, “An Exploration of Fetish Social Networks and Communities,” *Advances in Network Science Lecture Notes in Computer Science*, 2016, 198, doi:10.1007/978-3-319-28361-6_17.

²⁰⁴ BitLove, Inc.

FetLife's interface is modeled, to a degree, on Facebook's. Against Facebook's inviting blue and white color scheme, FetLife's black and red décor contrasts starkly; however, much like its normative counterpoint it still possesses the familiar components of an SNS: profile page, news feed, and ads. Unlike Facebook, FetLife does not require users to provide their real names. In fact, it claims, "some people don't mind you using their full real name and others don't want you to even use their first name,"²⁰⁵ and encourages users to respect others' levels of comfort. While users are encouraged to fill out a profile, the categories provided are less concerned with the user's demographic information and personal identifiers (though it does provide fields for age and location), and more with their gender, sexual orientation, sexual role, level of commitment to the BDSM lifestyle, and what they are seeking from the site.²⁰⁶ Moreover, though users can connect with others, a great deal of interactivity occurs on the groups and board pages as well as on the content sections of the site (i.e. amateur porn and erotica). The news feed only serves to update the user with their friends' posts in chronological order (rather than tailoring them due to interest). Finally, though the site presents the user with advertisements as they navigate the pages, it typically presents randomized content from the site's sponsors rather than material catered to the user through a series of algorithms. Though similar in structure, these sites operate as inherently different publics due to their desperate approaches to surveillance and data collection and to the adaptation of federal prostitution legislation into site policy.

²⁰⁵ FetLife Staff, "Community Guidelines," FetLife, 2017, Accessed November 10, 2017, <https://fetlife.com/guidelines/community>.

²⁰⁶ BitLove, Inc., FetLife.

4.2 Networked Publics and Counterpublics

I use the theoretical framework of networked publics and counterpublics to illustrate the meaningful differences between these two sites. Drawing on Louis Althusser's theory of being "hailed" into subjectivity, Warner explains that, similarly, a public is formed "by the virtue of being addressed" by an external factor, such as a speaker, a performance, or even a text, and the web of discourse it incites.²⁰⁷ In the case of SNS publics, sites and the networks they constitute hail users in subjectivity. Citing Althusser's definition of ideology as "a 'representation' of the imaginary relation of individuals to their real conditions of existence,"²⁰⁸ Galloway and Chun make the similar arguments that graphical user interfaces (GUIs) operate as a means of constructing subjects ideologically.²⁰⁹ Interfaces interpellate the type of users who will reproduce the structural and theoretical narratives of public itself (defined through site terms and policies); the architecture of the site "regulates" the user.²¹⁰ While meeting the same qualifications as traditional publics, digitally networked publics operate as a specific subset of the category that adhere to their own structural rules and present their own specific risks regarding user privacy.

Privacy (notably that pertaining to sexuality) remains a battleground between public accountability and personal autonomy. The collapse of the public and the private within SNS publics is apparent when these are read in accordance with Marwick and boyd's understanding of

²⁰⁷ Michael Warner, *Publics and Counterpublics*, (New York: Zone Books, 2002), 67.

²⁰⁸ Louis Althusser, "Ideology and Ideological State Apparatuses (Notes Towards an Investigation)," In *Lenin and Philosophy and Other Essays*, trans. Ben Brewster (New York: Monthly Review Press, 2001), 109.

²⁰⁹ Chun, *Programmed Visions*, 67; Galloway, *The Interface Effect*, 52.

²¹⁰ Lessig, *Code v 2.0*, 7.

networked publics. They define networked publics as “publics that are restructured by networked technology,” and further differentiate social networking sites from other networked publics by “the combination of features that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.”²¹¹ While sites like Facebook maintain the illusion of privacy by granting user’s authority over the public, yet bounded system of their profile and audience through a series of predetermined settings options, they still perpetuate the structure of a public Panopticon through surveillance capitalism.²¹² A user’s data might be protected from other users, but it is not protected from the corporation.

Despite the enforced publicity of the SNS structure, subjects of digitally networked publics (just as those in non-digital publics) employ various rhetorical tactics to appropriately navigate, express themselves, and interact with other members of the public. Speaking to a phenomenon they call “context collapse,” which occurs when an audience of real, potential, and imagined viewers from various social circles of the user’s life overlap, Marwick and boyd note that users in networked publics rely on tactics such as “impression management,” “self monitoring,” and shifts in self-presentation in order to construct their identity in a way to cater to

²¹¹ danah boyd, "Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications," In *A Networked Self: Identity, Community, and Culture on Social Network Sites*, edited by Zizi Papacharissi, 39-58. New York, NY: Routledge, 2010.

²¹² See: Shoshana Zuboff, "Big Other: Surveillance Capitalism and the Prospects of an Information Civilization," *Journal of Information Technology* 30, no. 1 (2015), doi:10.1057/jit.2015.5.

the expectations of each all at once.²¹³ Van Dijck observes, however, that because these sites are typically structured in a way that calls for an authentic identity across all platforms, maintaining separate identities on each is a challenge.²¹⁴ Unsurprisingly, many users strive keep their involvement in FetLife's public "private" from their activity within Facebook's, but must work within the affordances of a actively public site structure to do so.

While both Facebook and FetLife function as networked publics in which users rely on these methods to avoid context collapse, the types of publics hailed dictate the extent to which they must do so. Warner explains that, although counterpublics meet the same criteria as publics, they are also conceptually dissimilar by merit of the facts that are "formed by their conflict with the norms and contexts of their cultural environment."²¹⁵ He further states that they "differ markedly in one way or another from the premises that allow the dominant culture to understand itself as a public."²¹⁶ Because counterpublics are actively in conflict with normative publics and strive to set themselves apart from the limits of such, the privacy of their members is imperative, thus complicating Van Dijck's conjecture that digitally networked publics will consistently attempt to cohere their users' identities between platforms.

Facebook and FetLife operate as disparate publics. Jansson et al. note, "No longer do we have one major national public sphere (cf. Habermas 1989); rather, with the emergence of social media the mediatized public sphere has become splintered into numerous smaller public

²¹³ Marwick and boyd, "I Tweet Honestly," 122-123.

²¹⁴ Van Dijck, "You Have One Identity," 200.

²¹⁵ Warner, *Publics and Counterpublics*, 63.

²¹⁶ Ibid., 112-113.

spheres.”²¹⁷ Not only does Facebook function as a normative public sphere and FetLife as a counterpublic sphere due to each site’s purpose (i.e. Facebook as a place to connect with friends and family and FetLife as a space to meet other members of the kink community), but also relation to their conduct regarding data collection and surveillance. Zuboff explains that surveillance capitalism is the process of monetizing data obtained through surveillance.²¹⁸ Facebook adheres to this model because, as Fuchs observes, “it stores, compares, assesses and sells the personal data and usage behaviour of several 100 million users.”²¹⁹ As a result, the power dynamic between the site and its members is unidirectional; by creating an account with Facebook, the user agrees to part with their data for the company’s profit.

If this system is the norm, then FetLife, as a counterpublic, acts in conflict to it. It does so first through its refusal to collect accurate data about its members, thus providing them with an extra layer of protection against context collapse. Second, it performs an alternate practice through its privacy policy, which claims to only share personal information with “certain trusted third parties to perform functions and provide services to [the site]... but only to the extent necessary to perform these functions and provide such services.”²²⁰ The policy goes on to state (from the perspective of the site managers), “Our personal information is on FetLife as well, we would never use companies that don't share a similar privacy philosophy as us.”²²¹ While FetLife

²¹⁷ André Jansson, Mia Lövhelm, Susanna Paasonen, and Johanna Sumiala, "Social Media: Implications for Everyday Life, Politics and Human Agency," *Approaching Religion* 3, no. 2 (2013): 29, doi:10.30664/ar.67514.

²¹⁸ Zuboff, "Big Other," 75-89.

²¹⁹ Fuchs, "New Media, Web 2.0 and Surveillance," 138.

²²⁰ BitLove, Inc.

²²¹ Ibid.

does not elucidate on these third parties, it makes a rhetorical effort to establish itself as separate from surveillance-based publics both through its claim to data collection as intrinsic to functionality and through its managers' self-identification with the site's members. The distinction between Facebook and FetLife as publics is further defined in each site's implementation of domestic sex work legislation within their policies.

4.3 Domestic Sex Work Legislation and Site Policy

Enforcing legislation within online arenas is a tricky situation at best, and that pertaining to sex work is no exception. This chapter focuses specifically on online sex work – a legal gray area; however, it is necessary to broadly outline United States prostitution regulation before delving into the nuances of this type of labor and discussing how each SNS addresses it. Within the U.S. legal system, sex work is regulated on a state-by-state basis. With the exception of 11 counties in Nevada in which it is legalized (a labor status that comes with its own set of rules and limitations), it is criminalized to varying degrees across the nation.²²² Legally, sex work is framed as “prostitution” as a means of differentiating it from human trafficking, which extends beyond the sex trade and encompasses all forms of enforced labor, including that performed by “domestic, agriculture, and sweatshop workers”.²²³ The United States Department of Justice

²²² Alexandra Lutnick and Deborah Cohan, "Criminalization, Legalization Or Decriminalization of Sex Work: What Female Sex Workers Say in San Francisco, USA," *Reproductive Health Matters* 17, no. 34 (2009): 38; *West's Encyclopedia of American Law*, edition 2. S.v. "Prostitution."

²²³ Jacqueline Comte, "Decriminalization of Sex Work: Feminist Discourses in Light of Research," *Sexuality & Culture* 18, no. 1 (2013): 202, doi:10.1007/s12119-013-9174-5; Kamala Kempadoo, Jyoti Sanghera, and

further defines prostitution as “a sexual act or contact with another person in return for giving or receiving a fee or a thing of value,” but these laws also tend to also encompass pimping, pandering, and commercial sex, or sexual acts either consensually or coercively exchanged for capital.²²⁴ Though this definition is applicable to most types of sex work, it is disproportionately enforced in the street-based sector.²²⁵

The conflation of sex work with human trafficking in the legislative sphere has detrimental effects on the community, especially in the online sector. In April 2018, U.S. politicians signed both the Allow States and Victims to Fight Online Sex Trafficking Act (FOSTA) and the Stop Enabling Sex Traffickers Act (SESTA) into law.²²⁶ Despite the well-intentioned rhetoric of the legislation’s nomenclature, it is clear that FOSTA and SESTA are less concerned with the righteous defense of the archetypical female victim and more focused on limiting both the protections, operations, and rights of those who intentionally and willingly engage in sex work, and more broadly, the freedom and neutrality of the Internet. First, there are already substantial legislative provisions that oppose human trafficking in the United States, namely The Victims of Trafficking and Violence Protection Act, and these new bills do little to

Bandana Pattanaik, *Trafficking and Prostitution Reconsidered: New Perspectives on Migration, Sex Work, and Human Rights*, (Routledge, 2012): 151.

²²⁴ The United States Department of Justice, "Model State Provisions on Pimping, Pandering, and Prostitution," The United States Department of Justice, 2014, Accessed November 26, 2018, <https://www.justice.gov/olp/model-state-provisions-pimping-pandering-and-prostitution>.

²²⁵ Alexandra Murphy and Sudhir Alladi Venkatesh, “Vice Careers: The Changing Contours of Sex Work in New York City,” *Qualitative Sociology* 29, (2006): 137.

²²⁶ Elliot Harmon, "How Congress Censored the Internet," Electronic Frontier Foundation, March 24, 2018, Accessed November 26, 2018, <https://www.eff.org/deeplinks/2018/03/how-congress-censored-internet>.

further their scope of this protection. Additionally, before the bills were even signed, mainstream news sources were quick to report that federal authorities succeeded in seizing and taking down Backpage – a site that many sex workers used for advertising.²²⁷ By reducing the more popular sites through which sex workers connect with their clients, this legislation reduces the chances of authorities locating victims of human trafficking due to the erasure of sexually explicit ads while simultaneously forcing professional sex workers to either promote their services on more illicit sites or return to street-based options. In part due to this continued legislative focus on online spaces, SNS platforms adjust their policies to adhere to the law.

Facebook is clear and direct in its restrictions pertaining to online sex work. Many of its restrictions relate directly to United States law; however, some take an extra step to proscribe online sex work that is not strictly illegal (e.g. prohibiting advertising for users not in the U.S., banning content that does not fall under U.S. prostitution law, etc.). Echoing the concerns of sex work abolitionists and human trafficking legislation, it explicitly prohibits users from posting sexual content involving minors. It also removes content involving sexual violence and pornography, which is arguably in line with United States Code 18, section 1460 – 2252C, which deals with the distribution of obscene or crime-inciting matter.²²⁸ However, it also goes as far as prohibiting the sharing of content containing nudity and “descriptions of sexual acts that go into vivid detail,” content which typically is not strictly prohibited on sites that do not cater to minors.

²²⁷ Emily Witt, "After the Closure of Backpage, Increasingly Vulnerable Sex Workers Are Demanding Their Rights," *The New Yorker*, June 10, 2018, accessed November 26, 2018, <http://www.newyorker.com/news/dispatch/after-the-closure-of-backpage-increasingly-vulnerable-sex-workers-are-demanding-their-rights>.

²²⁸ 18 USC. Sec. 1460 – 2252C.

Most relevantly, Facebook bans both prostitution and the solicitation of escort services.²²⁹ In doing so, it builds off government intent, but extends its own regulations over the area of “cyberspace” it controls by casting blanket of censorship over all forms of online sex work.²³⁰

Like Facebook, FetLife complies with United States law regarding prostitution (despite being owned by the Canadian company, BitLove), but it allows users to engage in other forms of online sex work. Its Terms of Use explicitly state that the site does not allow users to “solicit or sell any kind of sex for hire.” However, in strict contrast to Facebook’s policy, it does allow users to post explicit sexual content (e.g. amateur pornographic photos and videos, erotic writing, etc.) as long as the participants are 18 or older. Moreover, it says nothing about escort services and even permits users to create groups to explicitly “post the schedule, price list or phone number of a phone sex operator, professional Dominant or professional submissive,” though it does not allow such information to be “publicly” posted beyond these groups.”²³¹ As such, FetLife constructs itself as a more welcoming space for those involved in online sex work.

4.4 Online Sex Work

Beginning in the 1990s, the majority of sex work began to transition rapidly from the streets to the Internet.²³² Drucker and Nieri report a 50% growth in the online sector of the sex

²²⁹ Facebook, Inc.

²³⁰ Lessig, *Code v 2.0*, 3.

²³¹ BitLove, Inc.

²³² Alison Bass, *Getting Screwed: Sex Workers and the Law*, (Lebanon, NH: ForeEdge, An imprint of University Press of New England, 2015), 45; Elizabeth Bernstein, *Temporarily Yours: Intimacy, Authenticity, and*

work industry between the years 1998 and 2008, and it has only expanded since then.²³³ As a result, the scholarship on sex work has adapted to address the unique issues that arise with this shift. Earlier work on the subject has the tendency to treat sex work as inherently and inescapably violent, patriarchal, and coercive.²³⁴ However, Comte notes that coercive and trafficking practices “constitute only a small portion of the reality of sex work,” and Weitzer claims that such a perspective “denies workers’ agency.”²³⁵ Similarly, Walby acknowledges that the rise of online sex work requires workers to perform more affective labor (e.g. the “girlfriend experience”), but also provides them with greater affective and emotional rewards.²³⁶ Centering the agency of the sex worker, I provide a review of the literature in this section that encompasses the distinctions between the different forms of online sex work, the subject positions of those in the industry other than that of the female worker, the safety and social benefits of using the Internet to conduct or mediate this form of labor, and the strategies that these workers use to avoid the risks common to this environment.

the Commerce of Sex, (Chicago: Univ. of Chicago Press, 2008), 69; Angela Jones, "Sex Work in a Digital Era," *Sociology Compass* 9, no. 7 (2015): 560, doi:10.1111/soc4.12282.

²³³ Drucker and Nieri, “Female Online Sex Workers’,” 1.

²³⁴ Cecilie Høigård and Liv Finstad, *Backstreets: Prostitution, Money, and Love*, (Cambridge: Polity Press, 1992): 183-184; Carole S Vance, *Pleasure and Danger: Exploring Female Sexuality*, (London: Pandora, 1992).

²³⁵ Jacqueline Comte, "Decriminalization of Sex Work: Feminist Discourses in Light of Research," *Sexuality & Culture* 18, no. 1 (2013): 197–199, doi: 10.1007/s12119-013-9174-5; Ronald Weitzer, "New Directions in Research on Prostitution," *Crime, Law and Social Change* 43, no. 4–5 (2005): 213, doi:10.1007/s10611-005-1735-6.

²³⁶ Kevin Walby, *Touching Encounters: Sex, Work, and Male-for-male Internet Escorting*, (Chicago, Ill: University of Chicago Press, 2012).

The online sex work industry has many different facets. It is typically categorized as a form of indoor sex work (as opposed to the more traditional street-based work), but this broader category also includes brothel workers, call girls, and bar hustlers.²³⁷ Jones further distinguishes between two types of online sex work. The first involves “the use of the Internet to actually deliver a service.”²³⁸ This labor includes webcam modeling, phone sex, and virtual reality experiences.²³⁹ The second type refers to “the use of the Internet to market sexual services that are delivered in physical space.”²⁴⁰ Most commonly, workers in this category use the Internet to facilitate eventual in-person interactions (e.g. by marketing services, screening clients, making appointments, etc.).²⁴¹ Although workers in the first category face fewer legal risks than those in the second as the services they provide are not typically illegal, privacy is crucial for both groups as they move between digital publics.

²³⁷ Drucker and Nieri, “Female Online Sex Workers,” 1

²³⁸ Jones, “Sex Work in a Digital Era,” 560.

²³⁹ Bass, *Getting Screwed*, 45; Drucker and Nieri, Female Online Sex Workers,” 1.

²⁴⁰ Jones, “Sex Work in a Digital Era,” 560.

²⁴¹ Ibid; Tammy Castle and Jenifer Lee, "Ordering Sex in Cyberspace: A Content Analysis of Escort Websites," *International Journal of Cultural Studies* 11, no. 1 (2008), doi:10.1177/1367877907086395; Scott Cunningham and Todd D. Kendall, "Prostitution 2.0: The Changing Face of Sex Work," *Journal of Urban Economics* 69, no. 3 (2011); Thomas J. Holt and Kristie R. Blevins, "Examining Sex Work from the Clients Perspective: Assessing Johns Using On-line Data," *Deviant Behavior* 28, no. 4 (2007), doi:10.1080/01639620701233282; Matthew V. Pruitt, "Online Boys: Male-for-Male Internet Escorts." *Sociological Focus* 38, no. 3 (2005), doi:10.1080/00380237.2005.10571265; James F. Quinn and Craig J. Forsyth, "Describing Sexual Behavior in the Era of the Internet: A Typology for Empirical Research," *Deviant Behavior* 26, no. 3 (2005), doi:10.1080/01639620590888285; Weitzer, “New Directions in Research.”

With the rise of online sex work, researchers have also broadened the scope of the field's focus to account for the experiences of others in the industry apart from female sex workers, on whom most of the literature was originally concentrated. For instance, Holt and Blevins consider the digital discourse and communities available to clients of sex workers.²⁴² Additionally, in the realm of male sex work, Pruitt provides a review of escort ads, Blackwell and Dziegielewski discuss the health risks specific to these individuals in the industry, and McLean considers the networks available to male sex workers in Australia.²⁴³ Moreover, claiming that the "literature on online sex work...has been restricted by society's binary logic of gender," Jones advocates for further research regarding the situation particular to transgender workers.²⁴⁴ Keeping this suggestion in mind, I developed my survey with the intention of allowing for flexibility in the responses to questions about participant identity.

Sex workers report many benefits to conducting their business online. These include finding greater enjoyment in the work, the ability to reach a wider audience at a lower cost, and the ability to screen clients before engaging in business with them through search engines and both digitally mediated and word-of-mouth exchanges with other sex workers.²⁴⁵ Furthermore, although online sex work contains its own range of high-risk scenarios, from outcalls with

²⁴² Holt and Blevins, "Examining Sex Work," 343–344.

²⁴³ Blackwell and Dziegielewski, "Risk for a Price"; Andrew McLean, "New Realm, New Problems? Issues and Support Networks in Online Male Sex Work," *Gay & Lesbian Issues and Psychology Review* 8, no. 2 (2012): 70–81; Pruitt.

²⁴⁴ Jones, "Sex Work in a Digital Era," 565.

²⁴⁵ Bass, *Getting Screwed*, 55; Castle and Lee, "Ordering Sex in Cyberspace," 108; Drucker and Nieri, "Female Online Sex Workers," 2; Jones, "Sex Work in a Digital Era," 561; Weitzer, "New Directions in Research," 216.

strangers to unsafe sex practices, the threat of violence and arrest is considerably lower in this segment of the industry.²⁴⁶ The Internet also offers opportunities for online sex workers to network with one another and share their experiences. McLean's study suggests that while many male sex workers are resistant to forming these networks, there are "potential benefits of associating with others on the basis of shared experience."²⁴⁷ In her research on webcam models, Jones examines how these workers use online discussion boards to provide new models with information about the risks and rewards of the job and advice to models who encounter work-related dangers, such as doxxing, capping, and harassment.²⁴⁸ Addressing the politics of the work, Feldman's analysis of the blog *Bound, Not Gagged* depicts how these sex worker community networks can develop into activist groups intent on distributing information and enacting policy change. Online spaces, however, come with risks as well as benefits.

Online sex workers face external and internal threats in the profession. Lessig notes, "Cyberspace demands a new understanding of how regulation works," and law enforcement agencies have adapted to this shifting environment by deploying myriad techniques for locating individual online sex workers.²⁴⁹ For instance, "a classy website with alluring photos and skillfully written ads," phishing software, and large sums of money deposited in PayPal accounts might draw police attention.²⁵⁰ Bass's interviewees report a number of tactics they use to detect

²⁴⁶ Blackwell and Dziegielewski, "Risk for a Price," 160; Cunningham and Kendal, "Prostitution 2.0," 276.

²⁴⁷ McLean, "New Realm, New Problems?" 76.

²⁴⁸ Angela Jones, "'I Get Paid to Have Orgasms': Adult Webcam Models' Negotiation of Pleasure and Danger," *Signs: Journal of Women in Culture and Society* 42, no. 1 (2016): 240-243, doi:10.1086/686758.

²⁴⁹ Lessig, *Code v. 2.0*, 5.

²⁵⁰ Bass, *Getting Screwed*, 53, 58-59.

undercover police and avoid arrest, including deploying a waiting period before meeting with new clients, requiring clients to cross state lines, and even offering free sessions to known police officers.²⁵¹ Next, although, as Sanders indicates, sex workers use identity management techniques to separate their work from their personal lives (e.g. exclusion of certain sex acts, use of condoms, performing a specific sexual role, and preventing emotional intimacy with clients), McLean states that there is still an observable “negative impact of engagement in commercial sex upon the private sex lives” of these workers.²⁵² Finally, Jones notes that online sex workers are still at risk of verbal and physical harassment from clients and asks, “Will individual workers’ ability to use technology affect their ability to protect themselves?”²⁵³ This chapter’s qualitative study seeks to address this question by locating and examining the specific rhetorical and technological strategies that online sex workers use to protect themselves in these diverse digital publics.

4.5 Method

A queer methodology is valuable for this type of work due to its theoretical and ethical investments. Brim and Ghaziani write, “queer social research methods question the origins and effects of concepts and categories rather than reify them in an allegedly generalizable variable-

²⁵¹ Ibid., 44, 56.

²⁵² McLean, “New Realm, New Problems?”⁷¹; Teela Sanders, “Its Just Acting: Sex Workers Strategies for Capitalizing on Sexuality,” *Gender, Work and Organization* 12, no. 4 (2005): 319–42, doi:10.1111/j.1468-0432.2005.00276.x.

²⁵³ Jones, “Sex Work in a Digital Era,” 564.

oriented paradigm, because these categories do not always align with lived experiences.”²⁵⁴ In this chapter, I question and challenge the normative, neoliberal narratives perpetuated by the surveillance-oriented agendas of web 2.0 social networking sites. My participants’ lived experiences offer productive outlets for intervening in this ideology. Queer methodologies also forefront an ethical researcher/participant dynamic. Drawing on the methods presented by both queer theory and rhetoric scholars, Dadas outlines an ethical approach to entering various online public and semi-public spaces, maintaining transparency in terms of both one’s identity as a researcher and the details of the study, and distributing surveys in a way that ensures the subjects’ knowledge and willingness to participate.²⁵⁵ Jones takes this claim a step further in her writing on queer methodology and sex work, advocating for auto-ethnography in queer methods especially as they pertain to sex work research.²⁵⁶ Throughout conducting this research, I maintained transparency regarding my subject position as a researcher and a member of these digital publics.

Beyond a queer methodology, I also draw on previous research regarding online sex work to present and discuss my results. Jenkins claims, “Internet technology can offer an opportunity to extend the scope of sex work research into new territories by providing a platform for the

²⁵⁴ Matt Brim and Amin Ghaziani, "Introduction: Queer Methods." *WSQ: Women's Studies Quarterly* 44, no. 3–4 (2016): 16, doi:10.1353/wsq.2016.0033.

²⁵⁵ Caroline Dadas, "Messy Methods: Queer Methodological Approaches to Researching Social Media," *Computers and Composition* 40 (2016): 60–72, doi:10.1016/j.compcom.2016.03.007.

²⁵⁶ Angela Jones, "Pornographics as Queer Method," In *Other, Please Specify Queer Methods in Sociology*, by DLane R. Compton, Tey Meadow, and Kristen Schilt. Oakland, (CA: University of California Press, 2018), 104.

voices of people working in areas of the industry about which little is known.”²⁵⁷ Through the technological slant of this chapter’s study, I examine the “new territory” of online privacy practices used by sex workers in digital publics. Following McLean’s lead, I use a qualitative approach to data collection and analysis “as it [is] considered to be effective in identifying nuanced and detailed information concerning the highly personal experiences of this group.”²⁵⁸ I ensured that my survey questions were open-ended in order to be receptive to this nuance. This is especially relevant to my demographic question about participant gender as, drawing on Jones’s observation regarding the underrepresentation of transgender workers’ experiences in the literature, I find it important to reintegrate these voices.

In order to recruit participants for this study, I began by emailing the moderators of four popular Facebook groups. I introduced myself, stated my intentions as a researcher, and asked permission to distribute my survey on their sites. Of these, the Sex Workers Outreach Project USA (SWOP-USA) group responded and maintained contact. After the University of Pittsburgh’s Institutional Review Board (IRB) approved the project, I worked further with my contact from SWOP-USA to ensure that my approach to working with this community was ethical, clear, and respectful. Following Dadas’s emphasis on ensuring the subject’s knowledge and willingness to participate, I both requested consent through the participation script on the landing page of the survey and included an additional question that gave the participant the option to either grant me consent to quote their survey responses verbatim or only allow me to

²⁵⁷ Suzanne Jenkins, "New Technologies, New Territories: Using the Internet to Connect with Sex Workers and Sex Industry Organizers," In *New Sociologies of Sex Work*, by Kate Hardy, Sarah Kingston, and Teela Sanders, (Farnham: Ashgate, 2011): 92.

²⁵⁸ McLean, "New Realm, New Problems?" 72.

use their data in aggregate. My SWOP-USA contact then approved my survey questions distributed the survey through their SNS networks.

I contacted the FetLife administrative staff with the same request. After receiving IRB approval, composing a formal project proposal, and developing a profile on the site, I received permission to distribute a link to the offsite survey on my profile and through specific boards. Due to the sensitive nature of the site, anonymity is valued highly in the FetLife community. In order to gain the trust of the site users and maintain the level of transparency for which Dadas advocates as well as the autoethnographic intervention suggested by Jones, I posted my legal name, my role as a researcher, and my involvement in the FetLife community on my profile, as well as the approved post and link to the survey. I then contacted the moderators of six boards, and received permission to post from the moderator of a popular group page. I introduced myself in the group (using both my legal name and username), provided information about the study, and distributed the link on this board.

The sample included adult individuals who identify as within or adjacent to professional BDSM and/or sex work communities. The survey was open for six months between October 2017 and April 2018. It consisted of 25 participants. Participants were recruited from the groups and pages on the aforementioned sites. Partial responses were recorded, since not all participants responded to every question. I did not record any identifying information (e.g. legal name, pseudonym, IP address) from survey participants, so the locations of many of the participants are unclear (i.e. they could be situated beyond the United States). Participants were not compensated for their participation.

I gathered data on the following categories. With regard to demographic information, I asked for participant age, identity as a sex worker, and gender identity. In terms of involvement

in digital publics and privacy tactics, I asked which networking sites these participants typically use for personal and professional reasons, whether or not they take additional precautions in maintaining their privacy and anonymity across social networking platforms, and the language they use to discuss their experiences online. Due to the relatively small sample size, it is impossible to make generalizations about online sex workers as a population from the results of this chapter's study. However, my study offers new qualitative data about the privacy practices these participants employ upon which further research can be founded.

The survey reflected a wide variety of demographics in terms of participant response. Participant ages ranged from 20 to 71 with a mean of 36. In terms of gender identity, eleven participants identified as female, eight identified as male, four identified as transgender or genderqueer, one identified as intersex (IS), and two did not respond. I asked whether or not the participant identified as a sex worker. Seventeen responded, "Yes," five responded, "Sometimes/It's Complicated," one responded, "No," and two did not respond. The following sections record my findings within the categories of site usage, identity management and context collapse, and surveillance, privacy, and cyber security.

Table 1 Online Sex Worker Demographics

	n	%
Gender Identity		
Female	11	44%
Male	8	32%
Transgender	4	16%
Intersex	1	4%
Sex Worker		
Yes	17	68%
Sometimes/It's Complicated	5	20%
No	1	4%
No Response	2	8%

4.6 Site Usage

The participants were asked two questions about the SNS platforms they used for personal reasons and those they use for discussing sex work. Due to the sites chosen for the survey, it is unsurprising that Facebook and FetLife were the sites most frequently indicated for these uses. Fifteen participants reported that they used Facebook for personal reasons specifically, and nine participants responded that they used FetLife. Some justified their use of

social media. One participant stated that she uses “Facebook for interacting with friends/family.” Another explained, “Mostly Facebook. I keep private Twitter, Instagram and Tumblr accounts to see friends' profiles & keep up with news/events in my community, but I don't post content. I also have a FetLife account, I'm a lifestyler.” These initial responses underscore the claim that different communities form within different digital publics; Facebook operates as a space for individuals to connect with friends, family, and those in their local community, and FetLife as a place for those interested in maintaining a kink lifestyle.

The distinction between the two sites is further apparent in the participants' responses to the question regarding which sites they use to discuss sex work, journal their experiences, and/or support sex workers in a community setting. Eleven participants indicated that they used FetLife, and four stated that they use Facebook. Two participants provided caveats regarding the use of Facebook in this context. One clarified that he uses “secret facebook groups.” Another observed, “Facebook, which pains me – it's a very insecure platform, I should know I do digital security work on the side. However it has large followings and there's so much bad information circulating in sex work communities about how to protect yourself with jerk clients and exploitative streaming platforms I feel called to weigh in where I can.” The anxiety surrounding Facebook's lack of security due to its surveillance-based model is palpable in these responses. However, the site also acts as a useful platform for sex workers who are involved in the political side of the profession, such as those on which Feldman's study focuses, to share their views. Jansson et al. observe, “networked communications...facilitate an easy and affordable dissemination of information of the kind unlikely to circulate in traditional media.”²⁵⁹ While both sites hail publics in accordance with their ideologies, because Facebook is a massive SNS that

²⁵⁹ Jansson et al., “Social Media,” 30.

encompasses a diverse range of groups, it allows those interested in spreading information greater opportunities for outreach than a smaller, more homogenous site like FetLife.

Table 2 Site Usage Results

	n	%
Personal SNS		
Facebook	15	60%
FetLife	9	36%
SNS (Sex Work Discussion)		
Facebook	4	16%
FetLife	11	44%

Fuchs notes that, with the rise of mass surveillance within a web 2.0 framework, the importance of community building/maintenance and collaborative information production in digital spaces has grown.²⁶⁰ Although multiple groups can exist within one digital public, not all digital publics have the infrastructure required to meet the privacy needs of each of their members. Bennett astutely states, “Individuals are arguably placed at risk because of their membership in, or assignment to, certain groups, rather than on the basis of their individual

²⁶⁰ Christian Fuchs, "Social Software and Web 2.0: Their Sociological Foundations and Implications," In *Handbook of Research on Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications*, ed. San Murugesan, 764–89, (Hershey, PA: Information Science Reference, 2010).

identities and the personal information it generates.”²⁶¹ Thus, it is crucial for sex workers, as a vulnerable population who face particular risks on the basis of their membership within this group, to foster communities within digital publics that can provide them with security. For these participants, Facebook exists as a public for them to correspond with “friends/family” outside of their profession, and FetLife – a counterpublic – as a space where they could safely describe their work. These findings are further reflected in the responses regarding identity management and the avoidance of context collapse.

4.7 Identity Management and Context Collapse

Identity management is a crucial tactic for sex workers, but it is one that becomes complicated as they operate in digital publics. Building off Hochschild’s research, Sanders observes that sex workers create “manufactured identities” both to protect themselves from the psychological risks of the job and as a business strategy, and McLean, working through Minichiello and Browne, extends this claim to account for the additional sexual safety practices used by male sex workers.²⁶² The participants in my study detail a series of rhetorical methods they use to establish and maintain these manufactured identities on SNS platforms. Drawing on their responses, I extend an analysis of the rhetorical strategies these individuals use to create

²⁶¹ Colin J. Bennett, “In Defense of Privacy: The Concept and the Regime,” *Surveillance & Society* 8, no. 4 (2011): 490, doi:10.24908/ss.v8i4.4184.

²⁶² McLean, “New Realm, New Problems?” 72; Sanders, “Its Just Acting,” 323.

separate personas within and between digital publics in order to avoid Marwick and boyd's phenomenon of context collapse.

Eighteen participants stated that they use a pseudonym when engaging in sex work. Two provided caveats, stating "yes, most of the time," and "shortened form of my real name." Two others indicated that they use a variety of pseudonyms, explaining, "Yes - multiple names," and "Yes. One primary, several variations in fact. I would never ever use my real name." One responded that she did so both to protect her privacy and create a mental barrier similar to that indicated by Sanders:

Yes, I do. This is for the sake of privacy. My real name is ethnic and therefore unique, and combined with knowledge of what state I'm from, people could find who I am and where I live with minimal effort. This is also for the sake of separating my work from my personal life. Names are largely personal, so having a separate one for sex work helps me mentally separate clients from friends.

Another's response operated accordance with Hochschild's writing on sex work as "surface acting."²⁶³ He stated, "I use a pseudonym that sounds legitimate. And I DO adopt a persona..in a sense. It's akin to an actor who's playing the role of a prostitute." A third, who identifies as a transgender male, cited using alternate gender performance as part of his manufactured persona: "Yes, as a sex worker, my persona is a Cisgender Female, with alternative name." While there are many reasons to use a pseudonym, a unifying thread that runs through these responses is the desire to protect an authentic digital identity.

²⁶³ Arlie Russell Hochschild, *The Managed Heart: Commercialization of Human Feeling*, (Berkeley: University of California Press, 1983).

The connection between social media and Foucault's Panopticon, or the instrument of "instrument of permanent, exhaustive, omnipresent surveillance," is readily available.²⁶⁴ Bennett describes the effect it produces on users: "Data subjects' might not be monitored at any one time, but they would be well advised to behave as if they were."²⁶⁵ In response to this form of surveillance, sex workers implement this strategy of identity management as they move between digital publics. I asked the participants about the words and language (e.g. name, job title, mention of sex work) that they use to describe themselves on personal networking sites and the sites they use to discuss sex work. Seven participants stated directly that they use all or part of their legal name on personal networking sites, such as Facebook, and only two responded that they use a pseudonym on these sites. Conversely, twelve participants reported that they use a pseudonym or handle on sites that they use to discuss sex work, such as FetLife, and only one responded that he uses his real name. In this way, sex workers' manufactured identities translate directly into digital publics through their use of naming conventions. One participant clarified, "My social orientation is straight, so I function in my personal world in that context... I keep my work strictly out of the public spotlight. (I live in the bible belt. Gay sex and prostitution are 2 of the biggest cultural taboos) Among a close circle of trusted friends, I'm pretty open and comfortable with direct references to what I do." His response suggests that it is not only the corporations or law enforcement that monitor his behavior, but other members of the digital publics who live in his local community.

²⁶⁴ Michel Foucault, *Discipline and Punish*, (Paris: Editions Gallimard, 1975; New York: Vintage Books, 1995), 214.

²⁶⁵ Bennett, "In Defense of Privacy," 492.

Table 3 Self-Identification Tactics in Sex Work and SNS Publics

	n	%
Sex Work		
Pseudonym	18	72%
Personal SNS (Facebook)		
Legal Name	7	28%
Pseudonym	2	8%
Sex Work SNS (FetLife)		
Legal Name	1	4%
Pseudonym	12	48%

The participants' digital identities are further cemented through the language used to talk about their profession on different sites. When discussing their work on sites such as Facebook, many participants emphasized that they refer only to the legal forms, such as pro-domme work (i.e. being paid to assume the dominant role in BDSM play), or else use coded language, such as "escort," "sexual healer," "spiritual healing," "bodywork," "massage," etc. to define their labor. Two participants clearly articulated the distinction between publics. One stated, "legal name on FB, vanilla job title-I do not reference sex work or kink on FB On FetLife I use a pseudonym, and I do reference sex work on my profile writings and group membership." Another noted, "I use my legal name on Facebook and Pinterest and my common scene name on Fetlife. My personal Fetlife account references and links to my sex work account. My sex work name

includes my scene name, so that perspective clients can vet me in the community,” and further clarified that, on the sites they use to discuss sex work, “I use a pseudonym. I refer to myself directly as a Domme and fetish model and am careful to use language that's legal.” Although a counterpublic like FetLife is a safer space for sex workers to discuss their labor than a normative public like Facebook, it still operates in accordance with US legislation, and members must be careful to use language that falls within the legal limits.

Cyborg-like, online sex workers compose their identities through a process of fragmentation and dissociation. Against the backdrop of legislation that criminalizes one facet of their identities, they must construct multiple personas that allow them to live while laboring. In normative publics like Facebook, they create and authentically name the figure of a politically conscious friend or family member, and in counterpublics like FetLife, they create the character of a figure that performs their authentic profession. While enacting the rhetorical process of dissociation in this separation, they also disrupt it. Neither identity assumes the value of the real. Each is more real against its counterpart. In constructing both, they benefit from each.

In describing the digital personae created by user data, Lyon claims, “the data doubles, created as they are from coded categories, are not innocent or innocuous virtual fictions. As they circulate, they serve to open and close doors of opportunity and access.”²⁶⁶ The participants in this chapter’s study create multiple data doubles across different SNS platforms. In doing so, they gain access to the opportunities offered by normative publics like Facebook (e.g. connections to friends/family, networks to disseminate information, etc.) as well as those offered by counterpublics such as FetLife (e.g. communication with other sex workers and those in the

²⁶⁶ David Lyon, *Surveillance and Social Sorting: Privacy, Risk and Digital Discrimination*, (Routledge, 2003), 27.

kink community). In addition to using linguistic and rhetorical strategies to keep these identities separate, participants also indicate a variety of technological methods.

4.8 Surveillance, Privacy, and Cyber Security

Surveillance is inherent to web 2.0. Members of digital publics are constantly surrendering their data to corporations on a micro and macro level (what Clarke refers to as “dataveillance”), as well as to other members of the publics to which they belong (what Jansson et al. refer to as “interveillance”).²⁶⁷ Fuchs explains that as companies continue to profit from user data, the lines between these forms of surveillance continue to blur, and Cohen reveals that regulations that protect user privacy in online publics are often written to accommodate big data collection.²⁶⁸ Thus, while many SNS platforms will provide users with privacy settings, which allow members to influence which and how much data is displayed within the public (providing protection on the level of interveillance), the site itself still controls access to the user’s data (further supporting the tendency toward dataveillance). In addition to these overarching issues, sex workers face the added threats of social stigma, online harassment, and law enforcement. For this vulnerable population, online privacy is a practical rather than theoretical concern. In discussing the options that websites do provide to opt out of targeted ads, Fuchs reminds us, “Not

²⁶⁷ Roger Clarke, "Dataveillance: Delivering '1984'," In *Framing Technology: Society, Choice, and Change*, eds. Lelia Green and Roger Guinery, 117–30, (St. Leonards, N.S.W.: Allen & Unwin, 1994); Jansson et al., “Social Media,” 34.

²⁶⁸ Julie E. Cohen, *Configuring the Networked Self: Law, Code, and the Play of Everyday Practice*, (New Haven: Yale University Press, 2012), 10; Fuchs, "New Media, Web 2.0 and Surveillance," 138.

all users have excellent Internet usage skills, which is an aspect of digital inequality.”²⁶⁹ This observation is reflected in the survey responses as participants indicated a spectrum of privacy practices that require varying levels of technological knowledge and skill to execute.

Fourteen participants responded that they take additional measures to protect their privacy online. Several of them indicated straightforward cyber hygiene tactics that require conscious attention but little technological knowledge. Three participants noted that they “avoid crossing photos between identities.” One stated specifically, “I do not show my face, the pictures I use are NEVER used elsewhere.” This tactic only requires members of digital publics to remember which photos they have uploaded to each public. Another took photo security a step further, blending the digital with the material: “I scrub all photos of EXIF data before posting to social media or platforms. Costumes, wigs, makeup that I don't use in day to day life.” This participant and on other referenced geographical location, claiming that they are careful to avoid providing any information that could reveal where and with whom they live when engaging in online sex work. Because sites like FetLife do not require members to input their location, this procedure is easily executable. One participant additionally remarked, “Deleting emails regularly, leaving the inbox and trash as clean as a whistle.” Although some sites save messages exchanged between members as a form of dataveillance, this provision would help this individual avoid accidental detection on the level of interveillance. Such precautions show an awareness of many of the most common digital threats.

Participants also reported using technologies that require a basic level of knowledge or skill. One participant responded that she uses “incognito mode whenever I am communicating with clients to try and avoid Google/fb linking my work email to persona.” While this prevents

²⁶⁹ Fuchs, “New Media, Web 2.0 and Surveillance,” 142.

information regarding a user's browsing history, cookies, and logins from being stored, it does not provide full protection from dataveillance as the user may still be visible to websites that they visit, the institutions that provide them access, and Internet service providers. Five participants marked that they use a different or virtual phone number, and four stated that they used a different or unlinked email. Tools such as these are free and readily available to the public. For instance, Google Voice allows users to acquire a free phone number from any available U.S. city; however, its program policy does state, "Do not use Google Voice to engage in or promote illegal activities."²⁷⁰ Though users gain an added layer of privacy, they do so by taking on the compound risk of violating both governmental and corporate regulations of cyberspace by breaking the law, breaching the site's Terms of Service, and making themselves more available to Google's databases. One participant takes these technologies a step further and uses a "burner phone," thereby acknowledging the importance of using secure hardware as well as secure software.

In addition to these fairly straightforward methods, other more powerful tools are used with a fair amount of frequency. Six participants indicated that they used a VPN, or Virtual Private Network. These tools enable users to send data across public networks, through other computers called "proxies," without connecting it to their IP addresses. An EFF whitepaper notes that police typically trace IP addresses as a way to solve crimes, often at a great risk to the

²⁷⁰ Google LLC, "Google Voice Acceptable Use Policy," Google Voice, 2018, accessed November 26, 2018, <https://www.google.com/intl/en-US/googlevoice/program-policies.html>.

subject's privacy.²⁷¹ However, privacy tools that prevent this require money and technical skill to implement. One user participant stated, "My husband reroutes our browsing etc. (I do not really understand it)." Their response indicates that some digital privacy methods, especially those that protect users against dataveillance, may be inaccessible to users without computational knowledge, and underscores the importance of having a support network in these instances. Participants indicated other cyber security tactics that intervene on the level of dataveillance; however, these were used with somewhat less frequency than or in accordance with a VPN. One participant who uses a VPN also noted using, "IP anonymizers, proxies, firewalls, airgap measures," but did not explain these tactics further, and another VPN user stated, "I'm just beginning to experiment with crypto currency payments [sic]." Such measures would protect the user from unwanted intruders accessing their computer and from alerting companies, such as PayPal, and law enforcement to suspicious payments respectively. One participant, who does not use a VPN, reported that they use TOR, a secure browser, and TAILS, an anonymous OS that can be launched from a USB stick or DVD from almost any computer. Again, such practices protect the user from both intrusion and detection, but require a higher level of computational knowledge and skill.

²⁷¹ Aaron Mackey, "Unreliable Informants: IP Addresses, Digital Tips and Police Raids," Electronic Frontier Foundation, (May 16, 2017): 7–8, accessed November 26, 2018, <http://www.eff.org/wp/unreliable-informants-ip-addresses-digital-tips-and-police-raids>.

Table 4 Privacy Practices Results

	n	%
Privacy Protection		
Yes	14	56%
No	2	8%
No Response	9	36%
Common Tactics		
Avoid Cross-Posting Photos	3	12%
Virtual Phone Number	5	20%
Different Email	4	16%
VPN	6	24%
Incognito or Secure Browser	3	12%
Other Methods	11	44%

Cyber security practices establish boundaries within the slippage between digital and non-digital publics. Though born digital, they protect people's lived experiences. An online sex worker's livelihood cannot be separated from their data. By employing these technical practices, sex workers enforce the separation of their fragmented identities and actively select the audience to whom their identity as a sex worker is displayed. These tools also reveal the humanity of those who threaten the people behind the device. While the job of a cyber security technique is to defend a machine, a piece of software, or a digital public against cyber attacks, it, by extension, makes an argument of exclusion against the individuals, governments, and corporate bodies who

author the attacks. The presence of cyber security indicates the continuum between human and machine. However, it cannot regulate this continuum flawlessly.

Citing Stalder, Bennett claims, “Privacy is not the ‘antidote to surveillance’ nor was it ever meant to be.”²⁷² Indeed, for the computer user, perfect privacy is an ever-receding horizon. For vulnerable populations like online sex workers, however, surveillance is not an abstract concern, but a real threat to one’s livelihood, and privacy not a theoretical aim, but a practical necessity. For the participants in this study, privacy begins in public. These individuals consciously discern between digitally networked publics and counterpublics as places where they can and cannot discuss their labor. They then use naming conventions and rhetorical strategies to manufacture and maintain separate identities within each public. In order to further protect themselves from dataveillance and interveillance, they use a variety of cyber security tactics that require varying levels of technological knowledge and skill to implement. Privacy is not an act that happens once, but a process that these individuals must repeatedly perform.

4.9 Conclusion

In this chapter, I have extended the scholarship on digitally networked publics to account for normative publics and counterpublics. I have claimed that Facebook operates as a normative public and FetLife as a counterpublic due to their approaches to data collection and implementation of US legislation regarding sex work within their site policies. Building on previous research regarding online sex work, I have offered a new study that considers the ways

²⁷² Bennett, “In Defense of Privacy,” 493.

in which online sex workers use site selection, self presentation, and cyber security to establish and maintain manufactured identities within these publics as a means of combatting the surveillance inherent to web 2.0.

Online sex workers operate in the slippage between digital and non-digital publics and counterpublics. They similarly navigate the overlapping and disparate areas between legislation and SNS regulations. They do so by fragmenting and composing separate identities. The authentically named identity occupies the space of the normative public, while the authentically laboring identity works within the counterpublic, allowing both to live. Cyber security practices aid in this process.

An obvious limitation to this chapter's study is the sample size. Generalizations about a population cannot be made from a sample of twenty-five participants. Using a larger sample, future research should consider the roles that the identity categories of class, race, gender, and sexual orientation play in online sex workers' approach to privacy. Additional lines of inquiry might also address how surveillance capitalism benefits from this specific population, the ways in which anti-sex work legislation and policy adapt to sex workers' privacy practices, and the political implications of examining vulnerable populations within academic studies; however, these questions are beyond the scope of this chapter. By examining the privacy practices of those for whom surveillance is an immediate threat, we can develop a security model that is applicable more broadly to all members of digital publics.

Within the context of this dissertation, my considerations regarding the qualities and makeup of publics reverberate. Sex work communities, like biohacking and speedrunning collectives, are not inherently queer. However, these communities-cum-assemblages members experience marginalization differently due to assumed or projected queerness. When striving to

protect a digital or traditional public or counterpublic, it is necessary to locate its boundaries, recognize the diverse, intersectional identities of those who comprise it, and select the tactics that will intentionally benefit its vulnerable members. Doing so allows us compose policy and cyber security procedures with the same intentional compassion that we can employ in our other subversive computational practices.

5.0 Chapter Four: Pittsburgh 10

“Je me donne à toi,” dit encore le patient, “mais ce don de ma personne” comme dit l’autre, “mystère, se change inexplicablement en cadeau d’une merde” — terme également essentiel de notre expérience.

– *Jacques Lacan, Le séminaire. Livre XI. Les quatre concepts fondamentaux de la psychanalyse*

Unreal City. Population: 300,000. It’s the summer of 2017, and your situation isn’t great. The televised results of a national election have avalanched your immediate social circle into a conditionally unprecedented state of despair, your credit card balance is exponentially higher than your dwindling savings account, and recently, your Tinder interface has stalled out on a notification declaring that there’s no one (read: queer folks) located within a 100 mile radius of your sorry subject position. Your mental health is on the flip side of Brennschluss, and you’re sustaining yourself on a diet of gin and melatonin. There’s really only one prepositional option that remains: out. And by going out, you’re going to skyrocket up that social ladder. You might be a 15 in Cleveland, but this is Pittsburgh, and you’ll never get to heaven by being a bottom feeder. That’s right, you’ve only got one goal from now on: fame, baby, fame. This is a game about spite. It’s a game about the ennui that plagues us all in late stage capitalism. And it’s a game about community. This is *Pittsburgh 10*.

The purpose of this chapter is both to analyze *Pittsburgh 10* as a queer rhetorical artifact and to use the game as a means of drawing a thematically cohesive thread throughout the previous three chapters. I begin by detailing the premise of the game, outlining its narrative and

distribution options. I then provide an account of my methodology in order to discuss the collaborative and technical processes that enabled this project's development. Doing so allows me to connect the project to the first chapter of my dissertation by illustrating how the game attempts to queerly exploit the slippage between the materiality and ideology of computation. I subsequently situate *Pittsburgh 10* within the field of game studies, focusing in particular on Ian Bogost's concept of procedural rhetoric, as well as the recent scholarly thrust, spearheaded by Bonnie Ruberg and others, to highlight what has always already been queer about the medium. Similarly, this section acts as a callback to my second chapter, which considers the slippage between code and interface. Next, I evaluate how the game's narrative simulates the procedure by which a public is transformed into a queer utopia through acts of mutual aid. This acts as a conceptual return to the previous chapter, which centers on the slippage between computational systems and cultural systems within and between publics. I conclude by contemplating the game's rejection of teleology in accordance with writings on queer time and anti-chrononormativity.

5.1 *Pittsburgh 10*

Pittsburgh 10 is a two-dimensional computer-based roleplaying game (RPG). The player controls an 8-bit character called Avey-tar (a little portmanteau with a big responsibility) on their journey around the city of Pittsburgh, Pennsylvania. Avey-tar is a queer, non-binary millennial powered by a pop-punk love of pizza and their pals and a hatred of The State™. They begin their journey in Friendship and immediately start performing acts of service for their buddies (non-playable characters, or NPCs) while engaging in discourse with acquaintances, colleagues, exes,

crushes, et cetera. (termed “Others”). These interactions earn them experience points (termed Pittsburgh Social Points), which in turn boost their Pittsburgh Level. While the game centers on the theme of interpersonal interactions, it also tackles the issues of mental health (modeled through the character’s status bars) and capitalism (simulated through the character’s persistent debt and the direct correlation between mental health and the consumption of commodities). As Avey-tar, and the player, approach the ever receding horizon of the much coveted “Pittsburgh 10” accolade, they realize that the real Pittsburgh 10 was the friends they made along the way.

I released *Pittsburgh 10* in January 2020. I chose to distribute through the platform itch.io, using the studio name Desert WiFi Games. Itch.io describes itself as “an open marketplace for independent digital creators with a focus on independent video games.”²⁷³ Ruberg observes, “distribution platforms like Steam have made nontraditional games an increasingly important part of the North American games scene.”²⁷⁴ As game development has becoming progressively decentralized with the rise of accessible and affordable software, distribution channels have also proliferated. It is important to choose a platform that aligns with a project’s purpose. I selected itch.io because of the site’s aversion to gatekeeping, its dedication to granting developers autonomy over their products, and its sales management options. From this project’s outset, I intended it to be free (or donation-based) and as widely accessible as possible, and itch.io supports this vision. Because I developed the game in Unity (a decision that I will later discuss) on an Apple machine, I was able to release it for download as a Mac application

²⁷³ itch corp, “About Itch.io,” itch.io. itch corp, 2020, <https://itch.io/docs/general/about>.

²⁷⁴ Bonnie Ruberg, “Queerness and Video Games,” *GLQ: A Journal of Lesbian and Gay Studies* s24, no. 4 (2018): 545–46, doi:10.1215/10642684-6957940.

and push a WebGL build to make it browser playable. I can only hope that it brings others the same suffering and frustration that it has caused me over the past three years.

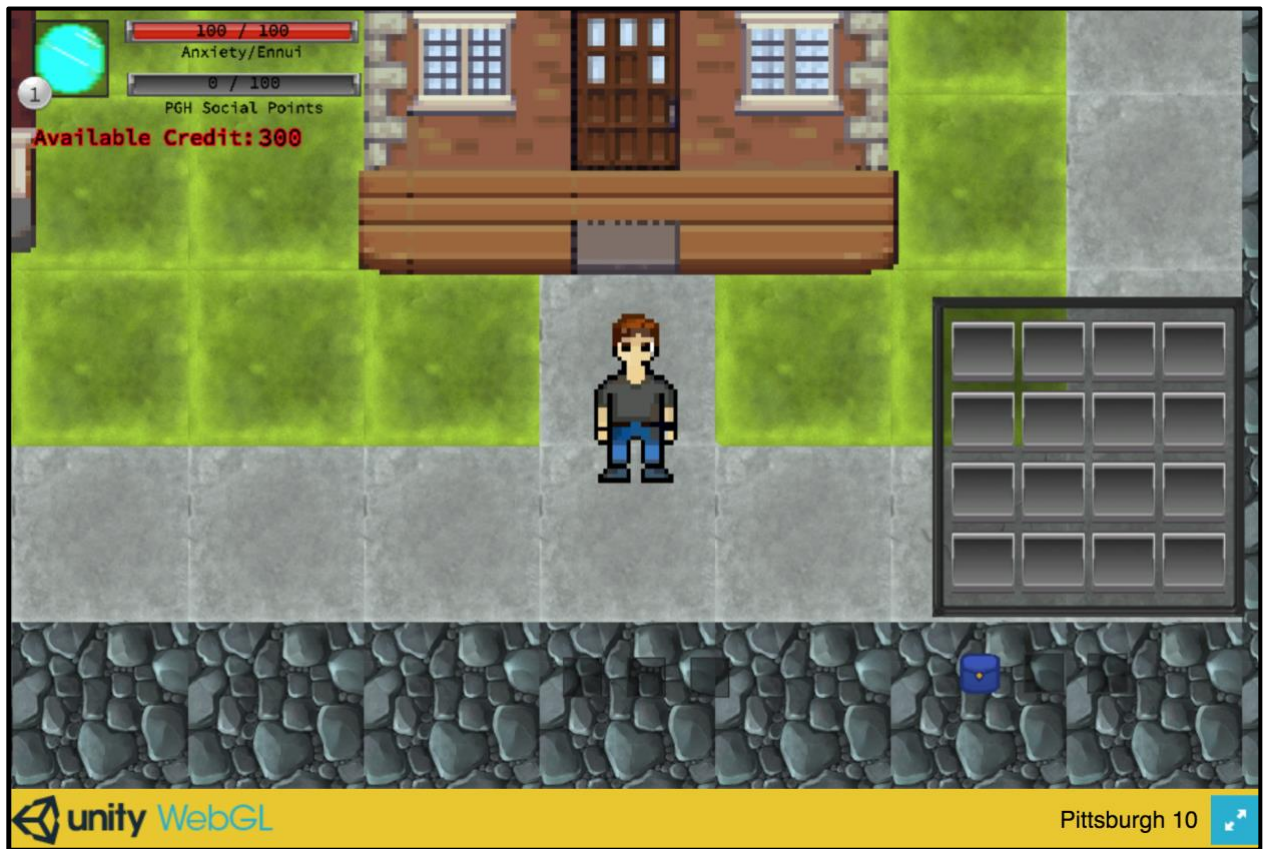


Figure 5 The Pittsburgh 10 WebGL Build

5.2 Methodology and the Materiality of *Pittsburgh 10*

Just as Avey-tar was called to embark on a quest through a poorly rendered simulacrum of the East End, I too set out on a journey to discover the finest low-budget game development options that the World Wide Web has to offer. I developed *Pittsburgh 10* in the game engine Unity, using its characteristic scripting language, C#. I created original graphics using Adobe Photoshop and Tiled, and found others through an array of open source online resources, such as

OpenGameArt and the Universal LPC Spritesheet Character Generator.²⁷⁵ While many of these decisions were spurred by serendipity, they have had lasting practical and ideological implications on the project; after all, as Freedman reminds us, “every development choice has its consequences.”²⁷⁶ In this section, I detail my methodology, focusing in depth on the slippage and interplay between the material and the digital elements of the game. I begin by discussing the reality of community and collaboration insofar as they relate to this project’s inception and the ways in which they translate into the simulated environment of the game. Using the lens of queer and computational failure, I then examine the role that my own hardware played in this project. Next, I turn to the software that was integral to production, considering the advantages and drawbacks to using the game engine Unity. I end by considering the tension that I experienced between adhering to normative development practices and my own desire to queer or subvert the process.

Despite being a predominately solo dissertation-adjacent project, *Pittsburgh 10* is intrinsically tied to the city it represents and the community it reflects. In considering her own queer game development process, Kara Stone claims, “we tend to portray most art practice, including game design, as an individual pursuit, so I want to be clear that I view reparative art as tied to the collective and to community.”²⁷⁷ Maintaining a focus on the collective ideal, I

²⁷⁵ "Character Generator," Universal LPC Sprite Sheet Character Generator, 2016, accessed July 16, 2019, <http://gaurav.munjal.us/Universal-LPC-Spritesheet-Character-Generator/>; "OpenGameArt.org," OpenGameArt.org, 2019, Accessed July 16, 2019, <https://opengameart.org/>.

²⁷⁶ Eric Freedman, "Engineering Queerness in the Game Development Pipeline," *Game Studies* 18, no. 3 (December 2018).

²⁷⁷ Kara Stone, "Time and Reparative Game Design: Queerness, Disability, and Affect," *Game Studies* 18, no. 3 (December 2018).

engaged in various informal and academic modes of collaboration in order to artistically represent voices beyond the solipsistic ego. Casual collaboration is messy. It involves neighborhood rage walks with my cousin (who is also my ongoing collaborator for the design of this project), discussing the bars we avoid and why. It involves art night evenings in which I nonchalantly drop a question about which side quests to feature in the game, and it involves countless Instagram polls about item inclusion and naming conventions. The most spectacular example of this form of incidental research, perhaps, was my sprite making party. Hailing a public comprised of members of my immediate and peripheral social circles with a Facebook post, I hosted an event at the local gay bar at which those in attendance made characters for the game with aforementioned open source RPG Sprite Generator. These tactics helped me shape a version of Pittsburgh that others, as well as myself, experience.²⁷⁸

The importance of these connections made considerable resurgence at the end of the project. After completing the initial Mac build, I distributed the application, an instruction sheet, and a feedback survey to several people who had displayed interest in beta testing the game. While nearly all of these participants provided me with comments via text message or

²⁷⁸ This generator predominately supports the creation of traditional fantasy RPG sprites. For one reason or another, many of those in attendance decided to represent themselves and others using fantasy creatures (e.g. elves, orcs, skeletons, witches, etc.). While Pittsburgh has a thriving witchcraft community, rendering these sprites appropriate, the other creatures were harder to place. My collaborator and I held a meeting to discuss the integration of these characters in the game world. For instance, we decided to subvert the racist logic of the orc by using these figures to stand in for gentrifying white people. The player will typically encounter these characters in the areas of Pittsburgh that have encountered urban colonialism. Moreover, one of the Quest Givers is an orc (simply called The O.R.C.). This figure, representing toxic relationships, leads the player astray by offering misleading and challenging quests with disproportionately small rewards.

conversation, no one filled out the survey. Based on the initial feedback I received, I made a few changes to the game before releasing the public version. These included correcting some Others' levels to accurately represent their stats, increasing the drop rate and number of items in the drop tables associated with some Others, and looping the music. I did not fix the larger, structural glitches due to time and an interest in exploitation.

In general, players found the game to be stressful and frustrating. This result adheres to Bonnie Ruberg's theory of "no fun" queer gaming as the procedures of the game effectively simulate the affect inspired by being queer in Pittsburgh. Perhaps the most common critique I received was in reference to the game's inability to allow the player to acquire more money or credit. I staunchly defend this decision. Money becomes the game's limiting factor, and the player must consider their priorities while spending it. If they choose to prioritize their own consumption, then they will be unable to complete the friendship side quests; however, if they prioritize questing, they might burn out. Capital is a regulating and oppressive force.

Academic collaboration also played a pivotal role in my game development process. This project remained the focal point throughout my Digital Studies and Methods certificate, and the feedback I received from my professors and colleagues was invaluable. Pursuing it in this context also lent me the credibility to expand my ethnographic research beyond everyday conversation. Ruberg notes, "many queer game studies scholars believe it is important to go beyond the walls of academe and speak directly with game-makers: contemporary queer subjects whose experiences of identity, community, and marginalization deeply influence their work."²⁷⁹ Using my subject position as not only a queer game-maker, but also an academic, I was able to conduct an IRB approved survey of (mostly queer) residents of Pittsburgh about their identities,

²⁷⁹ Ruberg, "Queerness and Video Games," 548.

communities, interpersonal interactions, and neighborhoods as a means of influencing my creative and scholarly work. The responses to this survey helped me choose which locations to include on the map, identify which subcultures to represent, and write dialogue for the NPCs. *Pittsburgh 10* remains materially dependent on Pittsburgh itself.

Apart from the global – or city-specific, rather – influence of the Pittsburgh queer community, I experienced firsthand the local material queer joys of operating an increasingly aging MacBook Pro. The distinction Kirschenbaum draws between “forensic materiality” (the physical components and processes of computing) and “formal materiality” (the symbolic systems in computing) provides a valuable lexicon for discussing the theoretical elements of computation.²⁸⁰ When segueing into the practical realm, however, the two concepts become blurred – especially within the confines of Apple’s characteristic blackboxing tactics. When a system is operating correctly, these intertwined aspects of materiality should be nearly undetectable. But a computer is not a god machine, and oftentimes when it fails to act as intended, it reveals information about its mechanics, our practices, and the unifying point of human-computer collaboration. Halberstam argues that failure is queer logic, stating in an interview with Ruberg, “So, that acceptance in failure, that investment in failure, that excitement about failure, is the queer art of failure.”²⁸¹ By accepting my computer’s failure, I learned more about my own process.

My computer performed queer failure in myriad ways. In terms of forensic material failures, the system frequently began to overheat within ninety seconds of demo play. This

²⁸⁰ Matthew G. Kirschenbaum, *Mechanisms: New Media and the Forensic Imagination*, (Cambridge, MA: MIT Press, 2008): 10-11.

²⁸¹ Ruberg, “The Arts of Failure,” 202.

situation prevented me from thoroughly testing the game for bugs and glitches. My computer's formal material failures continued to manifest in two noticeable and thrilling ways. First, I consistently received a notification that my system was taking up 60 to 100GB of storage. As a result, I removed nearly every piece of data that was not directly related to game development from my machine. Perhaps even more mysterious was the feature that my integrated developing environment, Microsoft Visual Studio for Mac, sporadically displayed: at times when I attempted to save the script on which I was working, the software would instead populate the file with code from another open script and change the file name. Exciting! When discussing alternate modes of gameplay, Ruberg remarks, "masochism, and kinkiness more broadly, are themselves forms of queerness, systems of counter-normative desires that, like the no-fun play experience, reject standard understandings of pleasure and create new possibility spaces for queer experience."²⁸² The same principle can be applied to queer game development. Although these errors are objectively "not fun," they did inspire within me a masochistic thrill and enabled me to assume a counter-normative ethos that allows me to claim that I created within a queer space, one not dictated by industry norms, professional teams, or even working machinery. In the end, despite my grievances, my bloody machine still somehow managed to run the sophisticated, high-powered game engine that made this project possible.

Within the liminal space between hardware and the game-as-software dwell the development platforms: the game engine, the coding environment, and the graphics generators. It's here that my queer development process begins to fall apart. In discussing the rise of the "queer games avant-garde," or "a wave of explicitly queer, small-scale, highly personal games made by LGBTQ designers," Ruberg observes, "new software tools, like the online application

²⁸² Ruberg, "No Fun," 114.

Twine, were breaking new ground by allowing people without computer science training or large development teams to design and release their own video games.”²⁸³ I lack computer science training and a development team, and I have a thorough pedagogical understanding of Twine and somewhat of a talent for writing – Twine would have made more sense for this project.

Call it hubris, call it pride, but I opted to use Unity, a corporate engine, and succumbed to all of the ideological implications associated with it. In his queer analysis of game engines, Freedman states, “game engines are computational structures, and their underlying algorithms, like all algorithms, have a social dimension.”²⁸⁴ He goes on to indicate that these engines classify and define the relations between objects, establish physics, control AI scripting, and render graphics; essentially, they are that through which worlds are built. Although the content of games built in these engines could be, conceivably, queer, these underlying relations that scaffold digital worlds adhere to normative expectations – both in terms of traditional gameplay and in the ways they reflect the values of the society that produces them. An RPG is an RPG is an RPG. Through no subversive intentions of my own, these procedures, at times, would fail during development – Avey-tar would duplicate or warp to a gray area off the map, the number of items in the inventory would increase indefinitely, or the object layers would render out of order. (Rarely were these issues due to a problem with the engine; more often, they were the result of an unchecked box in the developer interface or a bug in the code.) While I corrected many of these glitches, others persisted. These emerged during my informal beta testing process, and I investigate them further in the following section. Many of them bother me, and I intend to fix

²⁸³ Ruberg, “Queerness and Video Games,” 548.

²⁸⁴ Freedman, “Engineering Queerness in the Game Development Pipeline.”

them during the second version's development process. I know that this desire contradicts the queer hope of the exploited glitch that I explore in the second chapter of this work, but this tension between my queer scholarship and my normative development practices persists at each layer of the project.

So is *Pittsburgh 10* the pinnacle of queer game development? Absolutely not. In fact, regarding its resulting materiality, it fails spectacularly. Apart from the aforementioned glitches – which rarely result in game-breaking errors, the systems runs fine; it's such a disappointment. Marcotte provides a metric highlighting five core aspects of control, or the physiological aspect of play. They identify flow, game feel, control literacy, procedural rhetoric, and materiality and embodiment as points through which gameplay can be normatively subverted:²⁸⁵

- Flow refers to the mental state achieved by the player when they are completely immersed in the game. In order to subvert this aspect, Marcotte, working through Ahmed, prescribes “creating visible gaps and seams in the experience.”²⁸⁶ *Pittsburgh 10* embraces these gaps through its subversion of the code/interface relationship. Whether due to a bug or a feature, when *Pittsburgh 10* fails to operate according to traditional RPG logic, it disrupts the flow and queers play. While testing the game, I do not enter a flow state, but this could be the fault of my machine – perhaps it's queerer than I am.
- Game feel is “the tactile, kinesthetic sense of manipulating a virtual object. It's the sensation of control in a game.”²⁸⁷ It is circumstantial elements of the game world that

²⁸⁵ Marcotte, “Queering Control(lers).”

²⁸⁶ Ibid.

²⁸⁷ Steve Swink, *Game Feel: A Game Designers Guide to Virtual Sensation* (Boca Raton: CRC Press, 2009), xiii.

enable the flow state. Marcotte identifies glitches as a potential means of subverting game flow. The glitches in *Pittsburgh 10* usurp the player's autonomy, often granting control to the game. Whether these glitches produce a positive effect (e.g. granting the player unlimited resources) or a negative one (e.g. discarding the player's items at random), they subvert the dynamic between user and machine, granting the later authority of the experience of the former.

- Control literacy indicates “the player’s ability to pick up and use a given controller or any other set of learned conventions for controlling a game.”²⁸⁸ *Pittsburgh 10* relies on basic QWERTY keyboard commands, which should be relatively intuitive to the standard (read: normative) computer user. The illusion of autonomy is allotted to the player through the Keybinds Menu, which allows them to customize movement and action controls, but these still must adhere to the functionality of the computer.
- Procedural rhetoric is, of course, the term coined by Ian Bogost to analyze the arguments made by the formal rules of gameplay. Marcotte cautions us, “designers interested in queering the hegemonic status quo of games should be careful not to reinforce existing problematic structures.”²⁸⁹ I’ll investigate this concept further in the following section, but for now state that *Pittsburgh 10* walks a fine line between reinforcing and subverting said structures.
- Materiality and embodiment refers to the interface between human and hardware. Marcotte identifies several games that use inventive objects to provide alternate forms of

²⁸⁸ Marcotte, “Queering Control(lers).”

²⁸⁹ Ibid.

control that speak to questions of ability and intersectional feminism. *Pittsburgh 10* doesn't. *Pittsburgh 10* uses a QWERTY keyboard.

I maintain a queer ethos throughout my scholarship, but this has yet to translate effectively to my praxis. Going forward, I will continue to collapse the divide between what I say and what I do.

José Muñoz states, “queerness is not yet here; thus, we must always be future bound in our desires and designs.”²⁹⁰ The future of *Pittsburgh 10*'s methodology and materiality hold its queer potential. Before its release, I distributed it for beta testing. Relying once again on the feedback of my community, I implemented many of suggestions given to me in this process. Maintaining a future focus on queer design, I also released the game as free and open-source (upon request).²⁹¹ Doing so allows others to use *Pittsburgh 10* as a basis to develop games about their own experiences – either within Pittsburgh or beyond. I licensed it through Creative Commons (likely using the CC BY-NC-SA license) in order to ensure that the game can be continuously adapted, but never used for commercial purposes. The queerness of *Pittsburgh 10*'s methodology lies in its material relationship to the community that inspired it; although at its base level, game development both failed queerly and failed to queer, as I moved up the stack, the process became arguably queerer.

²⁹⁰ Muñoz, *Cruising Utopia*, 185.

²⁹¹ Within reason – I discuss my coding process within the following section, and because my scripts are largely based on those of a game developer who makes and uploads free tutorials on YouTube, I'm hesitant to infringe on his intellectual property by releasing my very similar code.

5.3 Crumbling Infrastructure: Slippage within the *Pittsburgh 10* Stack

As I have argued elsewhere, queer potential for computation exists within the slippage between code and interface (both the GUI and the developer interface). Shira Chess advises, “acknowledging the queer potential of gaming is a mobilizing a call-to-action for game designers and scholars to embrace that queerness – not only thematically, but in form and process.”²⁹² Here, she is referring to an early tension within the field of game studies between ludology, or the belief that games should be understood as play and analyzed via their rhetorical procedures, and narratology, or the theory that games should be analyzed as any other storytelling artifact.²⁹³ This chapter approaches *Pittsburgh 10* from both angles; however, this section is dedicated to the former. Considering the Scholarship of Ian Bogost and Steve Holmes, I discuss the slippage that emerged between the game’s code and interfaces during development. In doing so, I consider the ways in which I exploited this slippage with the intention of queer subversion. Though some may promulgate the death of the author/programmer, I find the consideration of these intentional choices a useful way to evaluate the queerness of games beyond the narrative layer.

In conversation with Halberstam, Juul remarks, “when you start playing you are pressured to accept the logic of the game.”²⁹⁴ A game’s logic is both rhetorical and technical. Ian Bogost defines “procedural rhetoric” as “the practice of persuading through processes in general

²⁹² Shira Chess, “The Queer Case of Video Games: Orgasms, Heteronormativity, and Video Game Narrative,” *Queer Technologies*, (2017): 85, doi:10.4324/9781315222738-7.

²⁹³ Naomi Clark, “What is Queerness in Games, Anyway?” In *Queer Game Studies*, by Bonnie Ruberg and Adrienne Shaw, (Minneapolis: University of Minnesota Press, 2017): 8; Bonnie Ruberg, “Queerness and Video Games,” 546.

²⁹⁴ Bonnie Ruberg, “The Arts of Failure: Jack Halberstam,” 207.

and computational processes in particular” and further clarifies that it “is a technique for making arguments with computational systems and for unpacking computational arguments others have created.”²⁹⁵ These arguments are written in the imperative statements of the game’s code and executed through its interface mechanics. This is not a seamless process, however, and much is obfuscated as these commands are translated up the stack. As I note in the second chapter, Steve Holmes claims that interfaces that conceal code practice coercive or bad rhetoric whereas those that are transparent about their underlying protocols exercise good rhetoric.²⁹⁶ I argue that speedrunners exploit the signifying slippage between these layers to queerly subvert the system as a whole. Approaching the same issue from a different angle, programmers can also intentionally use both coercive and transparent coding practices within the development process to create a queer structure that critiques normative game genres. Using the language of affect, Ruberg projects a similar developmental potential within a game’s slippery structure: “what new insights could be uncovered by supplementing [Bogost’s] structural approach with a phenomenological perspective – by analyzing games for their affective rhetoric: the language of the feelings they invoke, how they communicate emotions to their players, how designing affect is interwoven in the art of game design.”²⁹⁷ Although *Pittsburgh 10* largely adheres to traditional RPG mechanics, it also pushes back by playing affectively with the linguistic and visual slippage between the code, the developer interface, and the GUI. The unintentional glitches in the programming further reveal the constructed nature of these relationships and offer the opportunity for queer exploitation.

²⁹⁵ Ian Bogost, *Persuasive Games*, (Cambridge, MA: MIT Press, 2010): 3.

²⁹⁶ Holmes, “Can we name the tools?”

²⁹⁷ Ruberg, “No Fun,” 111.

Prior to developing Pittsburgh 10, I had very little coding expertise and no knowledge of the C# language. It was necessary to find a tutorial. After about a year of trial and error, I located a free tutorial on YouTube that addressed the components of game design that I needed to actualize this project. Created by inScope Studios, the RPG builder tutorial strives to recreate a 2D version of the popular online multiplayer World of Warcraft.²⁹⁸ Also built in Unity, the tutorial's game centers on the character of a wizard who travels around a map populated by NPCs and cartoon trees. He kills skeletons with his spells, completes side quests, and collects items. It's a classic rendition of a tale as old as the game industry. While *Pittsburgh 10* could be read as a re-skinning of this project, its procedural arguments differ in several key ways that impact its affective charge.

Code is written for both computer and human audiences. While much of my code communicates a similar message to the computer as that featured in the tutorial (e.g. the player presses "1" and a projectile graphic is launched at another sprite, which indicates to the computer to reduce a numerical value associated with that sprite by 10 points), the nomenclature of the scripts and variables is intentionally changed to render affect in human readers (e.g. the "Enemy" script has been retitled to "Other"). When making these changes, I am careful to indicate them in the comments of the code. For instance, the image below indicates that I've changed the function name "TakeDamage" to "TakeEnnui," the "damage" variable to "affect," the "health" variable to "impression," and the "die" animation to "bye."

²⁹⁸ In order to enact ethical labor practices, I subscribed to the developer's Patreon.


```

171 //TakeEnnui changed from TakeDamage, affect changed from damage, impression changed from health
172 public virtual void TakeEnnui (float affect, Transform source)
173 {
174     impression.MyCurrentValue -= affect;
175     TalkingTextManager.MyInstance.CreateText(transform.position, affect.ToString(), SITTYPE.IMPRESSION, false);
176     if (impression.MyCurrentValue <= 0)
177     {
178         Direction = Vector2.zero;
179         myRigidbody.velocity = Direction;
180         GameManager.MyInstance.OnInteractionConfirmed(this);
181         //Changed from die in the tutorial
182         MyAnimator.SetTrigger ("bye");
183     }
184 }

```

Figure 6 The TakeEnnui Function in *Pittsburgh 10*

Oftentimes these affective choices are translated beyond the code into the development interface. The following image is an example of how the Other script looks when it is attached to a game object (i.e. another person's sprite).

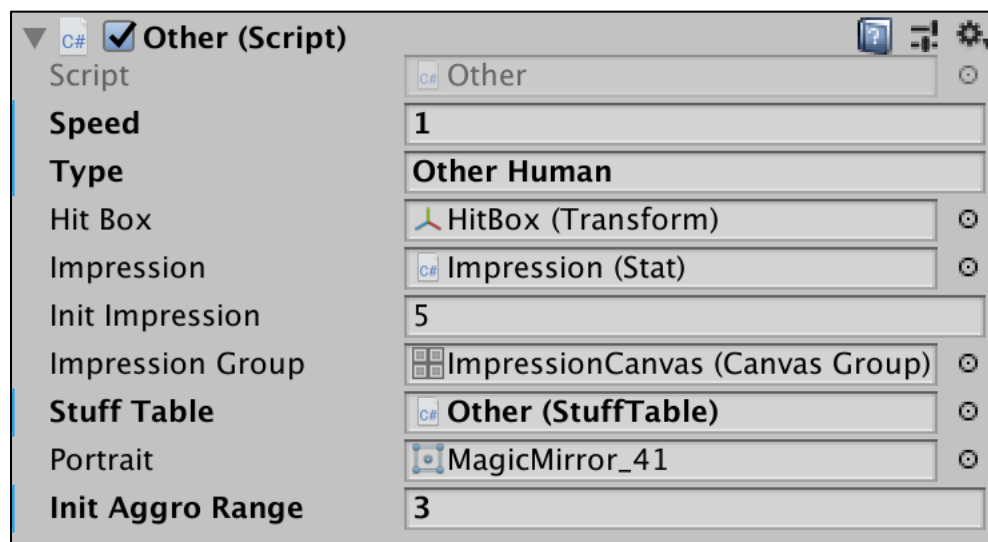


Figure 7 The Other Human Script in the Unity Developer Interface

While the player will likely never see the code or the development interface, these rhetorical changes send an affective message to myself and other potential developers about the ideological intent of the game. By utilizing the interplay between the GUI and the code/developer interface, I convey a similar message to the player.

5.3.1 Case Study I: Procedural Rhetoric of Intentional Programming

Leaning on the coercive properties of the GUI, I concealed Pittsburgh 10's code in a way that suggests that it follows an alternate logic from its normative counterparts. Clark observes, "in a workshop given at New York University's Game Center, meritt kopas elaborated on McDaldno and St. Patrick's techniques and urged participants to deconstruct existing game genres to find the fundamental assumptions driving patterns of play, then queer the genres by twisting, flipping, or undermining those conventions."²⁹⁹ I draw on two examples from *Pittsburgh 10* to demonstrate how I undermined fundamental or assumed gaming conventions using the rhetorical potential of the GUI:

1) When the wizard fires a thunderbolt at the skeleton in the tutorial, the red health bar above the enemy diminishes in size from right to left to reveal an empty background. Once the bar is completely empty and the counter on the screen, a visual representation of the counter in the program, reaches 0, the death animation is triggered. In developing Pittsburgh 10, I inserted an empty foreground graphic over a red background for the Other's "impression bar." When the player communicates with the other, through the use of emoji, the empty foreground diminishes in size from left to right, creating the illusion of the bar filling up. Although the program is still counting down to 0, which, when reached, causes the game to trigger the "bye" animation, this number is not represented on the screen. While the processes explained here are written nearly identically in the code, the procedural rhetoric is different for each scenario. In the case of the wizard and the skeleton, the game is arguing in traditional RPG fashion that if the player enacts violence against their enemies, then the enemy will die, and the player will be rewarded with

²⁹⁹ Clark, "What is Queerness in Games," 4.

experience points and the opportunity to loot the body. In *Pittsburgh 10*, the game is arguing that if the player makes an impression on someone, they will be rewarded with social capital. This difference is largely due to the affective visual difference between a value increasing and a value decreasing and the affective conceptual difference between killing and communicating.

2) The wizard in the tutorial has three ranged attacks: a thunderbolt, a firebolt, and a frostbolt. They are contained in his spellbook represented by sprites of lightning, fire, and ice respectively, and the player can select them at will to shoot at the skeletons. Similarly, in their repertoire – styled like an old school notebook, Avey-tar has three modes of communication through which they can converse with the Others of Pittsburgh: “gesture,” “locutionary act,” and “performative utterance.” These terms are largely borrowed from J.L. Austin to indicate the real-world impact of language.³⁰⁰ This design choice is both a nod to the linguistic theory and to Galloway and Thacker’s aforementioned claim that “code is the only language that is executable.”³⁰¹ Here, the code being executed is triggering a visual simulation of the impact of language within the game world.³⁰² Each form of communication is represented by a corresponding emoji, which the player launches at the Others. *Pittsburgh 10* subverts the mechanics of a traditional ranged attack, such as those featured in the tutorial, by using the procedure instead to convey the affective angles of interpersonal communication.

³⁰⁰ J. L. Austin, *How to Do Things with Words* (Cambridge: Harvard University Press, 1962).

³⁰¹ Galloway, *Protocol*, 165.

³⁰² Because the other two interactions are subject to change, they won’t be discussed in depth in this draft.



Figure 8 The *Pittsburgh 10* Repertoire

5.3.2 Case Study II: Procedural Rhetoric of Glitches

It is necessary to discuss the structural glitches present in *Pittsburgh 10* as a means of both drawing a parallel to the second chapter of this work and addressing the ways in which the user encounters the slippage between the code and the interface of the game. Here, I briefly describe the ways in which the glitches manifest, their procedural rhetoric, and their potential (or

lack thereof) for queer exploitation. Through these glitches, the game itself becomes personified; its relationship with the player acts as a technical manifestation of the project's themes.

QuestLog Crash. The QuestLog Crash glitch occurs in the WebGL build. Ideally, each side quest should only be accepted and completed once. However, this glitch allows players to accept a quest multiple times. The quest then appears to be repeated in the player's QuestLog. The game only allows the player to complete the quest once. When the player attempts to abandon the repeated quest, the game detects a null exception (i.e. a command to run a script on a non-existent game object) and crashes, terminating gameplay. This error only crashes the program in the WebGL build because I chose not to enable exceptions in the publications settings. According to the Unity manual, "this gives the best performance and smallest builds. With this option, any exception thrown causes your content to stop with an error in that setting."³⁰³ In order to be browser playable, the game needs to have quick loading time and small runtime. This setting optimizes web performance but is a kill switch in the case of an unforeseen error.

Although irritating, this glitch still rhetorically expresses an alternate narrative. Procedurally, in my decision to disable the failsafe, I transferred authorial power to the computer. Bogost writes, "procedural rhetoric is a subdomain of procedural authorship; its arguments are made not through the construction of words or images, but through the authorship of rules of behavior, the construction of dynamic models."³⁰⁴ In opting for a quicker, smaller, browser-friendly model, I relinquished control over the user's experience and set the rule for the

³⁰³ Unity Technologies, "Building and Running a WebGL Project," Unity, Unity Technologies, 2019, <https://docs.unity3d.com/Manual/webgl-building.html>.

³⁰⁴ Bogost, 29.

computer to crash when encountering a null exception. I do not see many opportunities for queer exploitation in this glitch, but it does communicate alternative gameplay logic. It makes the argument that if one gets caught in a repeated loop of providing favors for others – perhaps at the expense of looking after oneself – one will burn out. In crashing, the computer simulates the mental experience of the player’s sprite.

Eternal XP. This is a bad one. Like a mass burial of Atari cartridges in an Alamogordo landfill level of bad. Essentially, when the player fills up an Other’s impression bar, the Other should cease to perform any functions and exist only as a GameObject through which the player can borrow limited items. This glitch, however, allows the player to still target and interact with the Other’s HitBox and receive Pittsburgh Social Points for doing so, thus transforming the Other into a mine for unlimited XP. This is a bit of a bummer as it renders the XP that the player receives from completing side quests (as well as the Pittsburgh Level itself) more or less irrelevant.

The Eternal XP glitch demonstrates the folly of executing simple commands within a potentially complex rule-based system, and while easily exploited, it relies on the user’s emotional response to acquire meaning. In lamenting the knee-jerk simplicity that developers enact in automated systems, Bogost states, “we think of computers as frustrating, limiting, and simplistic not because they execute processes, but because they are frequently programmed to execute simplistic processes.”³⁰⁵ This system is doing just that. When the HitBox is triggered by an interaction and the Other’s impression bar is full, the computer follows the rule of adding value to the player’s PGH Social Points bar. In order to fix this glitch, I will need to include

³⁰⁵ Ibid., 7.

another rule that prohibits the computer from adding this value more than once, making the points system more complex.

Obviously, a player can easily exploit this glitch. They only need to make an impression on one Other to access unlimited points and achieve the Pittsburgh 10 accolade. But at what cost? In doing so, the user phenomenologically orients themselves towards those who produce anxiety rather than towards those with whom they share a queer kinship bond. Ruberg remarks of challenging games, “I don’t want to win. I want to fail. I want to feel frustration, annoyance, disappointment, domination, and pain. I want a play experience that is, queerly enough, no fun.”³⁰⁶ When this glitch is exploited to create a win condition facsimile, the user is deprived of this “frustration, annoyance, disappointment, etc.” It’s not that the game is no fun; it’s simply not anything. The human becomes a machine, performing the most basic repetitive function in order to receive a reward that quickly becomes devoid of meaning. In order to play, queerly or otherwise, the user must form an affective bond with the system.

Random Discard. The inventory is the glitchiest system in the game. It’s structured through six intersecting scripts that control the inventory itself, the “bags” that represent the inventory, the “slots” that store the items in each bag, and the auxiliary storage units (e.g. a box in *Friendship and the Others*’ “stuff tables”). Five additional scripts control item properties, and three more scripts manage the vendor scheme. It’s a complicated system. In development, I encountered numerous errors, including the icon lingering after an item had been discarded, bags switching slots in loading saved games, and vendors selling items other than those that I’d included in their windows. It comes as no surprise that an assortment of glitches managed to sneak their way into the final product. The Random Discard glitch appears to occur when a bag

³⁰⁶ Ruberg, “No Fun,” 109.

in the inventory is nearly full. At times, the player will attempt to use a specific item, but the game instead uses another – seemingly random – item. The glitch is not triggered during item quest completing (e.g. if the player gives the required items to a Quest Giver NPC). It's frustrating at best.

Narratively, this glitch can be read in numerous ways. Echoing Kittler's views on mechanical meaning making, Bogost says of the linguistic properties of computation, "procedural representation is a form of symbolic expression that uses process rather than language."³⁰⁷ Like language, procedural rhetoric is subject to multiple interpretations, and like other manifestations of rhetoric holds the potential to be coercive or manipulative. The procedure of the Random Discard glitch adheres to these properties. One reading suggests that this glitch contributes to the verisimilitude of the game. People lose objects all the time. This is the digital equivalent to leaving your keys in an Uber. A more sinister reading indicates that the game gaslights the player into believing that they are the party responsible for discarding the unintended item. The first time it happens is jarring, and it is only through repetition that it becomes normalized as a procedure. A third interpretation might assume that the game becomes a chaotic force, an anxiety-producing enemy not unlike those that charge toward the player sprite. As with the QuestLog Crash glitch, I cannot see an immediate possibility for the queer exploitation of the Random Discard glitch. However, it does make an arguably queer, anti-consumerist argument. Items should not be consumed for personal gain, but contributed to the community as a feature in the worldmaking process. Fortunately, the final glitch is somewhat more optimistic.

³⁰⁷ Bogost, *Persuasive Games*, 9.

Infinite Coffee. Initially a signifier of my failure as a programmer, this glitch has become my favorite. As with the Random Discard glitch, the Infinite Coffee glitch comes about due to a flaw in the inventory system. I still don't know what triggers it, but it occurs when the player uses a consumable item such as coffee, fizzy water, veggie burgers, etc. Typically, when a player uses one of these items, the game applies the item's effects (e.g. giving the player more ennui) and removes the item from play. When this glitch is triggered, however, the item's effects are applied, but the game does not remove the item from the inventory. This allows the player to use the item ad infinitum, a dead-useful feature in a game where these items are overwhelmingly acquired using limited monetary resources. Beta testers do report that this glitch isn't permanent; eventually, the programming kicks back in and the special item is removed from play upon use.

Infinite Coffee is a pleasantly exploitable glitch that makes an argument about mechanical autonomy. Bogost observes, "procedural systems generate behaviors based on rule-based models; they are machines capable of producing many outcomes, each conforming to the same overall guidelines."³⁰⁸ Within the 11+ scripts of the inventory/item system, I established a network of guidelines. The glitches attest to the great deal of flexibility attributed to the machine while operating within these guidelines. The many outcomes, in this case, include the intended item being used and discarded appropriately, an unintended item being used and discarded, and the intended item being used and not discarded. By exploiting the Infinite Coffee glitch, the player can prioritize using their funds to acquire the items needed to complete the side quests. In a way, the game is enacting the mutual aid. It is providing them with additional support for prolonged play, removing some of the frustration associated with the game, but maintaining the

³⁰⁸ Ibid., 4.

challenge. When I release the next version of the game, I am considering allowing this glitch to stay. As my collaborator noted, “Pittsburgh is hard – you can have a lil infinite coffee as a treat.”

Although, in many ways, *Pittsburgh 10* is bound to the coding conventions and gaming mechanics of the tutorial, the affect that augments this procedural structure differs rhetorically. The programming nomenclature argues against the violence coded in traditional RPGs, and the options available through the GUI subvert expectations of the genre. The glitches, imbued with their own rhetoric, further reveal to the player the constructed, slippery, and exploitable features of the code/interface relationship. The procedural rhetoric of the game is further queered in relation to the narrative itself.

5.4 Who Can Say If I’ve Been Changed for the Better: *Pittsburgh 10* as Queer

Worldmaking

Pittsburgh 10 enacts its queerness most visibly within the slippage between its procedural rhetoric and its narrative. Hanna Brady provides a deconstructive comment regarding queer narrative: “Fiction and nonfiction aren’t mutually exclusive. They live on a spectrum.”³⁰⁹ In this vein, *Pittsburgh 10* is both a story about Pittsburgh, queerness, and myself, and it isn’t. Teddy Pozo uses the language of haptics to explore this paradox: “queer games can use the haptic to retain the specificity, complexity, and unknowability of their individual narratives, while inviting players to relate these narratives to their own lives, as tools for learning about others and about

³⁰⁹ Hanna Brady, “Building a Queer Mythology,” In *Queer Game Studies*, by Bonnie Ruberg and Adrienne Shaw, (Minneapolis: University of Minnesota Press, 2017).

themselves.”³¹⁰ Citing personal memories and inside jokes – unknowable to those beyond my social circle, *Pittsburgh 10* follows my individual narrative, but it also extends an anecdote that should be familiar to many finding their way through a queer community. Following Pozo’s further observation that the intention of queer game development should not be to evoke empathy within cis, straight consumers, but instead create relatable stories for queer audiences, *Pittsburgh 10* invites queer players to delve into the procedures and stories – both mine and theirs – of making a queer world.³¹¹ I begin this section by tracing the history of public sphere theory and relating it to the public simulated within the world of the game. I then discuss the process of queer worldmaking and argue that the player in *Pittsburgh 10* enacts this process through acts of mutual aid, framed in the game as completing side quests assigned by NPCs. Through the interplay of mechanics and storytelling, *Pittsburgh 10* advocates for the creation of a queer utopia.

The game world of *Pittsburgh 10* is a public in the most literal and traditional sense. The option for privacy does not exist as Avey-tar must wander the open world without refuge. Jürgen Habermas originally defines the public sphere emerged as a space for individuals to meet publicly and exchange ideas, opinions, and information regardless of class.³¹² Nancy Fraser criticizes Habermas’s alignment of publicity, rationality, status, by implication, masculinity, and notes that he fails to take into account multiple other counterpublics that coexisted along the

³¹⁰ Teddy Pozo, “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).

³¹¹ Ibid.

³¹² Jürgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society* (Cambridge: MIT Press, 1989).

lines of gender, race, et cetera. beyond the boundaries of what Habermas defines as a public.³¹³ As I discuss in depth in my third chapter, Warner expands on the distinction of publics and counterpublics, stating that they are “formed by their conflict with the norms and contexts of their cultural environment.”³¹⁴ Within and between these publics, Alice Marwick and danah boyd and locate the phenomenon of “context collapse,” which occurs – most noticeably in digital publics – when the various social groups (e.g. publics, counterpublics, and private spheres) to which an individual belongs begin to overlap.³¹⁵ Gameplay models the relationships between publics, counterpublics, and the individual who must navigate them.

Prioritizing communication and interpersonal interaction, *Pittsburgh 10* reflects Habermas’s theory of the public as a place of information exchange. The game further reflects the distinction between publics and counterpublics as the individuals with whom Avey-tar communicates through the use of emojis comprise the general public whereas the NPCs for whom Avey-tar provides services form the queer counterpublic. Context collapse is a pervasive issue within the game. The intentional community of the queer counterpublic rewards Avey-tar with verbal and material support, but the collapsed community of the Pittsburgh public contributes to their anxiety. Perhaps the antithesis to context collapse, however, is the process of worldmaking – instead of experiencing anxiety or shame about the public revelation of one’s belonging to a queer counterpublic, one practices the slow conversion of a public into a queer

³¹³ Nancy Fraser, “Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy,” *Social Text*, no. 25 (1990): 56–80.

³¹⁴ Warner, *Publics and Counterpublics*, 63.

³¹⁵ Marwick and boyd, “I Tweet Honestly, I Tweet Passionately: Twitter Users, Context Collapse, and the Imagined Audience,” 122–123.

utopia (either real or imagined). This process is simulated through the game's narrative and mechanics.

Ruberg identifies both queer gamer spaces and queer game spaces as sights of queer worldmaking.³¹⁶ While they locate this process in a masochistic ethos, valuably calling readers to “think about masochistic play as a site of potential rather than pathology,” I choose alternately to consider the bonds formed through acts of mutual aid, manifested digitally through the simulated procedures by which they are created, as the foundations of a queer utopia.³¹⁷ Working from a Marxist and environmentalist foundation, Ruth Levitas claims that the concept of utopia is “better understood as a method than a goal.”³¹⁸ “The utopian method,” she claims, “involves both making explicit the kinds of society implied in existing political programmes and constructing alternatives. It entails also considering the kinds of people we want to become and that different forms of society will promote or inhibit.”³¹⁹ For Levitas, utopia is both an individual and a collective approach, one that exists not wholly in the imaginary but also within the systems of the present. Queer scholars similarly advocate for utopia that is paradoxically already present and always on the horizon. Muñoz poetically remarks, “queerness is essentially about the rejection of a here and now and an insistence on potentiality or concrete possibility for

³¹⁶ Bonnie Ruberg, “Forty-Eight-Hour Utopia: On Hope and the Future of Queerness in Games,” In *Queer Game Studies*, by Bonnie Ruberg and Adrienne Shaw, (Minneapolis: University of Minnesota Press, 2017); Ruberg, “No Fun.”

³¹⁷ Ruberg, “No Fun,” 122.

³¹⁸ Ruth Levitas, *Utopia as Method: The Imaginary Reconstitution of Society*, (Houndmills: Palgrave Macmillan, 2014), xi.

³¹⁹ *Ibid.*, xviii.

another world.”³²⁰ The blueprints for this other world, he indicates, can be found in the queer aesthetic. As for Levitas, utopia for Muñoz is an imagined future, the foundation for which can be located in the structural enclaves of the present. Berlant and Warner further define a queer world as “a space of entrances, exits, unsystematized lines of acquaintance, projected horizons, typifying examples, alternate routes, blockages, incommensurate geographies.”³²¹ They go on to populate this world with “relations and narratives that are only recognized as intimate in queer culture,” providing the examples of “girlfriends, gal pals, fuckbuddies, [and] tricks.”³²² Promising a holistic utopic future, today’s queer world is frustratingly sketched in between the normative systems that structure the present, bound together by intimate relations that lack state validation.

Pittsburgh 10 explores these queer global and individual imagined futures. Because it is world constructed through and confined by political program of capitalism, the Pittsburgh of the game enables and necessitates an alternate Marxist system of barter and care work within it. The queer interactions that Avey-tar has with the NPCs operate as Muñoz’s blueprint of the world as it could be. As Avey-tar performs side quests that range from the touchingly thoughtful to the absurdly counterintuitive for their friends, FWBs, exes, coven mates, anarchist zine collective companions, et cetera, they chart out an alternate geography of a digital Pittsburgh that actualizes Berlant and Warner’s vision. While the player might be able to reach the honor of becoming a “Pittsburgh 10” through anxiety-producing discourse alone, they must engage in acts of mutual aid to unlock the affective potential of the game.

³²⁰ Muñoz, *Cruising Utopia*, 1.

³²¹ Berlant and Warner, “Sex in Public,” 558.

³²² Ibid.

I serendipitously encountered the concept of mutual aid at the Gender, Bodies, and Technology Conference in Roanoke, VA during the spring of 2019. Dean Spade was a keynote speaker, and instead of giving an academic paper, he gave an activism informed speech about surviving the neoliberal apocalypse. Mutual aid, he claimed, is what we need “when the lights go out.”³²³ Hits home. Spade addresses the idea of mutual aid in a great deal of his informal writing. Citing examples of riding bikes, composting, caring for chronically ill friends, as well as participating in local activism against prisons, union-busting organizations, and neighborhood evictions, he argues that social justice is a way of communal living rather than a service performed sporadically to assuage guilt or despair. Presenting a holistic picture, he states, “letting ourselves feel the dissatisfaction, frustration, powerlessness that contemporary systems can create is an important part of finding ways to take action towards alignment, finding company on that journey, beginning to take the risk of wanting and acting toward greater alignment.”³²⁴ Spade’s contemporary systems of oppression echo Levitas, Muñoz, Berlant, and Warner’s capitalist, normative structures of the present, and his alignment and company, their blueprints of a queer utopian future. Through mutual aid, we can model this future in the here and now.

In the game, mutual aid takes the form of community care work. Queers will talk shit about each other ‘til sundown, but we’ll also show up to bat for one another. Developing in the

³²³ Dean Spade, "Solidarity Not Charity: Mutual Aid For Mobilization And Queer And Trans Survival," Address, Gender, Bodies, and Technology Conference, Hotel Roanoke, Roanoke, VA, April 27, 2019.

³²⁴ Dean Spade, “‘Having a Cause’ versus Living in a Life Centered in Radical Transformation,” Dean Spade, November 23, 2018, <https://www.deanspade.net/2018/11/23/having-a-cause-versus-living-in-a-life-centered-in-radical-transformation/#more-1699>.

space between fiction and non-fiction once again, I drew on my own personal experiences, surveyed my friends, and dwelled in the realm of the imaginary to generate quests that simulated mutual aid. Most RPGs allow for two types of quest: kill quests and item-retrieval quests. Because killing is reframed as communicating in *Pittsburgh 10*, some of these do exist. For instance, at one point Avey-tar's cousin notices their ongoing "seasonal" depression/anxiety and encourages them to go out and talk to five people. However, most of the missions take the form of item-retrieval quests. Some examples include grocery shopping for an injured friend, picking up a crystal for a local jewelry maker, locating a plant for an herbalist covenmate, making copies of a zine for your collective, buying cigarettes for an ex, and acquiring movie tickets for your introverted pal. These characters do not have names but are described through their relation to the player (e.g. Your Cousin, Your Jewelry Maker Friend, Your Fantasy Novelist Friend), thus further shaping the world and defining the player's role. A communal network is formed through subject relations.

The tasks construct the procedural foundation of the game's queer narrative. In opposition to the hetero-masculine form of storytelling that involves a single climax, Chess writes, "The pleasure of gaming isn't in a singular moment, but in the anticipation and release of many singular moments, perhaps even moments that do not infer the productivity of reproduction. The pleasure of video game narrative is about becoming, rather than about coming."³²⁵ Upon completing each task, Avey-tar is rewarded, not with currency – as their community is also subsumed by a neoliberal hellscape – but with ultimately valueless Pittsburgh Social Points. The player is rewarded with affect. *Pittsburgh 10* lacks an ultimate, teleological climax, but it offers these small pleasures as a method of utopian meaning making.

³²⁵ Chess, "Queer Case of Video Games," 88.

On February 8, 2020, my collaborator and I hosted a launch party for the game at SYN Bar in Friendship, Pittsburgh. We advertised the event publicly through flyers, the Desert WiFi Games Instagram account, and our personal text message and social media channels. On the night of the event, we bought beer, distributed branded stickers and lighters, and set up a playtest station. Life imitates art. The context collapse was palpable as individuals from the various circles to which I belong – academics, makers, anarchists, witches, queer folks, et cetera – gathered together to hail me into subjectivity. Together, in that backroom bar space, we enacted the worldmaking process simulated in *Pittsburgh 10*.

5.5 Conclusion: Flowers in the Dustbin

Endings can be terribly unsatisfactory. The final moments of a narrative, dissertation, or life can pale in comparison to the bulk of the experience. Chrononormativity is the temporal system that organizes lives and stories along a predictable trajectory – punctured perhaps by certain crescendos (e.g. marriage and boss battles) – toward an ultimate climax; however, as is the case with most academic terms that tack a prefix upon a “normative” root, it is predicated upon a series of slippery assumptions, and thus can be queered. Working through Bliss Cua Lim and Elizabeth Freeman, Matt Knutson observes, “temporal standardization serves to naturalize existing power structures and consequently force a sociocultural other into a peripheral temporal position.”³²⁶ It is by centering this sociocultural other – in this case, queerness – that a critique of

³²⁶ Matt Knutson, “Backtrack, Pause, Rewind, Reset: Queering Chrononormativity in Gaming,” *Game Studies* 18, no. 3 (December 2018).

the temporal standard becomes possible. Taking a literary approach, Chess writes, “Barthes explains that the hermeneutics of a text rely on the pleasures of creating problems or questions within the reader, and then delaying the response – the pleasure is not in the climax but in the delay of that very climax.”³²⁷ If actualizing a teleological goal or climax affirms the chrononormative agenda, then the delay of this climax is an act of queerness or subversion. In *Pittsburgh 10*, the climax is delayed indefinitely.

Chalk it up to deadlines, subpar programming abilities, or intentional design, but *Pittsburgh 10* lacks a win condition and a teleological goal. The player wins when they feel as if they’ve won. Examples of “winning” might include reaching level 10, completing all the quests, or interacting with all the Others. However, none of these options produce a simulated reward in the game. The reward comes from inside the player. Halberstam states, “This idea that you want to play to win, and that only winning will do, is not simply wrong about games, it’s wrong about the human. That feels to me to be a very queer insight.”³²⁸ Because winning is not an option, *Pittsburgh 10*’s lack of ending is inherently queer. It rejects chrononormativity and casts the player into a state of freeplay. Not unlike Derrida dislodging the linguistic and sociohistoric center, disrupting the chain of signification, the game plucks the player out of any sort of familiar narrative script. The user must inscribe their own meaning within the game through the act of worldmaking and beyond the game through their affective bond with their computer.

As a rhetorical text, *Pittsburgh 10* effectively unifies this dissertation project. However as a queer artifact, its success is somewhat more complicated. On the level of materiality, it operates as a normative RPG. This is, in part, due to the limitations of the system in which it was

³²⁷ Chess, “Queer Case of Video Games,” 85.

³²⁸ Ruberg, “The Arts of Failure,” 204.

built. While this failure can be coded as queer, it is a bit of a stretch. Between the layers of code and interface erupt points of queer potential. The naming conventions of the scripts and variables reflect the programmer's ideology, and the rhetoric of the interface allows the game's procedural rhetoric to adhere to this ideology as well, queering what would otherwise be normative game mechanics. The glitches in the game further suggest alternative procedural arguments and opportunities for queer exploitation. *Pittsburgh 10* is most successful in terms of the interplay between its procedural rhetoric and its narrative. By completing side quests for queer NPCs, the player enacts a procedure that represents mutual aid, and by extension performs a simulation of the queer worldmaking process. The importance of this process is emphasized through the lack of ending or climax; quite simply, in the absence of teleology, maintaining relationships supplement affective fulfillment. I began this chapter with a quote from Lacan, which roughly indicates that, when delayed or hidden, the object of desire is the epitome of the sublime, but when obtained, it is transformed into shit. As with most of my writing, this epigraph is tongue-in-cheek, yet undeniably apt. Conceptually, *Pittsburgh 10* was intended to be a reflection of my ideology, scholarship, and self, but now, completed, it's revealed itself to be something of a disappointment. Perhaps this is often the case with metatextual analysis.

6.0 Conclusion: I Am Error

We created computers in our image just as we have created gods in our image. If this is the case, then mine is a glitchy God. To err is human; to produce a world through Boolean logic is divine.

The essential thesis of this work is computers are rhetorical texts that can be queered. We can queer materiality by rejecting prepackaged hardware and building, playing with, and failing to create our own mechanisms. We can queer the relationship between code and interface by locating and exploiting glitches. We can queer the digital publics interpellated in software systems by carving out spaces for our communities and protecting them with informed cyber security practices. We can computationally compose with the resolution to create queer art. Queerness isn't accidental; it's intentional.

The underlying argument of this work is that practical composition is necessary to the critical analysis of computers. While this claim relates to my experimentation with microchips, a Raspberry Pi, and a FetLife account, it predominately refers to my work on *Pittsburgh 10*. By building a video game, I learned about the material allowances and limitations of running an industry standard game engine on a personal machine, about the fear of detecting bugs in my own programs as the counterpoint to the joy of finding them in others', and about the empyreal feeling of assembling an artifact that generates connection within a community. In a desert high school English class, I read the line, "one of life's quiet excitements is to stand somewhat apart

from yourself and watch yourself softly becoming the author of something beautiful, even if it is only a floating ash.”³²⁹

Intentional community resides in the heart of this work. I gesture toward my own involvement in queer, religious, anarchist, and other localized and online groups. These circles, in turn, form avenues leading to publics upon which I linger on the fringes. I do not count myself as a member of the biohacking, speedrunning, or sex work communities. When discussing these demographics, I maintain a linguistic distance as a means of treating them with scholarly respect. Going forward, I hope to develop this project with further qualitative research. Reintegrating the voices of those who have been erased by mainstream narratives is integral to my stake in subversive digital humanities praxis. I write with an awareness of my own subject position, a love of my community, and an admiration for those about whom my work concerns.

Although – or perhaps because – she is speaking of grief and desire, Judith Butler’s line resonates through an interface darkly: “Let’s face it. We’re undone by each other. And if we’re not, we’re missing something.”³³⁰ We become fragmented through relation and creation, and between the fragments swells a slippery no man’s land. This slippage is a normative failing and an invitation to play. As we play with methodologies and ideological frameworks, we are also playing with people. As we use technology to create our communities, our art, and ourselves, we are also relating to bodies. To be embodied is to dwell in a biological glitch.

³²⁹ Norman Maclean, *A River Runs Through It and Other Stories* (Chicago: University of Chicago Press, 1976), 43.

³³⁰ Judith Butler, *Undoing Gender* (New York: Routledge, 2009), 19.

Errare humanum est, perseverare autem diabolicum, et tertia non datur. And when the third option isn't data, it must be composed. And so I propose. Errant errat. Queer the error. Err the error. Wander in error.

Appendix A IRB Approval



University of Pittsburgh *Institutional Review Board*

3500 Fifth Avenue
Pittsburgh, PA 15213
(412) 383-1480
(412) 383-1508 (fax)
<http://www.irb.pitt.edu>

Memorandum

To: Sandra Nelson
From: IRB Office
Date: 10/13/2017
IRB#: [PRO17070300](#)
Subject: Self-Identification of Sex Workers on Social Networking Sites

The above-referenced project has been reviewed by the Institutional Review Board. Based on the information provided, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section

45 CFR 46.101(b)(2)

Please note the following information:

- Investigators should consult with the IRB whenever questions arise about whether planned changes to an exempt study might alter the exempt status. Use the "**Send Comments to IRB Staff**" link displayed on study workspace to request a review to ensure it continues to meet the exempt category.
- It is important to close your study when finished by using the "**Study Completed**" link displayed on the study workspace.
- Exempt studies will be archived after 3 years unless you choose to extend the study. If your study is archived, you can continue conducting research activities as the IRB has made the determination that your project met one of the required exempt categories. The only caveat is that no changes can be made to the application. If a change is needed, you will need to submit a NEW Exempt application.

Please be advised that your research study may be audited periodically by the University of Pittsburgh Research Conduct and Compliance Office.



University of Pittsburgh
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Memorandum

To: Sandra Nelson
From: IRB Office
Date: 10/31/2017
IRB#: [PRO17100147](#)
Subject: Pittsburgh Community Video Game

The above-referenced project has been reviewed by the Institutional Review Board. Based on the information provided, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section

45 CFR 46.101(b)(2)

Please note the following information:

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Appendix B Survey Questions

Appendix B.1 Self-Identification of Sex Workers on Social Networking Sites

Are you comfortable with parts of your responses or complete responses being reprinted in the study (no information will be collected that connects your identity to your response)?

What is your age?

What is your gender identity?

Do you identify as a sex worker?

If so, what words or language do you use to express your identity?

Do you use an alternate name or persona when engaging in sex work? (**Note:** If so, please do not indicate what this name is.)

What social networking platforms do you use for personal reasons (e.g. Facebook, Tumblr, Instagram, etc.)?

What words or language do you use to represent yourself on these platforms?

What social networking platforms do you use for professional reasons (apart from sex work) (e.g. LinkedIn, etc.)?

What words or language do you use to represent yourself on these platforms?

What social networking platforms do you use to discuss sex work, journal your experiences, and/or support sex workers in a community setting?

What words or language do you use to represent yourself on these platforms?

What words, terms, language, or slang have you used in sex worker communities in the past that has since stopped being used?

Do you take additional measures to protect your privacy online?

If so, what tactics do you use?

Do you take additional measures to protect your anonymity online?

If so, what tactics do you use?

Appendix B.2 Pittsburgh Community Video Game

Identity Information

What is your age?

What ethnicity/ethnicities do you identify with?

What is your gender identity?

What are your gender pronouns?

What term (if any) do you use to define your sexual orientation?

What are some other personal identifiers with which you closely align yourself (e.g. occupation, political alignment, religion, etc.)?

Relationship to Pittsburgh

Why do you live in Pittsburgh?

How long have you lived in Pittsburgh?

What changes have you noticed in Pittsburgh during your time living here?

Which neighborhood do you live in?

Which public locations do you tend to frequent in your own neighborhood (e.g. bars, coffee shops, libraries, parks, etc.)?

Why do you frequent these spaces?

Which public locations do you tend to frequent beyond your own neighborhood (e.g. bars, coffee shops, libraries, parks, etc.)?

Why do you frequent these spaces?

Are there any spaces within or beyond your neighborhood that you avoid? Which are they?

Why do you avoid these spaces?

Interpersonal Interactions

Do you feel as if you belong to a primary group, community, or subculture within Pittsburgh?

How do you relate to this community (e.g. music, interests, politics, etc.)?

What other groups, communities, or subcultures do you belong to within Pittsburgh?

How do you relate to these communities (e.g. music, interests, politics, etc.)?

Do you notice your different social groups colliding or intersecting at certain events? What type of events?

Do you notice your different social groups colliding or intersecting in certain physical spaces? Which spaces?

How do you respond when your different social groups intersect (i.e. in terms of emotion, behavior, etc.)?

Do you feel as if you have many close friends in Pittsburgh?

How would you define a close friend?

Do you feel as if you have many acquaintances in Pittsburgh?

How would you define an acquaintance?

Do you feel as if there are many people in Pittsburgh who you would rather avoid?

What are a few reasons why you might want to avoid someone?

How do you typically meet new people in Pittsburgh?

What values, characteristics, or identifiers do you typically look for or appreciate in your friends?

Would certain values, characteristics, or identifiers belonging to someone prevent you from being friends with them? If so, what are a few examples?

What tactics do you use to navigate social situations involving people you would rather avoid?

Is there any other information you'd like to provide about your experiences in Pittsburgh?

Appendix C Video Game Links

Desert WiFi Games Hyperlink: <https://desertwifigames.itch.io/>

Pittsburgh 10 Hyperlink: <https://desertwifigames.itch.io/pittsburgh-10>

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