

‘SINCE NO EXPRESSIONS DO’:
QUEER TOOLS FOR STUDYING LITERATURE

By

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APPROVAL

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ABSTRACT

“‘Since No Expressions Do’: Queer Tools for Studying Literature”

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This dissertation explores how digital methods and tools for studying text engage with queer literature. I critique digital methods and tools by posing computation, where textual data is cleaned and structured for electronic processing, against the complexity of queer subjecthood and affects expressed in textual style, form, and voice. While tools like quantitative text analysis, for example, transform, and necessarily reduce, qualitative elements of gender and sexuality into numerical data such as word frequencies or concordances, I argue that this reduction opens up possibilities for interpreting the formal qualities of queer literature. Just as digital formats transform and manipulate text into data, so do literary forms figure queer identity and experience in narrative and figurative structures. Reading formal expressions of queerness through technology, such as data formats and programming logics, surfaces the structures and constraints of non-normative identity formations and desires. In bringing these forms to the surface, technology also suggests (without revealing) some residue that cannot be captured by the tool. This elusive aspect constitutes queerness as something at once tangible and slippery.

Besides offering new digital procedures for studying literary material, this work also offers a crucial critique of the way Queer Studies theorizes the relationship between identity and embodiment. The order of chapters in my dissertation poses a trajectory for the field of Queer

Studies that increasingly grapples with the role of embodied experience, particularly that of race, in queer identity. This critique of Queer Studies and its implicit whiteness strategically forecloses queerness as something, as José Esteban Muñoz argues, “not yet here,” but perpetually on the horizon (1). For this project, queerness remains as a target beyond reach, as a fount for future subversions, exemplified with the term “queer” itself, which Judith Butler says is “never fully owned, but always and only redeployed, twisted, queered from a prior usage and in the direction of urgent and expanding political purposes” (173).

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DIGITAL MANIFEST

- I. ““Since No Expressions Do”: Queer Tools for Studying Literature” Dissertation Whitepaper
- II. Code (zip files)
 - a. **qdr-master.zip**: Zip file containing the contents of the Queer Distant Reading (qdr) application. URL: <https://github.com/gofilipa/qdr>.
 - b. **qte-main.zip**: Zip file containing the contents of the Queer Text Encoding (qte) application. URL: <https://github.com/gofilipa/qte>.

A NOTE ON TECHNICAL SPECIFICATIONS

The qdr application uses the standard library in Python version 3. In addition to Python, it requires the Natural Language Toolkit (NLTK) and Word2Vec libraries. To run the application, download and install the above libraries and the qdr module from the github repository linked in the Digital Manifest. Use a command line program (such as Terminal on Mac) to run the application. Input a command that contains 4 arguments: The first argument is the “python” command, the second argument is the module name “qdr,” the third argument specifies a text to analyze like “orlando.txt” (which comes packaged with the app) and the fourth argument is the term that you want to analyze, for example, “woman.”

The qte application uses the CETEIcean library in Javascript. To view the application, navigate to the project URL: <https://gofilipa.github.io/qte/>.

GLOSSARY OF VARIABLES

tei-del: adds strike-through text decoration to text rendered in HTML.

tei-del[implication]: adds coloring text decoration to struck through in text rendered in HTML.

teii-del[implication]::before, tei-del[implication]::after: assigns text attribute in XML in text rendered in HTML.

tei-del[implication]:hover::before, tei-del[implication]:hover::after: adds hover effect to text attribute rendered in HTML.

GLOSSARY OF FUNCTIONS

launch(filename): opens and reads the text file.

preprocess(raw): tokenizes the launched text file with NLTK.

clean(text): removes punctuation, capital letters, stop words, and inflections from preprocessed text with NLTK.

similar(cleaned, word): Creates a word embedding model with Word2Vec and returns the most similar words to the keyword.

context(tokenized, word): Gets the context for the keyword from the source text with NLTK

subtract(cleaned, word, operand): Subtracts a vector from another vector with Word2Vec.

To my parents

/

Para meus pais

INTRODUCTION

The desire to write is the desire to fool you, seduce you.
Here I am – again – always getting the girl, saying the right
thing or (toss this in for effect) something deliciously,
winsomely wrong. Look over there – that's me, at four

Figure 1: Screenshot from *These Waves of Girls*, “desire_to_write.htm.”

Caitlin Fisher’s electronic work, *These Waves of Girls*, tempts the reader throughout the text with hyperlinks to seductive phrases like “the desire” or “that’s me, at four...” (“desire_to_write.htm”). Though they are associative in nature, supporting the work’s decentralized formal structure, the links also defer narrative coherence within the story, a sexual coming of age of a young lesbian woman named Tracey. Clicking through a few episodes, the text reveals itself to be, like much of the “hypertext fiction” of the early 2000s, disorienting. The links offer a profusion of narrative paths that disrupt the relationship between cause and effect, halting the narrative progression in what James Pope describes as “a baffling range of choices for movement which actually [leads] to a stifling of movement altogether” (11).

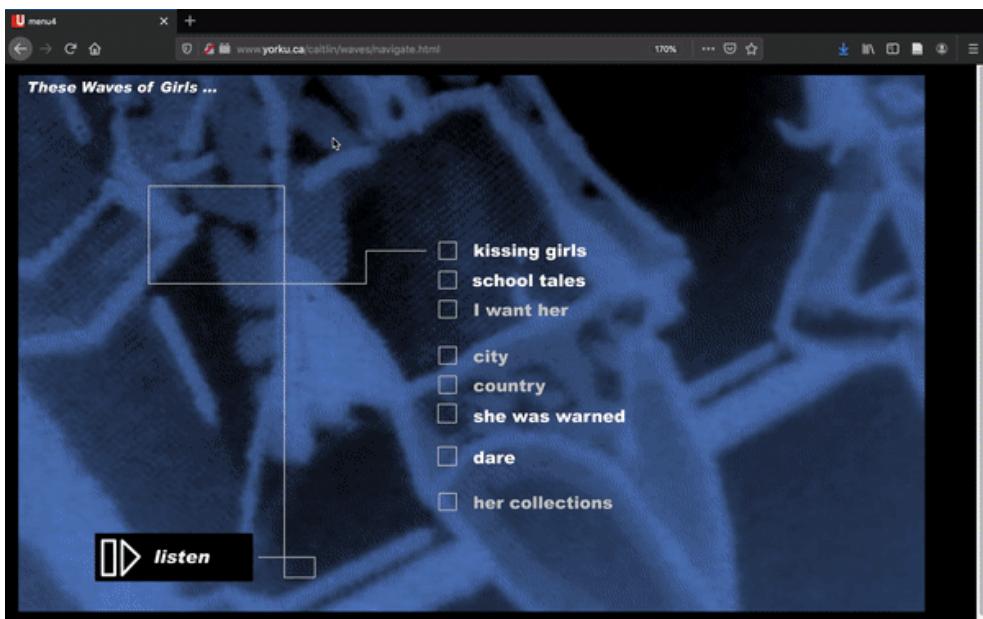


Figure 2: GIF of *These Waves of Girls*'s opening menu and one possible reading path.

In addition to dogging this deferral of narrative coherence, the reader also follows the narrator's elusive promise of sexual discovery. One highly eroticized scene, for example, uses linking to cast the object of Tracey's desire into doubt. Here, the 15-year-old Tracey performs a gymnastics "beam routine" for an older man:

'I don't want to have sex.' I say. 'Not with you.'

But then, not wanting to disappoint, 'I could do my beam routine.'

I take off my clothes and, fifteen, mount the line of the carpet to perform my entire junior beam routine, handstand press, two backhandsprings included.

He jerks off. Dismount.

I hurry into my clothes and head home to Vivian (who loves me, but not as much as I love her). For years I worry that the shoe salesman was really disappointed, stuck with a fifteen year old virgin gymnast rather than a real bad girl. ("Beamroutine8.htm")

The beam routine performance enacts a tension between touch and desire that drives not only the narrative story, but also the reader as she clicks her way through the links. The phrase, “I don’t want to have sex, not with you,” implies Tracey’s friend Vivian, to whom Tracey declares her love earlier in the episode—“Our third daiquiris arrive and, my hand hot on her waist, “I tell her I love her”—as the object of her desire (“beamroutine5.htm”). However, on the level of narrative form, desire’s referent is destabilized by the text’s associative structure. The link to the phrase, “I don’t want to have sex,” leads to a page about another love object, Jennie Winchester:

I’m in bed with Jennie Winchester and I realize she wants me to undo her pants.
She needs to be home by 11:00 and needs to leave my place by 10:45. I’m kissing her but opening my eyes at intervals to catch the clock. At exactly 10:43 I unbutton her Levis and shove my hand inside, barely undoing the zipper. “I’m in bed...” (“jennie_levis.htm”)

The assertion, “I don’t want to have sex,” and its direct link to Jennie and implied one to Vivian (both of whom are depicted as highly desirable partners elsewhere in the story) throws the object of Tracey’s desire into doubt. These unexpected links contribute to the disorienting experience of reading this story, where the reader continually loses context the farther she goes. On top of these associative disjunctions, the process of traversing the story on a physical level, in literally clicking through its various episodes, reinforces desire as a moving target, as something to be “grasped.” The hyperlinks throughout the work index this frustration, where the reader clicks through a story she will never fully grasp, to read about a desire that is never fully defined. This

confusion in navigating through *Waves*, in re-interpreting the same fragments within new contexts, characterizes desire as something slippery and elusive.

I open with this work because it illustrates a foundational assumption for this dissertation—that digital media abstracts complex elements of queer identity, desire, and experience in text into possibilities for formal analysis. In *Waves*, for example, where desire is distributed across a network structure, the network becomes a formal device for exploring queer desire. This text puts into practice post-structuralist principles about the destabilization and de-centering of literary narrative in a continually branching network that scrambles the reader’s sense of direction.¹ Despite this apparent disorder, however, movement across the text is highly constrained by standards that rule all network connections, what Alexander Galloway refers to as network “protocol.” Protocol operates mostly out of view, taking the form of technical standards like HTML (HyperText Markup Language) that control the connections between pages in the story. The tension between this controlling structure and the potential for free movement within it recalls a condition of the network in which, according to Galloway, “protocol is synonymous with possibility” (168). The same rules that determine movement throughout the network can also be used to subvert its expected behavior, to seek out what hackers call an “exploit.”

This project examines how digital media and formats constrain textual expressions of sex, sexuality, and gender. Then, I explore how these constraints might engage theories of power and modes of resistance from the field of Queer Studies. The network format as a controlling structure, for example, shares in similar principles that also influence the inception of Queer Studies in Judith Butler’s *Gender Trouble: Feminism and the Subversion of Identity* in 1990.

¹As George Landow points out in his seminal work on hypertext theory, theories of textuality by post-structuralists like Roland Barthes and Jacques Derrida have a lot to offer in the interpretation of hypermedia. For example, Derrida’s idea of “de-centering” and Barthes’s idea of the “readerly” versus “writerly” texts. See Landow.

Butler's famous critique of sex, gender, and sexuality as social constructions that precede and determine subjectivity rather than express it² lays the groundwork for Queer Studies' fixation with exposing social categories as forms where power circulates. It also inspires methods of resistance by seeking out exploits that manipulate the system's own rules against it. My work applies this energy—which is at once critical and creative—from Queer Studies to analyzing digital media and methods.

Queer DH

This work lies at the intersection of Digital Humanities (DH) and Queer Studies, in an emerging field called *Queer DH*. While much of DH scholarship is driven by what Stephen Ramsay describes as “the heightened objectivity made possible by the machine,” that is, social science methodologies that seek to test hypotheses and verify results, Queer DH emphasizes instead how digital tools and methods might productively complicate the stability and legibility of knowledge (x). In doing so, Queer DH projects generally take one of two approaches: the first imagines alternative digital tools that reflect the complexity and nuances of real-world objects and phenomena, while the second approach deconstructs and critiques existing tools, maintaining that queerness is inherent to computational logic.

The first approach often consists of speculative or critical making projects that do not work in a functional sense. Rather, these projects problematize the technological forms and formats, like data structures, programming logics, and interfaces, of technical objects. For example, Zach Blas and micha cárdenas's computer program, *transCoder*, contains programming functions

²Butler draws from Michel Foucault's deconstruction of power and its operations through “discourse,” demonstrating how what appears to be a repression of sexuality results in the codification of sexuality and its multiplication into various forms and discourses. See Foucault, Michel, and Robert Hurley.

inspired by Queer Theory, such as the “destabilizationLoop,” which “breaks apart any process that acts as a continuously iterating power,” and “nonteleo()” which “strips any program of a goal-oriented result” (“libraries.txt”). This project explores how a “cultural layer of queerness... acts upon and mutates mutually with the computer layer of algorithms, binary logic, data structures, code, software, and digitization” (“about.txt”). Another example of Queer DH is Kara Keeling’s call for an operating system, “Queer OS,” that “take[s] historical, sociocultural, conceptual phenomena that currently shape our realities in deep and profound ways, such as race, gender, class, citizenship, and ability... to be mutually constitutive with sexuality and with media and information technologies” (Keeling, “Queer OS”). Taking up Keeling’s call, Fiona Barnett et al propose tools that “[do] not yet exist and may never come to exist [... do] not yet function and may never function,” such as an interface that “disappears but is not naturalized,” and “promiscuous” applications that “move and interact across platforms, devices, users, and geographical regions unrestricted” (Barnett et al). This project, the authors explain, moves beyond the desire to understand the inner workings of technology:

While our queer impulse may be to explode this [black] box, to lay bare its inner workings in a gesture of radical revelation, this desire to access the truth of the machine in that hardware, those circuits, these gates and switches is rooted in a drive toward depth, essence, and resolution that is antithetical to a QueerOS... a more productive interface would be expansive, proliferating the relationality allowed for by the inter-face, its inter-activity, its nature as that which is between or among, that which binds together, mutually or reciprocally. (“Interface”)

Speculative projects like *transCoder* and “Queer OS” share a suspicion that the “drive toward depth” undermines the playful, elusive nature of a queer ethos.

Interested in depth, by contrast, another strand of Queer DH examines existing technological systems for the ways they engage queer concepts or methods of analysis. For example, work by Jacob Gaboury explores how “NULL” values in databases evoke a distinctly queer logic, a “refusal to cohere, to become legible.” In database computing, NULL values represent data that is missing but cannot be equated to zero. By indexing a presence of absence, the NULL enacts a “retreat from representation [that] sits at the heart of queerness” (Gaboury). Moving from the database to data formats, Textual scholar Julia Flanders explores the “queerability” of the TEI (Text Encoding Initiative), a “markup language” for adding descriptive tags to textual data. Flanders deconstructs the TEI’s data structure, a hierarchical, tree-like structure where elements “nest” within one another. Despite the rigidity of this format, which requires discrete data and strict labelling conventions, Flanders argues that it offers a possibility for dissent, for expressing “smooth” information, that is, non-discrete or blurry data, through nesting and customization. According to scholars like Gaboury and Flanders, it is from within the structuring logics of computer software itself that queerness finds the space to operate.

Cutting between these approaches, my project first takes a critical look at digital tools to seek out their constraints, specifically, the ways they reduce or collapse the complexity and nuance of queer identity and experience into computable components. Then, I experiment with how this reductive aspect might be manipulated to vitalize the details of queer identity and experience. Each chapter of my dissertation takes up a different constraint within programming logics and data structures and explores how this constraint can be re-deployed to reflect the

complex and ambiguous forms of queerness as theorized by Queer Studies. For example, in my second chapter on the TEI, or “text encoding,” I take the rigid and hierarchical format of text encoding framework as an opportunity to think productively about hierarchical power structures. In the careful and minute work of encoding a text, where each element is tagged within a document hierarchy, the editor grapples against the limitations of the compulsory categorization and containerization of data. Moving within and against the limitations of the document hierarchy, I borrow from historiographical methods and theorizing about recovery work. This close examination of text encoding allows me to make the connection between hierarchical data structures and totalizing power dynamics, rethinking my usage of the text encoding tool to foreground that which has been excluded from the system.

Constraint and Incommensurability

In seeking out the computational constraints of each tool, I unpack some common assumptions about software and data. The first assumption is that software is politically neutral, that it is used in similar ways or has the same effect on all individuals and groups. Rather, as my analysis attempts to demonstrate, software encodes social ideology, specifically, hegemonic ideas for handling and organizing difference. For example, Tara McPherson’s work traces how the computer’s operating system (OS), which supports a computer’s basic functioning, develops alongside 1960s and 1970s discourses on racial equality. She shows how “the organization of information and capital” in OS development resonates in the neoliberalist discourses that “distanc[ed] the overt racism of the past even as they contained and cordoned off progressive radicalism” (30). These systems, which partition and simplify complex processes into discrete components, evoke the ways that identity politics cordons off social groups into manageable

units, suggesting how “Certain modes of racial visibility and knowing coincide or dovetail with specific ways of organizing data” (McPherson 24). She offers an example with the guidelines for developing UNIX, the operating system that powers MAC and Linux computers:

Rule of Simplicity: Design for simplicity; add complexity only where you must.

Rule of Parsimony: Write a big program only when it is clear by demonstration that nothing else will do.

Rule of Transparency: Design for visibility to make inspection and debugging easier...

Rule of Representation: Fold knowledge into data so program logic can be stupid and robust. (26)

The rules of “Simplicity” and “Parsimony” ensure that programs will be composed of small, interlocking parts that can be easily updated and transported to newer versions, while the rules of “Transparency” and “Representation” flatten nuance, ambiguity, and “raw” data into legible forms. McPherson explains that these rules correspond to ideological values for partitioning and organizing difference so that components can be independently modified without affecting the whole system. Moving to 21st century computing, these ideologies spread into data gathering, surveillance, and quantification practices. As computational power grows, the emphasis on efficiency perpetuates social stratifications from previous eras. Ruha Benjamin asserts that “the road to inequity is paved with technical fixes,” where newer technologies reproduce bias and discrimination under the guise of objectivity and progressivism (7). Benjamin’s work surfaces

how innovations in tracking, labelling, and monetizing data extend racist paradigms into new tools, such as databases for financial services that associate “black names” with criminality (Benjamin 5).³ The assumption of neutrality obscures the principles driving tool development, as well as those who design and carry out those principles. Benjamin explains that, “bias enters through the backdoor of design optimization in which the humans who create the algorithms are hidden from view” (5-6).

In addition to neutrality, this dissertation unpacks an assumption about data, that it can be gathered or processed in a “raw” or unaltered state. Because data always undergoes a transformation from real-world objects and phenomena into electronic format (like CSV, JSON, and XML),⁴ some complexity and nuance is always compromised, and data structures represent data that has already been reduced in some way. As Johanna Drucker explains, each piece of data carries with it the result of many interpretive decisions. To highlight the reductions of data, a term that deceptively connotes that which is “given,” Drucker proposes thinking of data as “capta,” suggesting that which is captured or taken. Moreover, she argues, the visual display of data obscures its observer-dependant origins: “the graphical presentation of supposedly self-evident information... conceals these complexities, and the interpretative factors that bring the numerics into being, under a guise of graphical legibility” (par. 23). To dissolve these assumptions of raw data, Drucker experiments with turning graphical metrics like lines and bars on a graph from discrete entities into expressive forms that break, blur, or bleed into one another.

Working against assumptions of neutrality and rawness in software and data, I explore

³For more on blackness and tracking technology, see Browne, Simone. For more on the relationship between blackness and media, see Nelson, Alondra.

⁴ CSV, or “Comma-Separated Values,” is a tabular format. JSON, or “JavaScript Object Notation,” is a key-value pair format. XML, or “eXtensible Markup Language,” is a hierarchical, tree-like format.

ways for resisting power structures from within technological processes themselves. Here, I deploy queer methods of analysis to surface that which eludes capture or categorization. These methods seek out an incommensurable quality in queerness that cannot be defined or fixed, an idea which I draw from Latina Feminist philosophy, Chicana Studies, and Queer of Color Critique. I adopt this term “incommensurable” from Latina Feminist philosopher Ofelia Schutte, who defines it as “a residue of meaning that will not be reached in cross-cultural endeavors” (56). Drawing from feminist postcolonial and poststructuralist concepts of alterity and difference, Schutte theorizes moments of miscommunication and ambiguity as politically potent tools for cross-cultural communication. Schutte gives an example of how the incommensurable emerges in conversation:

In cross-cultural communication, each speaker may “say” something that falls on the side of the “unsaid” for a culturally differentiated interlocutor. Such gaps in communication may cause one speaker’s discourse to appear incoherent or insufficiently organized. To the culturally dominant speaker, the subaltern speaker’s discourse may appear to be a string of fragmented observations rather than a unified whole. (62)

Schutte proposes that one attend to gaps and elisions in communication, and to the ways in which “the other’s speech, or some aspect of it, resonates... as a kind of strangeness, as a kind of displacement of the usual expectation” (56). Within such failures in communication, where meaning does not transfer, incommensurability also manifests as a clash of meanings, in what Chicana theorist Gloria Anzaldúa describes as *el choque*, a bodily experience of collision

between two opposing forces. In the experience of the *choque*, “The ambivalence from the clash of voices results in mental and emotional states of perplexity... *de un alma atrapado entre el mundo del espíritu y el mundo de la técnica*” (Anzaldúa 78).

The point of isolating incommensurability is not to try to grasp or translate the vestige of lost meaning, but to recognize that gap as a space that constitutes queer experience and subjectivity. Moments of incommensurability, from Schutte’s subtle and strange gaps in communication to Anzaldúa’s tumultuous *choque* between opposing meanings, enable queerness to retain a quality of elusiveness. This elusiveness—which cannot be measured, which resists the capture of technological protocols and processes—creates space for new forms of identification and experience. According to José Esteban Muñoz, queer subjectivity is defined by working within the gaps of identification, what he calls “disidentification,” where subjectivity emerges in the failure to adhere to social expectations (*Disidentifications* 5).⁵ Within this gap, minority subjects find alternative pathways to connect with majority culture, “read[ing] oneself and one’s own life narrative in a moment, object, or subject that is not culturally coded to ‘connect’ with the disidentifying subject” (*Disidentifications* 12).

Queer Form

This dissertation poses the incommensurable qualities of queer identity and experience against the necessary disambiguation of technological processes. First, through digital methods like text analysis, text encoding, and media archaeology (discussed in more detail below), I seek out textual expressions of sex, sexuality, and gender that resist the transformation between

⁵Muñoz builds from Chicana theorists Norma Alarcón’s idea of “differential consciousness” and Chela Sandoval’s concept of emergent identities-in-difference, which center moments of failed interpellation as the core materials of subject formation, to a general paradigm of identity formation that he calls “identities-in-difference” (*Disidentifications* 6).

technical registers, that are constituted through lack or displacement. Then, I explore how digital tools might be reworked to engage with this resistance. To handle forms that resist this transformation, I combine the concepts of “deformance” from Digital Studies with “queer form” from Queer Studies. Deformance, coined by Jerome McGann and Lisa Samuels, describes the act of distorting, disordering, or re-assembling literary material, with the goal of estranging the reader from their familiarity of the text. McGann and Samuels explain that while electronic formats reduce complex literary elements into computable components, they also confront the reader with new opportunities for analysis. By continually subscribing the text to new configurations, digital tools can expose the semantic potentialities of the text’s latent aspects, a quality that McGann refers to as a text’s “quantum poetics,” explaining that, “Aesthetic space is organized like quantum space, where the ‘identity’ of the elements making up the space are perceived to shift and change, even reverse themselves, when measures of attention move across discrete quantum levels” (McGann 183). This project uses deformance to surface a text’s “queer form,” a term I borrow from Kadji Amin, Amber Jamilla Musser, and Roy Pérez to describe “an aesthetics that moves persistently around the visual,” “mak[ing] difference a little less knowable, visible, digestible” (235). Queer form, according to these theorists, “resist[s] the dictates of transparency normally required of non-normative subjects by illuminating the unseen” (233). My work seeks out such forms, ones that figure the contour, boundary, and edge around the elusive identities, repressed desires, and other coded elements of queerness in text.

My dissertation includes a digital component that demonstrates in practice how these tools reveal, not solutions for understanding or “fixing” queerness, but opportunities for exploring its shifting permutations. As a practical application of my research, this digital component, called the *Queer Text Toolkit*, explores the interpretive possibilities of text analysis and text encoding

procedures. Here, users can experiment first-hand with how reductive digital formats and processes, which collapse stylistic and formal expressions of gender, sex, and sexuality into computable data, can be redeployed toward creative exploration. The project consists of two applications, “queer distant reading” and “queer text encoding,” which correspond to my first two chapters on text analysis and text encoding, respectively. The “queer distant reading” application is a command-line application for text analysis procedures inspired by Judith Butler’s theory of gender performativity. Here, the process of “iterating” (or cycling) through the words in a text, which is central to text analysis tasks, draws from Butler’s formulation of gender as a series of repeated acts that destabilize binary structures of gender. The application consists of computer code (in the form of a Python module) containing scripts for loading, cleaning, and analyzing the text, which builds from existing software for Natural Language Processing and network analysis. The second application in the toolkit, “queer text encoding,” offers an interactive and beginner-friendly Text Encoding Initiative (TEI) workflow for “marking up” homoerotic content in text. Here, a website interface encourages readers to think productively about the limitations of “semantic markup” (a method for labelling or tagging textual data) and how its protocols engage with critical debates about recovery work. It consists of a JavaScript-based web application containing a transcribed and encoded manuscript of a portion of Oscar Wilde’s *The Picture of Dorian Gray*, which Wilde edited in part to remove suggestions of homoeroticism.⁶ Aimed at an audience of humanist scholars at the beginning of their technical training, the Toolkit lowers the barrier to entry for educators and students using digital tools to analyze queer literature. The fourth and final chapter of my dissertation explains the technical

⁶ See Lawler, Donald L. *An Inquiry into Oscar Wilde's Revisions of the Picture of Dorian Gray*. Garland Pub, New York. 1988; Wilde, Oscar, and Nicholas Frankel. *The Picture of Dorian Gray: An Annotated, Uncensored Edition*. Cambridge, Mass., Belknap Press of Harvard University Press, 2011; Wilde, Oscar, and Joseph Bristow. *The Complete Works of Oscar Wilde*. Vol. 3. Oxford, Oxford University Press, 2000.

components of these tools and situates them within their larger theoretical interventions.

Chapter Trajectory

The first three chapters—the main written portion of my dissertation—follow a thread within the field of Queer Studies that increasingly grapples with the role of embodiment, and particularly of racialized embodiment, in theorizing queer identity and experience. My first chapter on text analysis considers early formulations of queerness as a discursive phenomenon, exemplified by Judith Butler's theory of gender performativity, which was heavily critiqued for eliding the lived realities of queer embodiment. My second chapter, on text encoding, weighs critical approaches from textual scholarship and queer historiography against the archive of slavery for the ways each handle absent or obscured elements of the archive. This chapter marks a turning point in development of Queer Studies with the emergence of Queer of Color Critique, where race becomes a necessary component to any theorization of sexuality, and gender. Energized by Black and Chicana Feminist thinking that powers much of Queer of Color Critique, my third chapter then embarks on a close reading of electronic materiality to explore the role of sensuality in both racialization and pleasure.

My first chapter, “‘A Melon, an Emerald, a Fox in the Snow’: Quantifying Gender in Virginia Woolf’s *Orlando: A Biography*,” examines how computational text analysis or “distant reading” grapples with gender ontology in Woolf’s novel, *Orlando*, which features a transgender protagonist. The chapter begins by tracing how the adoption of quantitative methods to analyze gender in Literary Studies effectively reproduces assumptions of gender as binary. I contrast this “reproducible” approach with more experimental ones that use quantitative methods to deconstruct social categories of gender and race. Drawing connections between computer

programming and gender theory, I delve into the Python programming language, focusing on the principle of iteration that drives text cleaning tasks, as well as the transformation of words into numerical representations, with the goal of bringing out the repetitive processes required for the quantitative analysis of text-based data. I then move to Judith Butler’s concept of gender performativity, which posits how gender expression might subvert traditional social structures through repeatedly “performing” gender constraints in ways that deviate from the norm. Taking this shared quality of iteration between Python and gender, I propose a text analysis methodology that interweaves, or iterates through, distant and close reading. Turning to Woolf’s text, I demonstrate how this method of text analysis yields a plurality of significations for gender terms in the novel, revealing how language and gender are closely coordinated in the narrative. I conclude by considering the limitations of this method, which poses gender as a discursive phenomenon, and its place within a larger trajectory of Queer Studies since Butler’s text, which inaugurated the field.

My second chapter, ““Where there is Spectacular Passion, they would Suggest Something Vile’: Encoding Queer Erasure in Oscar Wilde’s *The Picture of Dorian Gray*” explores the Text Encoding Initiative (TEI) standard, an editorial schema for “marking up,” or tagging, textual elements in electronic format, to encode the homoerotic elements that Wilde edited and repressed during his revisions of *Dorian Gray* (1890). My analysis in this section finds that the TEI works best with data which is discrete and bounded, rather than “smooth” data, that is, data that blends or blurs with elements around it. Like my critique of text analysis, this computational constraint reveals a connection to queerness: As a labelling tool, the TEI indexes moments where queer themes, which are plural and permeable in this text, threaten to spill over the bounds of the data structure. I close the main portion of the chapter by proposing a custom editorial workflow that

encourages editors to tag homoerotic elements in a way that surfaces some of their elusiveness. Finally, in the chapter's conclusion, I delve deeper into the mutually reinforcing nature of dominance structures across data formats and text encoding practices. Here, I draw from Queer of Color Critique and Black Feminist scholarship to energize a radical re-thinking of editorial practices. I close by highlighting examples of current TEI projects that deploy collaborative and minimalist practices to challenge the structuring modes of textual editing and the TEI data format.

Whereas the first two chapters are about deconstructing digital tools for text analysis and text encoding, my third chapter, "Sex, Flesh, Skin: A Media Archaeological Reading of *Dawn* and *skinonskinonskin*" engages a close reading of electronic literature. This chapter juxtaposes two unlikely texts—a hypertext work from 1999, *skinonskinonskin* by *Entropy8Zuper!*, and a science fiction novel from 1987, *Dawn* by Octavia Butler—to unpack the role of media and mediation across technological and physiological systems. Though these works present vastly different narrative worlds, not to mention physical formats, they both trouble the boundary between materiality and abstraction, in one case through stacks of computer hardware and software, and in another through depictions of bodily and mental processes. My analysis takes the concept of materiality, expressed in both hardware and human flesh, as a ground for understanding how physical registers interact with symbolic ones. Drawing from thinkers in Chicana Studies and Black Feminist Studies, I explore how attention to sensuality across media environments can suggest new forms of social relation.

Moving from discursivity to embodiment, my analysis highlights moments of incommensurability in queerness to energize the search for new forms. Queerness, as Muñoz argues, is "not yet here," but perpetually on the horizon (1). At the end of my project, queerness

remains a target beyond reach, a fount for future subversions, exemplified by the term “queer” itself, which Butler famously says is “never fully owned, but always and only redeployed, twisted, queered from a prior usage and in the direction of urgent and expanding political purposes” (173). Emphasizing the nebulous and shifting nature of this term, this work thus offers an approach for studying queer texts which cannot be subscribed to a general methodology. The goal, as I try to demonstrate with the *Queer Text Toolkit* application, is not to build reproducible schemas and models for analyzing queerness. Rather, it is to harness the opacity and unintelligibility of queer forms. My project posits queer form as a technology of resistance, as resources for resisting inclusion into what Muñoz describes as “the ossifying effects of neoliberal ideology” (22). I hope this experimental work will encourage further developments for reading our queer literary heritage, that, as Butler says, “begin, without ending, without mastering, to own—and yet never fully to own—the exclusions by which we proceed” (25).

CHAPTER ONE

“‘A Melon, an Emerald, a Fox in the Snow’: Quantifying Gender in

Virginia Woolf’s *Orlando: A Biography*”

Introduction

The novel *Orlando: A Biography* (1928), by Virginia Woolf, famously opens with an assertive gender designation followed by an immediate qualification: “He—for there could be no doubt of his sex, though the fashion of the time did something to disguise it—was in the act of slicing at the head of a Moor which swung from the rafters” (11). When performing quantitative text analysis on this text, a fictional biography of a 16th-century English nobleman who undergoes a sex change, the standard tasks of “pre-processing” evacuate the ways that gender is complicated in this sentence. In order to perform quantitative analysis, a process which involves calculating and visualizing textual patterns, the text must first be transformed into a computable format.⁷ This task of pre-processing (also called “cleaning” or “normalizing”) strips the original text of capitalized words, punctuation, “stop words” (such as articles and prepositions), and inflections in word endings, all of which are deemed to be semantically minor, and would affect the analysis of more substantial features like nouns, verbs, adverbs, and adjectives. Afterward, the following list of words, or “tokens,” remain in the first sentence:

⁷ Text analysis borrows from Natural Language Processing and Machine Learning methods to do analyses like Topic Modeling, Sentiment Analysis, and Logistic Regression (discussed below). Though these methods differ in important ways, they share in basic tasks of counting and classifying words and other textual elements with the goal of predicting and visualizing patterns in text.

'could', 'doubt', 'sex', 'though', 'fashion', 'time',
'something', 'disguise', 'act', 'slicing', 'head',
'moor', 'swung', 'rafter'.

“Cleaning” this text not only strips it of its pronouns, including the gender assertion in the first word, “He.” It also cuts the em dash immediately following this “He,” which signals the entrance of the narrator and his conspicuous certitude: “—for there could be no doubt of his sex....”

This chapter examines how quantitative text analysis works to analyze gender by using Woolf’s *Orlando* as a test case. It explores an experimental approach to text analysis that deconstructs gender binaries by drawing connections between computer programming and gender theory. This analysis emphasizes the principle of *iteration*, central to both text analysis and gender theory, with current “reproducible” methods in quantitative analysis. It concludes by proposing a text analysis procedure that iterates through “distant” and close reading gender terms in *Orlando*, and considers the limitations of this method within the larger trajectory of Gender Studies.

The Fantasy of the Falsifiable

Because computers can process hundreds of texts at a time, “reading” at much faster rates than humans, they attract critics like Franco Moretti, Matthew Jockers, and Ted Underwood who pose ambitious questions about literary history. Moretti, for example, explains that quantification reduces textual complexity to open up its potential for its analysis: “fewer elements, hence a sharper sense of their overall interconnection” (*Graphs* 1). This approach toward quantification represents what I call the “fantasy of the falsifiable.” Leaving aside critiques of Moretti, particularly in light of the credible allegations of harassment and assault by graduate students

(see Lauren F. Klein, “Distant Reading After Moretti”),⁸ I want to focus on Moretti’s early essay “The Soul and the Harpy” (1983), which lays out his reasoning for developing a new methodological approach for literary criticism. Moretti in this essay betrays a deep suspicion about the analytical practices in contemporary literary criticism that “multiply, rather than reduce, the obstacles every social science encounters when it tries to give itself a testable foundation,” and the literary critic, “whose only pleasure lay[s] in contemplating his own reflection,” like Narcissus (“Soul” 22, 14). Moretti proposes an alternative methodology, a “falsifiable criticism,” that grounds the critical process in hypotheses to “test” literary interpretations (“Soul” 21). *Falsifiable* here means verifiable, pursuing answers that are “coherent, univocal, and complete” (“Soul” 21). The goal, according to Moretti, is for literary criticism to reach irrefutable conclusions: “The day criticism gives up the battle cry ‘it is possible to interpret this element in the following way,’ to replace it with the much more prosaic ‘the following interpretation is impossible for such and such a reason’, it will have taken a huge step forward on the road of methodological solidity” (“Soul” 22).

Moretti’s falsifiable criticism eventually develops into “distant reading,” a critical method that involves posing hypotheses, assembling and analyzing data, making inferences, and occasionally, reframing the original hypotheses. For example, when studying the effect of market forces on titles of English books published between 1740-1850, Moretti finds an interesting relationship between the size of the market and the length of titles: “As the market expands, titles contract; as they do that, they learn to compress meaning” (204). When explaining his process, however, his word choice diminishes the interpretive moves he makes throughout his critical

⁸ In the wake of the #metoo movement in 2017, three graduate students accused Moretti of harassment and assault. Stanford university claimed to be reviewing the case with no formal proceedings or other action being taken. See Liu, Fangzhou and Hannah Knowles.

analysis:

first, I describe a major metamorphosis of eighteenth-century titles, and *try to explain* its causes; next, I *suggest* how a new type of title that emerged around 1800 may have changed what readers expected of novels; and finally, I *make a little attempt* at quantitative stylistics... (181-2; emphasis mine)

The word choices here repeatedly understates the interpretive moves Moretti makes at each stage of his analysis. As Stephen Ramsay points out, Moretti tends to present his insights as an objective description of reality, which is reinforced by the presence of graphs and other visualizations. It is as if “data is presented to us... not as something that is also in need of interpretation” (Ramsay 5).

Ironically, this faith in falsifiable criticism gets its strongest expression in a famous detraction by Nan Z. Da, who argues that quantitative methods, trading “speed for accuracy, and coverage for nuance,” reveal a “fundamental mismatch between the statistical tools that are used and the objects to which they are applied,” (620, 601). Da emphasizes her point with an experiment in “Topic Modeling,” a machine learning method that generates a number of “topics,” or keywords, from large collections of text. Da attempts to verify the results of a topic modelling experiment by replicating the process on her own computer, but she fails to produce the same results and concludes that the method is ineffective. However, as Ben Schmidt explains, the difference in her results is an effect of the different technical specifications that Da uses to run her experiments. Additionally, he points out that, “Far more than anyone I’ve seen in

any humanities article, she asserts that scientists do something arcane, powerful, and true.⁹

Despite their vastly different views on the role of quantitative methods for studying literature, Da and Moretti appear to agree that these methods ought to provide results that are, at the very least, reproducible.

Interested in the interpretive possibilities of quantification, Ted Underwood explores what he calls “perspectival models” of literary data. Underwood explains that “Machine learning algorithms are actually bad at being objective and rather good at absorbing human perspectives implicit in the evidence used to train them” (“Machine Learning and Human Perspective” 92). To demonstrate how a model can absorb perspectives on gender, Underwood trains an algorithm with character descriptions tagged by the character’s gender, so that the algorithm “learns” what words are typically associated with women and which words are typically associated with men. At the end of this training process, the resulting model can then predict the gender of characters in new text. Dan Sinykin explains that this method, called “perspectival modelling,” because it represents a single perspective of the data, enables Underwood “to leverag[e] the human prejudices built into modeling toward humanistic ends” (par. 4). In another example, Underwood uses a logistic regression algorithm to calculate and visualize the terms typically associated with gender in books by men and books by women (See Figure 3). Here, each axis represents a different perspective on gender: the top half of the graph represents words written by women, and the bottom half by men, with positive numbers signifying overrepresentation of words to describe women, and negative numbers signifying overrepresentation of words to describe men.

⁹ Schmidt rightly points out that Da uses different parameters and software to run her Topic Models, which explains the discrepancy in results. For a more thorough critique of Da’s aims and methodology in this article, please see Ben Schmidt’s “A Computational Critique of a Computational Critique of Computational Critique.” *Ben Schmidt*, Dec 5, 2019. https://benschmidt.org/post/critical_inquiry/2019-03-18-nan-da-critical-inquiry/

Underwood explains that, “I needed a simple picture, frankly, in order to explain how a quantitative model can be said to represent a perspective” (“Machine Learning and Human Perspective” 98).

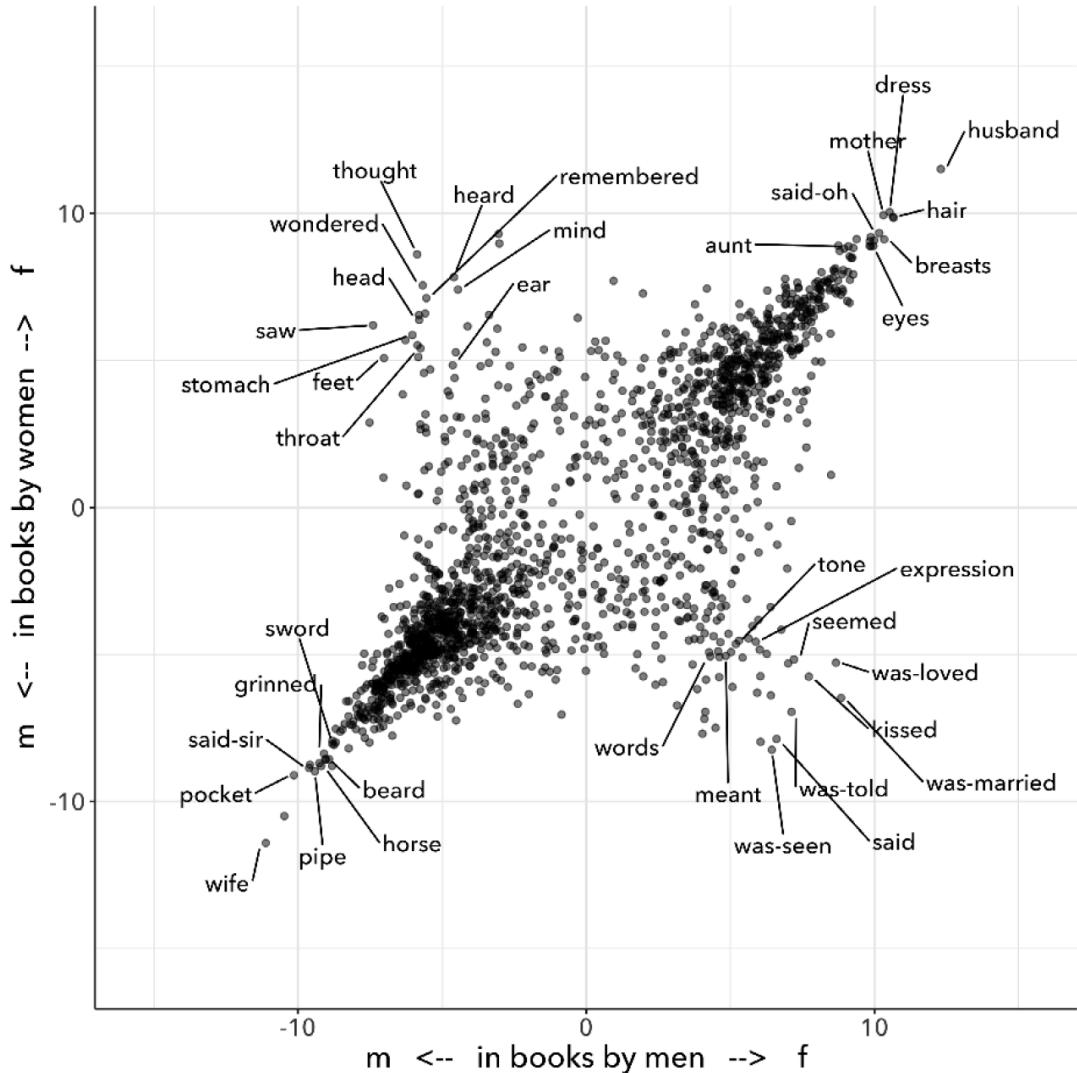


Figure 3: Underwoods logistic regression model. The terms on the left side of the graph describe men, with the top-left corner and bottom-left corner denoting books by male and female authors, respectively. The terms on the right side of the graph describe women, with the top-right corner and bottom-right corner denoting books by female and male authors, respectively. On each axis, positive numbers indicate that a word is overrepresented in descriptions of women and negative numbers indicate that it is overrepresented in descriptions of men.

Underwood’s methodology, however, can only reinscribe the binary that he wants to historicize. Here, he uses logistic regression analysis, a binary classification algorithm that

makes predictions on a scale from 0 to 1. The problem is that Underwood's choice of algorithm reifies gender as either/or, in other words, as an opposition, which Underwood admits himself when he says that "gender theorists will be frustrated by the binary structure of the diagram" ("Machine Learning" 98). Here, the concept of femininity is deliberately consolidated and computed against that of masculinity, which is precisely the purpose of a binary classification algorithm—to collapse all possible answers between a scale of yes/no. Feeding gender terms into such an algorithm effectively reinforces this binary.

There are good reasons for using computational methods to historicize gender as a binary system, but in my view, this approach overlooks the potential of computational methods to surprise us. These methods might instead harness what Ramsay describes as "the objectivity of the machine," to destabilize the existing categories (x).¹⁰ For example, work by critics like Susan Brown, Laura Mandell, Richard Jean So, and Edwin Roland apply distant reading methods toward deconstructing social categories like gender and race. Brown and Mandell explain that, "The goal is to acknowledge the subjective effects of belonging to an identity constituted historically through oppression without believing that the identity itself exists independently from historical conditions" (Mandell and Brown 6).¹¹ This position places computational methods within a discursive frame, aligning it with debates from post-structuralist feminist theory that explore and provoke the representative capacities of language. For critics like Brown and Mandell, the computer becomes a tool for exploring how language constructs (and can

¹⁰ In his book *Reading Machines*, Ramsay draws from the deformative critical methods of Jerome McGann and Lisa Samuels to harness the enabling constraints of computation that "unleash the potentialities" of the text, offering opportunities for new readings (33).

¹¹ In their introduction to *The Journal for Cultural Analytics*'s "Identity Issue," Brown and Mandell situate feminist debates around identity politics as a necessary context for understanding how computational processes engage gender identity.

deconstruct) social categories.

The quantitative analysis of gender, Mandell explains, typically “present[s] conclusions about ‘male’ and ‘female’ modes of thinking and writing as if the M/F terms were simple pointers to an unproblematic reality, transparently referential and not discursively constituted” (par. 5). Mandell’s examination marshals key findings from feminist theory, drawing from Judith Butler, among others, to assert that gender is “constructed both by the measurer and the measured” (par. 38). To deconstruct gender, Mandell turns to genre, another category which will allow scholars to see the reductive constitution of categories generally. Here, Mandell uses the popular stylometry measurement, “Burrow’s Delta,” which visualizes the “distance” between writing styles by creating branches (or “deltas”) between different texts. She finds that the stylistic qualities of a female writer, Mary Wollstonecraft, shares with those of comparable male writers: “Wollstonecraft’s sentimental anti-Jacobin novels most resemble [William] Godwin’s sentimental anti-Jacobin novels... whereas her essays most resemble [Samuel] Johnson’s writings” (par. 29). Drawing gender into conversation with genre, Mandell creates categories such as “‘men writing as men,’ ‘women writing as women,’ ‘women writing as men,’ ‘men writing as women,’ ‘unspecified (anonymous) writing as men,’“ and so on (par. 35).

Just as quantification can be harnessed to deconstruct the M/F binary, so it can deconstruct what Edwin Roland and Richard Jean So describe as “the machine’s initial binary understanding of race” (68). Roland and So deconstruct racial categories by experimenting with an algorithm that evaluates an author’s race based on diction. Analyzing a large corpora of novels by white and black authors, they find that black authors generally display more varied vocabulary than white authors (66). From this result, they infer that white authorship, as a category, only coheres against the variance of black authorship. Whiteness, in other words,

depends on the characterization of blackness.

This quantitative exercise points Roland and So toward a peculiarity in the results: that the algorithm wrongly categorizes James Baldwin's novel *Giovanni's Room* (1956) as being written by a white author. This misclassification is attributable to the use of a single word, "appalled," which the computer mistakenly reads as proof of white authorship. Going back to the text, Roland and So discover that this term occurs only once, in an early scene where the narrator David describes his strained relationship to his father: "I did not want to be his buddy. I wanted to be his son. What passed between us as masculine candor exhausted and *appalled* me" (Rpt. in Roland, So 71; emphasis mine). Noting the connotations of whiteness in "appalled," which has the middle French root, "apalir," meaning "to grow pale," Roland and So posit that this term suggests a relation between gender and race: "the moment David develops a troubled relationship to normative masculinity [as] also the moment he becomes 'white'" (71). They point out that the computer's misclassification reinforces this text's notorious elision of explicit references to race, whereby racial markers are displaced for an implicit whiteness, as critics have observed in the scholarship on this novel. Taking the computer's mistake as a starting point for analysis, Roland and So thus contribute to the ongoing debate about the complex relationship between gender and race in the novel.

Because race is a social construct, and machines only impute meaning that is encoded into them, Roland and So reason that machines are ideal instruments for studying the construction of race (60). In direct opposition to the "falsifiable" position advanced by Moretti and others, the machine's error surfaces a yet unexplored aspect related to race, that of sexuality:

Our reading's destabilization of the machine's logic of white and black arises directly from the novel's expression of queerness. By queering the machine's color line, Baldwin's novel challenges our initial classifications of the novels as white or black, which had necessarily effaced a more sophisticated, intersectional view of social identity. In their current form, our data and model are not robust enough to handle this kind of intersectionality. (72)

Like Mandell, So and Roland use computational methods to destabilize, rather than reify, binary categories like male/female, or white/black. In this case, a single computational error opens a site for speculation about how whiteness suggests a troubled understanding of sexuality, where queerness might articulate with race.

Iteration

Mandell asserts that both gender and genre “are… highly imitable,” so that “anyone can adopt gendered modes of behavior, just as anyone can write in genres stereotypically labeled M/F” (par. 30). While this interpretation echoes a common misunderstanding of Butler’s theory (explained further below), gender performativity remains a useful heuristic for quantitative text analysis. First, the common misreading of Butler’s theory is that gender performativity denotes an act or series of acts that can be imitated at will.¹² Rather, as Butler emphasizes in her follow up book, *Bodies that Matter: on the Discursive Limits of Sex* (1996), performativity is a

¹² In *Gender Trouble: Feminism and the Subversion of Identity* (1990), Judith Butler famously disrupts two essentialist views of sex and gender in contemporary feminist thought: first, that sex is biological while gender is constructed; and second, the gender, as a construction, is a self-expression of the subject. According to Butler, there is no such thing as a subject that exists prior to gender expression, as a subject only comes into being by participating in a gender norm.

compulsory process that precedes and constitutes subjectivity—it is a mechanism through which the subject can emerge: “a process of reiteration by which both ‘subjects’ and ‘acts’ come to appear at all” (*Bodies* xviii). Butler here makes the argument for gender as purely discursive, where what is experienced as the physical body, from sex to sexuality, only materializes through the repetition of gender norms in which each act signals a prior, authorizing norm.¹³ This thread of discursivity, and its implications within a larger trajectory of Queer Studies, is picked up again in this chapter’s conclusion.

To better understand performativity as a discursive phenomenon, it is helpful to situate Butler’s work within the context of second-wave feminism and its deconstruction of gender binaries. Here, Butler draws from the work of feminist theorist Luce Irigaray, who asserts that influential Western thinkers like Plato, Aristotle, and Freud have defined femininity “on the basis of masculine parameters” (Irigaray, *The Sex Which Is Not One* 23).¹⁴ Irigaray argues that the association of “woman” with “matter” (associated to binaries such as “rationality/emotion” and “mind/body”), and its subordination to male “form” erases the possibility of representing woman at all. Rather, this binary “produces the feminine as that which must be excluded for that economy to operate” (Butler, *Bodies* 10). This “domesticated” feminine term contrasts with the excessive feminine, the “necessary outside” of the domesticated feminine (which is also its

¹³ Common critiques of Butler point out the limits of this theory for posing gender and sexuality as discursive. From the field of Trans Studies, Jay Prosser problematizes Butler’s “deliteralization of sex,” a critique that he applies to Queer Studies more generally. Prosser explains that because Butler’s analysis attends to performativity as a discursive phenomenon, it elides the real-world concerns of the body’s materiality. Prosser offers the example of Butler’s reading of *Paris Is Burning*’s Venus Xtravaganza who, Butler argues, occupies a space of transgression due to her inability to attain her sex change. According to Butler, a sex change that would “make [her]self complete” would also fulfill the desire for a masculine body would reinscribe heterosexual hegemony (45). Prosser points out that this reading fails to reckon with the material body and its precarious existence, as Venus’s death illustrates (55). Butler’s “metaphorization of the transgender body” demonstrates one crucial way that Queer Theory has subsumed, without fully accounting for, transgressive desires in cross-gendered identifications.

¹⁴ Irigaray here critiques Jacques Derrida famously defines as “phallogocentrism,” the idea that man, symbolized by the phallus, is the center and focus of knowledge.

enabling condition), that creates a “field of disruptive possibilities” (Butler, *Bodies* 13).

However, Butler points out, this “unspeakable” element cannot be invoked directly without subscribing itself to the ruling structure (*Bodies* 12).¹⁵ She asks, “how can one read a text for what does *not* appear within its own terms, but which nevertheless constitutes the illegible conditions of its own legibility?” (*Bodies* 11). This question—how to express what is not there, what is refused by the system of the visible—leads Butler to her theory of gender subversion.

For Butler, subversion begins by questioning the origin of linguistic signification. She wonders, “Can language simply refer to materiality, or is language also the very condition under which materiality may be said to appear?” (*Bodies* 6). Butler finds that, in order to refer to a body, language must first assume a body. Therefore, she reasons, the signification of the body actually creates the body which it appears to reference: “signification produces as an *effect* of its own procedure the very body that it nevertheless and simultaneously claims to discover as that which *precedes* its own action” (6). This reasoning leads Butler to a major realization: “the mimetic or representational status of language.... is not mimetic at all. On the contrary, it is productive, constitutive, one might even argue performative” (*Bodies* 6). If language produces the reality that it seems to merely reference, it means that subjects are always interpellated, and in fact brought into subjectivity, by a discourse prior to their participation in it.

Within this regulatory structure, this significatory circle, lies the possibility of resistance by *resignifying* meaning. Because language does more than represent, because it works to produce meaning, language can be resignified toward subversive usages by “citing” what Butler

¹⁵ Irigaray’s concept of the “necessary outside” seems to anticipate another popular critique of Butler’s theory, from the field of Political Philosophy, which claims a logical inconsistency in Butler’s theorization of subjectivity. If the resistance to signification comes from outside the cycle of signification, does this not imply a pre-discursive identity or at least desire for resistance? Geoff Boucher writes that Butler locates the potential for subversion “in a disembodied intentionality that appears to stand outside of the culturally-scripted subject positions that the individual occupies” (115).

calls a “repudiated” meaning. Butler offers the famous example in the resignification of the term “queer,” which has been transformed from a term of abjection to one of empowerment. “Queer” is resignified when it harnesses its own repudiation, which is an implied but “disavowed abjection [that] will threaten to expose the self-grounding presumptions of the sexed subject” (*Bodies* 3). In other words, the term “queer” implicitly draws from this domain of abjection which is repudiated by heterosexuality. Butler proposes that one “consider this threat and disruption... as a critical resource in the struggle to articulate the very terms of symbolic legitimacy and intelligibility” (*Bodies* 3). By citing the repudiated meaning, the term “queer” “resignify[es] the abjection of homosexuality into defiance and legitimacy” (*Bodies* xxviii).

Here, repetition is key, enabling the introduction of what is external to the binary into the system. Turning back to Irigaray’s writing, Butler explains that Irigaray achieves this resistance by “mim[ing] philosophy... and, in the mime, tak[ing] on a language that effectively cannot belong to her” (Butler, *Bodies* 12). Irigaray undermines authority through repetition, by “cit[ing] Plato again and again, but the citations expose precisely what is excluded from them, and seek to show and to reintroduce the excluded into the system itself” (Butler, *Bodies* 18). Irigaray displaces the logic of phallogocentrism by introducing something external to the system while simultaneously remaining within its terminology. Butler simulates Irigaray’s thought process:

I will not be a poor copy in your system, but I will resemble you nevertheless
by miming the textual passages through which you construct your system
and showing that what cannot enter it is already inside it (as its necessary
outside), and I will mime and repeat the gestures of your operation until this

emergence of the outside within the system calls into question its systematic closure and its pretension to be self-grounding.” (*Bodies* 18)

Through repetition, deception emerges from resemblance, and insubordination through subservience. The key is iteration, a continual miming of the authorizing norm.

Turning from gender to computation, I examine how iteration also emerges in the Python programming language as it is used for computational text analysis. In what follows, I surface how iteration operates in a central way for doing text analysis. Here, I will deconstruct Python syntax for cleaning and analysis tasks. Then, I will demonstrate how this quality of iteration can be emphasized and redeployed to analyze gender.

At a very basic level, much of text processing with the Python programming language consists of “iterating” over words in a text. The Python programming language handles text data in the form of words, or `strings`, contained within groupings called `lists`. A text analysis program will iterate over, or go through, each string in the list to perform a task. The `for loop`, a common construct for iterating through lists, repeats a single action to each string within the list. Most of text analysis consists of “looping” through bits of text and performing actions to standardize the text for analysis. These actions include tokenizing, cleaning, and regularizing. The first step, tokenizing, means separating the strings in the text into workable units, or `tokens`, that are easier to clean and regularize. Once the text is tokenized, it can be stripped of capital letters, punctuation, and what are called “stop words,” which consist of prepositions, articles, pronouns, and auxiliary verbs. The goal of pre-processing is to eliminate words or punctuation that will skew the results of analysis due to their high frequency and low semantic value in comparison to nouns, verbs, and adjectives, and adverbs. The task of pre-processing text forces words into existing boxes, so to speak, stripping any significance

conveyed by capitalized words, rhythms of language in stop words, inflections in word endings, and so on. Nonetheless, these reductions are a necessary trade-off in order to make the text more amenable to quantitative analysis.

Below is an example of a `for` loop that “iterates through,” or cycles through, the words in text with the goal of filtering out punctuation and transforming any capital letters into lowercase forms:

```
clean = []

for word in text:

    if word.isalpha():

        normalized.append(word.lower())
```

Here, the loop begins by creating an empty list, `clean`, where words will be dropped after passing the filters below. The next line begins the `for` loop, which iterates through each word in the `text`. The third line, an `if` statement is a conditional that checks if the word is comprised of only alphabetic character. If the word fulfills this condition, then it passes to the fourth line, which adds that word to the `clean` list. When the word is added to the list, its letters are transformed into lowercase format with the `lower()` function. The final list, therefore, will only contain alphabetic and lowercased letters.

The next step is removing stop words. Here, I use another loop:

```
no-stops = []

for word in cleaned:

    if word not in stops:
```

```
no-stops.append(word)
```

This expression takes each word in our cleaned list, and checks to see if that word is also contained in a list of stop words, that is, words like articles, prepositions, and auxiliary verbs. If the word is *not* a stop word, then it will be added to a new list, no-stops. Running the first sentence of text *Orlando* through the loop will return the following list of words:

```
[ 'could', 'doubt', 'sex', 'though', 'fashion', 'time',
  'something', 'disguise', 'act', 'slicing', 'head', 'moor',
  'swung', 'rafters' ]
```

The next (and final) step of cleaning involves stripping word inflections to get the root. Here, there are two possible choices, which differ in how much computational processing each requires. The first one, called “stemming,” simply cuts the endings from the word. For example, “rafters” will be stripped to “rafter.” What this method gains in speed, however, it loses in precision, and can sometimes alter part of the word root, such as “berries,” which would become “berri.” The other possibility, called “lemmatizing,” involves looking up each word, one by one, in a dictionary to find its appropriate root, or “lemma.” Though it takes more time, this process is useful to handle words like “berries,” and also more complex plural forms, like “children” and “teeth.” Below is the code for lemmatizing the text, which uses the “WordNetLemmatizer” to lookup the individual lemmas for each word:

```
lemmatized = []
for word in no-stops:
```

```
lemma = WordNetLemmatizer().lemmatize(word)
lemmatized.append(lemma)
```

After lemmatizing, the text is ready for analysis. A good first step is to begin by searching the immediate words that surround the target word, in this case, the word “woman.” Here I use a function from the Natural Language Toolkit, or NLTK (a popular Python program for text analysis), called `concordance()`, which displays the context surrounding a given word.

Below are the results for the words surrounding “woman” throughout the *Orlando*:

Displaying 15 of 187 matches:

ty manly charm quality old woman loved failed growing old w
en without knowing perhaps woman heart intricate ignorance
indow pulled among cushion woman laid worn old made bury fa
red dyed cheek scarlet old woman loved queen knew man saw o
finger swore vilely master woman scarcely le bold speech le
ment panic twelve poor old woman parish today drink tea ton
perverse cruel disposition woman broke engagement night eve
verladen apple old bumboat woman carrying fruit market surr
embassy figure whether boy woman loose tunic trouser russia
ed stared boy ala boy must woman could skate speed vigour s
me standstill handsbreadth woman orlando stared trembled tu
d asked tumult emotion old woman answered skin bone trulls
and longer full prying old woman said stared one face bump
save sea bird old country woman hacking ice vain attempt d
ce melt heat pity poor old woman natural mean thawing must

This context window around the usage of “woman” in the text, which only shows its first fifteen occurrences, reveals a text that has been stripped of punctuation, capital letters, prepositions, articles, pronouns, auxiliary words. What remains is largely nouns, verbs, and adverbs. Most of text analysis consists of counting these remains. For example, from these contexts surrounding the target word, another function, called `similar()` can then infer words that tend to be used in similar contexts. To compute the results of `similar()`, the program first takes the context of the target word from `concordance()`, then it searches the text for other terms which contain the same surrounding words. The result for running `similar` on the word “woman” is the following:

```
man moment night boy word world child pen ship door one  
room window light little lady table book queen king
```

By searching the text for words that appear in similar contexts to the chosen word, this method might reveal words that have an obvious relation to the target word, such as “lady” or “queen” for woman. It is important to point out, however, that the computer does not impute meaning to the words. Rather, it only counts each word as a string, that is, as a piece of data composed of alphanumeric sequences. Behind the scenes, the program has a list of how many times each string appears near every other string in the text. It takes the string “woman,” for example, then counts all of the strings in proximity to “woman.” Then, it searches for other words that tend to have similar strings in proximity.

Basic text analysis tasks like `similar()` and `concordance()` contrast with “deep learning” methods that work in more sophisticated ways to count and analyze language. Many of

these methods use the concept of word embeddings to ascribe machine-interpretable meaning to strings. Like `similar()` and `concordance()`, word embeddings work from patterns of word similarity based on context. Unlike the previous methods, however, word embeddings encode a value (actually, a list of values) to a given word based on its context. The value of any given word is known as its “vector,” which represents the location of the word in graphical space. A vector for a single word, “woman,” for example, will contain a list of numbers that represent a similarity score between “woman” and another word. As numerical representations, word vectors enable further quantitative exercises that can analyze the relationship between “woman” and other words. The classic example for introducing the potential of word vector math is the formula, “King - Man + Woman = Queen” (Mikolov et al. 2). Here, gender terms are quantified so that one can derive the difference between “King” and “Queen”.¹⁶

Based off a popular dataset, the vector which represents “woman” contains a list of numbers that score the similarity “woman” to other words in the dataset.¹⁷ Here, the word “woman” is most closely associated to the word “child,” with a similarity score, or “weight,” of .93, or 93%, then with “mother,” with .92, then “father,” with .90, and so on:

```
[('child', 0.9371739625930786),  
 ('mother', 0.9214696884155273),  
 ('whose', 0.9174973368644714),  
 ('called', 0.9146499633789062),
```

¹⁶ This example is taken from the famous 2013 paper by Mikolov et al that introduces the concept of word vectors. It almost goes without saying that their introductory example reproduces gender as a binary structure, where “Queen” is computed through its relation to “King” and “Man.”

¹⁷ The language model for this computation comes from Word2Vec’s “glove-twitter-25” dataset, which is based on Twitter data.

```
('person', 0.9135538339614868),  
('wife', 0.9088311195373535),  
('being', 0.9037441611289978),  
('father', 0.9028053283691406),  
('guy', 0.9026350975036621),  
('known', 0.8997253179550171)]
```

Commonly, word vectors are organized into a matrix, or tabular, format. Using this matrix format, further mathematical operations are possible using statistics, linear algebra, and calculus—the building blocks of so-called “deep learning” methods. Significantly, in deep learning, the individual words associated to each probability do not matter, only the probabilities themselves, which together represent the word vector. The word “woman,” therefore, would be represented with the following vector: .937, .921, .917, .915, .914, .909, and so on. This representation demonstrates that, even when removing the individual words assigned to each probability, the vector is still defined by its relation to other words. In the following section, I use these word vectors as a starting point to explore terms related to each gender in *Orlando*, starting with the terms “woman” and “man.”

Queer Distant Reading

I now turn to Virginia Woolf’s novel, *Orlando: A Biography*. This novel is ideal for a computational study of gender for two reasons. First, published in 1928, it is an early example of transgender narrative. Second, as many critics have noted, its characteristic modernist experimentation with the limits of language destabilizes normative concepts of identity and gender. Jane de Gay, Jill Channing, and Christy L. Burns, for example, assert that Woolf deploys

imaginative elements, magical realism, and parody, respectively, to resist realist narrative expectations. De Gay describes Woolf's writing as "feminist historiography" that "reject[s] Victorian patriarchal metanarratives" and instead "use[s] the strategies of fiction to bring history alive and make it live in the present" (de Gay 71). In a similar vein, Burns and Channing both point out that Woolf uses fantastical elements to disrupt expectations of plot and narrative to challenge the stability of gender and identity. Doubling down on the role of language, some critics emphasize that Woolf's narration purposefully obfuscates any coherence between gender, identity, and even race and nationality. For example, Victoria L. Smith asserts that "the fantastic content in the novel is directly linked to the undecidability/impossibility of the form of the novel and of the protagonist" (58). Pamela Caughey agrees, arguing that *Orlando*'s transgressiveness comes from its discursive moves: "Far from defeating sexual difference, as many feminist critics claim, Orlando enacts it, enshrines it, exploits it, makes a spectacle of it, but as a playful oscillation not a stable opposition" (Caughey 48).

In what follows, I pursue a text analysis method that I call "iterative" for the way it moves between close and distant reading, a process similar to what Andrew Piper calls "bifocal" reading. This process, in Piper's words, "no longer us[es] our own judgments as benchmarks... but explicitly construct[s] the context through which something is seen as significant (and the means through which significance is assessed)" (17). My method takes the output of computations as material for close reading analysis, using the computer to identify words that I then examine in context and with critical subjectivity.

I begin with a list of terms that are computed as similar to "woman" and "man" in the

text.¹⁸ To get distinctive results for each gender, I modified the code to remove any words with strong associations to the opposite gender. For example, I compute words that are most positively associated with “woman” and most negatively associated with “man.” Though this analysis, like Underwood’s, begins with a binary formulation of gender, this binary quickly destabilizes as I move deeper into the close reading analysis. By *iterating* through distant and close reading, the terms swell with significations that pluralize the binary and work toward resignifying the initial results for “woman” and “man.” Below are the words most closely associated with “woman” and “man,” respectively, each with its own score, or probability. The following are the words most associated with “woman”:

```
[ ('soft', 0.3692586421966553),  
  ('named', 0.34212377667427063),  
  ('sciatica', 0.3223450779914856),  
  ('frilled', 0.3187992572784424),  
  ('despaired', 0.31375786662101746),  
  ('friend', 0.31238242983818054),  
  ('delicious', 0.30853813886642456),  
  ('winked', 0.30514153838157654),  
  ('notion', 0.3047487139701843),  
  ('seductiveness', 0.30290719866752625) ]
```

And the following with “man”:

¹⁸ Unlike the vector for “woman” in the previous section, the vectors here are trained on Woolf’s novel, and therefore reflect an understanding of gender markers based on this specific text.

```
[ ('chequered', 0.4025157392024994),  
  ('fact', 0.3394489586353302),  
  ('denounced', 0.3346075117588043),  
  ('house', 0.33423593640327454),  
  ('curiosity', 0.33144116401672363),  
  ('defend', 0.3284823000431061),  
  ('dancing', 0.3282632827758789),  
  ('marbling', 0.3184848427772522),  
  ('cynosure', 0.3057470917701721),  
  ('rather', 0.3024100363254547) ]
```

At first glance, the terms for each list appear to align with existing conceptions of femininity and masculinity, such as “soft” and “frilled” for “woman,” and “fact” and “defend” for “man.” But as I examine these words in context, the gender binary becomes less clear cut. From the “woman” list, the term “delicious” only appears after Orlando has transitioned into a woman in the story. As I explain below, this term reveals a relationship to queerness characterized by a distinctly passive mode of gender subversion. Then, from the “man” list, I examine a term that only appears once in the novel, at a significant moment which initiates what I call the novel’s “crisis of signification” with language. Following this thread, I examine further passages that develop this theme as it spreads into Orlando’s interior narration. I conclude with a close reading of a rather dramatic passage that contains words from both the “woman” and “man” lists, and that coordinates this crisis with themes of gender ambiguity and homosexual desire.

I begin with the word “delicious,” which occurs only after Orlando transitions into a woman. Three of this term’s five occurrences appear in a single passage, when Orlando is sailing from Turkey back to her native England. The ship captain offers Orlando a slice of beef, which sends her into a rapturous speculation about the joys of womanhood:

‘A little of the fat, Ma’m?’ he asked. ‘Let me cut you just the tiniest little slice the size of your fingernail.’ At those words a *delicious* tremor ran through her frame. Birds sang; the torrents rushed. It recalled the feeling of indescribable pleasure with which she had first seen Sasha, hundreds of years ago. Then she had pursued, now she fled. Which is the greater ecstasy? The man’s or the woman’s? And are they not perhaps the same? No, she thought, this is the most *delicious* (thanking the Captain but refusing), to refuse, and see him frown. Well, she would, if he wished it, have the very thinnest, smallest shiver in the world. This was the most *delicious* of all, to yield and see him smile. ‘For nothing,’ she thought, regaining her couch on deck, and continuing the argument, ‘is more heavenly than to resist and to yield; to yield and to resist. (114)

Here, “delicious” describes a refusal, then a yielding—the vacillations of what appears to be a passive form of pleasure, ostensibly opposed to the active pleasure of pursuit which Orlando enjoyed as a man. Although the word “delicious” describes an arguably feminine experience of pleasure, about withholding and, eventually, submitting to the active force, it is a pleasure rooted in what is not quite passivity and not quite power.

To get a deeper understanding of this term, I run another similarity search with “delicious”

as the target word. The top result, the word most related to “delicious” in the text, is “culpable.” I then turn back to the text to examine where this word appears, which happens twice, both times in the same scene on the ship, during Orlando’s ruminations about the pleasures between the sexes. The first of those appearances occurs within one of the few sentences in the novel in which Orlando considers her homosexuality explicitly:

And as all Orlando’s loves had been women, now, through the culpable laggardry of the human frame to adapt itself to convention, though she herself was a woman, it was still a woman she loved; and if the consciousness of being of the same sex had any effect at all, it was to quicken and deepen those feelings which she had had as a man. (119)

“Culpable,” from the Latin “culpa,” meaning fault, denotes a body deserving of blame for its refusal to conform. Here, the word modifies “laggardry,” which describes the obstinacy or persistency of Orlando’s love for women, despite that she is now a woman herself. It seems that, for Orlando, desire is defined by a sense of guilt about refusing to conform. The next usage of this term occurs soon after, when Orlando reprises her earlier thoughts about the deliciousness of refusal:

‘To refuse and to yield,’ she murmured, ‘how delightful; to pursue and conquer, how august; to perceive and to reason, how sublime.’ Not one of these words so coupled together seemed to her wrong; nevertheless, as the chalky cliffs loomed nearer, she felt culpable; dishonoured; unchaste, which, for one who had never given the matter a thought, was strange. (120)

Rehearsing the conventional roles of the sexes, roles which Orlando fails to fit into, she feels (in addition to “culpable) “dishonour[ed]” and “unchaste”—words associated with an ideal of virtuous femininity. This feminizing language deepens the relationship between desire, guilt, and deliciousness, the last of which was previously characterized as pleasure in a passivity that is not quite powerless. Here, Orlando’s refusal to conform to social expectations, for which she feels culpable, constitutes another kind of passivity, a form of refusal. The connection between “delicious” and “culpable” seems to define queer desire as a distinctly passive mode of resistance.

Now, I move to Orlando’s experience as a man, returning to the original list of similar terms. I return to the list of vectors associated with the word “man,” and begin with “chequered,” which appears only once, at the start of the story, when Orlando makes his entrance, stepping into “the yellow pools chequered by the floor” (12). This moment is the first of many in which the narrator calls into question his credibility as a biographer, a self-described “scribe,” who distinguishes his role from the poet who embellishes and exaggerates reality through figurative language. However, the narrator’s commitment to straightforward description soon gallops into full-fledged figuration when he tries to describe Orlando’s beauty:

Directly we glance at Orlando standing by the window, we must admit that he had eyes like drenched violets, so large that the water seemed to have brimmed in them and widened them; and a brow like the swelling of a marble dome pressed between the two blank medallions which were his temples. Directly we glance at eyes and forehead, thus do we rhapsodize.

Directly we glance at eyes and forehead, we have to admit a thousand disagreeables which it is the aim of every good biographer to ignore. (12-13)

Here, the narrator's evocative language undermines his pretense to objectivity. This slip into figurative language eventually grows into a crisis of signification that recurs persistently through the novel. This crisis will eventually affect not only language's ability to signify, but also that of gender. As Victoria L. Smith affirms, "what happens in the novel... and what it thematizes—language's inability to adequately represent the 'thing itself'—mirrors the undecidability of the text—is it a biography, an autobiography, fantasy, etc.—and the impossibility of the form of 'woman'" (58).

The crisis of signification even spreads to Orlando's internal thoughts, where it first emerges during a period of depression following his love affair with Sasha, a Russian princess. Here, I take the another term, "despaired," from the list of vectors associated with "man." Like "chequered," this term occurs only once in the novel:

So then he tried saying the grass is green and the sky is blue and so to propitiate the austere spirit of poetry whom still, though at a great distance, he could not help reverencing. 'The sky is blue,' he said, 'the grass is green.' Looking up, he saw that, on the contrary, the sky is like the veils which a thousand Madonnas have let fall from their hair; and the grass fleets and darkens like a flight of girls fleeing the embraces of hairy satyrs from enchanted woods. 'Upon my word,' he said (for he had fallen into the bad habit of speaking aloud), 'I don't see that one's more true than another. Both

are utterly false.' And he despaired of being able to solve the problem of what poetry is and what truth is and fell into a deep dejection. (75)

Orlando, deep in depression, struggles to understand the role of figuration in language. Much like the narrator who is suspicious of figurative language, Orlando also questions the truthfulness of figuration. First, he attempts plain language, "the sky is blue," "the grass is green," but these prove insufficient for describing a sky that moves "like the veils which a thousand Madonnas have let fall from their hair" and grass that "fleets and darkens like a flight of girls fleeing the embraces of hairy satyrs from enchanted woods." Orlando, who has just been abandoned by a woman, sees flight and modesty, qualities which he finds "false," in nature. The word "despaired" here, like "chequered" above, appears in a moment that elevates the role of figuration in language. It also marks a crossing of the crisis of signification over the diegetic threshold, into Orlando's internal world. These terms, which occur in scenes where the lines between fiction and reality, and internal and external narration are blurred, elevate the importance of language's imaginative capacities in the novel.

In a final example, language's ability to signify becomes closely coordinated to gender. I examine the co-occurrence of words from both the "woman" and "man" lists within a single passage, the scene where Orlando first meets his beloved Sasha. The words "curiosity," which is associated with "man," and "seductiveness," which is associated with "woman," appear in a tumultuous meditation on Sasha's gender incomprehensibility. The drama begins when Orlando, upon seeing Sasha for the first time, cannot tell whether she is a man or a woman:

He beheld, coming from the pavilion of the Muscovite Embassy, a figure, which, whether boy's or woman's, for the loose tunic and trousers of the Russian fashion served to disguise the sex, filled him with the highest *curiosity*. The person, whatever the name or sex, was about middle height, very slenderly fashioned, and dressed entirely in oyster-coloured velvet, trimmed with some unfamiliar greenish-coloured fur. But these details were obscured by the extraordinary *seductiveness* which issued from the whole person. Images, metaphors of the most extreme and extravagant twined and twisted in his mind. He called her a melon, a pineapple, an olive tree, an emerald, and a fox in the snow all in the space of three seconds; he did not know whether he had heard her, tasted her, seen her, or all three together.

(For though we must pause not a moment in the narrative we may here hastily note that all his images at this time were simple in the extreme to match his senses and were mostly taken from things he had liked the taste of as a boy. But if his senses were simple they were at the same time extremely strong. To pause therefore and seek the reasons of things is out of the question)... A melon, an emerald, a fox in the snow—so he raved, so he stared. When the boy, for alas, a boy it must be—no woman could skate with such speed and vigour—swept almost on tiptoe past him, Orlando was ready to tear his hair with vexation that the person was of his own sex, and thus all embraces were out of the question. (27-28)

The passage constellates the crisis of signification within the larger issue gender ambiguity. Orlando uses seemingly arbitrary metaphors, “A melon, an emerald, a fox in the snow,” indicating that at the same time which he cannot place Sasha’s gender, he also cannot find the right words to describe her. As Sasha’s gender oscillates between male and female throughout the passage, so the narrative voice alternates between Orlando’s interiority and the narrator’s commentary. Taking this crisis of signification beyond the diegetic narrative, the narrator’s “pause” signals the constructed nature of the scene. This constructed quality is emphasized by the narrator’s explanation for Orlando’s choice of words, which have no “reason,” and “were mostly taken from things he had liked the taste of as a boy.” Language, like gender, thus becomes a tool for representation and performance.

The iterative reading practice, which bases close attention to language from the results of distant reading analysis, brings to the surface the relationship between gender and imagination, particularly imaginative forms of language, in the novel. As Pamela Caughey asserts, Orlando’s gender transgression is intimately connected to the narrator’s experiments in figuration and form: “Woolf brings out the arbitrariness of [sexual] identity, the arbitrariness of language itself, through Orlando’s switching from one sex to the other, and from one poetic language to another, as well as through the shifting of her own rhetoric in this novel (42). The list of words offer a starting point for isolating passages throughout the text, which then offer opportunities for finding new words to read in context. As the reader moves from distant to close, from a word vector to its context, the meanings of certain words gain new significations. And what happens with language in the novel also happens with gender. The above passage, with its “switching” and “shifting” discourse, which asserts that word choices are arbitrary and flowing, implies that gender is also a fluid phenomenon.

Conclusion

The argument that *Orlando*'s subversiveness is a discursive one, opens the text to numerous critiques,¹⁹ particularly from Trans Studies. According Jay Prosser, Woolf's experimentation with language and narrative form belies the embodied reality of transsexuality. He argues that "Orlando is not about the sexed body at all but the cultural vicissitudes of gender. As h/her narrative propels h/her through four centuries of history, Orlando is free to move beyond h/her body—quite queerly, to break through the limits of the flesh" (Prosser 168). By "the sexed body," Prosser means the physical body that exists in a physical world. *Orlando's* transgressiveness, Prosser argues, results from a play of language and literary form that elides the specificity and the lived reality of the "sexed body." Due to its "ambivalence, a wavering around transition," "a transformation of transition into new identity," its "easy androgyny," this text is transgender rather than transsexual (Prosser 169).

A decade later, Omise'eke Natasha Tinsley writes about the problem of gender fluidity as a metaphor. In her essay, "Black Atlantic, Queer Atlantic: Queer Imaginings of the Middle Passage," Tinsley argues for the imbrication of sexuality and race through the lens of the Black Atlantic. By sexuality, Tinsley does not necessarily mean "same-sex" desire, but relationships from the Middle Passage, that "mak[e] disruption to the violence of the normative order..."

¹⁹ Jamie Hovey and Jessica Berman both explore how the text challenges the boundaries of national identity through an implicit critique of imperialism, a critique that emerges from the privileged position of the white, British perspective. Hovey remarks that *Orlando* is "an ambivalent articulation of English nationalism," a nationalism that intersects with (and depends on) gender and race (Hovey 394). Displacing the oppressive effects of nationalism to racialized and sexually transgressive subjects, the novel "allows the protagonist to pass as respectable and heterosexual" (Hovey 398). Bringing the question of transsexuality to the fore, Berman argue that as a "trans text," *Orlando* utilizes methods of marking and categorizing bodies to interrogate the structures and boundaries of nationality (Berman 218). According to Berman, "The transnational situation as also intrinsically transgender" (Berman 218). Berman's account harps on "the disruptive, critical energy of the prefix 'trans'" to unpack the concept of "nation" and "nationality" (Berman 220).

connecting in ways that commodified flesh was never supposed to” (199). Reading for relation rather than desire, her critique re-works the trope of fluidity which, drawing from the ocean, “is not an easy metaphor or queer and racially hybrid identities but for concrete, painful, *and* liberatory experience” (192-193). For Tinsley, fluidity is an opportunity for “a return to the materiality of water to make its metaphors mean more complexly, shaking off settling into frozen figures” (212). Reading from Dionne Brand’s book, *Map to the Door of No Return* (2001), on the Middle Passage, Tinsley theorizes fluidity as a “social liquidation,” being stripped by the water, particulars of identity washed away in the current. She explains that “brown bodies are gender fluid not because they choose parodic proliferations but because they have been ‘washed of all this lading, bag and baggage’” (209).

Tinsley’s critique surfaces the ways that gender fluidity, as a trope for queerness, obscures the connotations of water, especially the physical one of corrosion. While the topic of physical embodiment and racialization is one that I take up in my third chapter, in the concept of flesh, here I have tried to show how attention to iterativity in computer code, and the fluidity it inspires for close and distant reading analysis, surfaces the material components that undergird what is often presented as an immaterial or abstract processes within quantitative analysis.

To think more deeply about this materiality, I would consider iterativity’s connection to the productive power of language, the ways that language physically executes action, for example, in computer code. The Python programming language differs from other languages (like markup languages HTML and XML, which I explore in my next chapter) in that it is an *executable* language. The code not only defines instructions, but it also enacts them. Perhaps, this active quality of Python programming might deepen our understanding of gender as an active, embodied phenomenon.

CHAPTER TWO

“‘Where there is Spectacular Passion, they would Suggest Something Vile’: Encoding Queer Erasure in Oscar Wilde’s *The Picture of Dorian Gray*”

Introduction

In the first scene of the novel, *The Picture of Dorian Gray* (1891), the painter Basil Hallward confesses to his friend Lord Henry Wotton why he cannot exhibit his portrait of the eponymous hero. Basil admits, “Where there is merely love, they would see something evil, where there is spectacular passion, they would suggest something vile” (Wilde 21). This striking line never appears in print. It was excised during Oscar Wilde’s revision process, along with similar suggestions of homoeroticism between the three main characters of the story.

The textual scholarship on this novel situates Wilde’s revisions as part of a larger project which begins with passing the censors and extends to after the book’s publication, when Wilde continued to alter the text in response to criticism about its decadence.²⁰ These famous lines from the text’s “Preface,” for example, which were included with the book version of the story published in 1891, obfuscate the relationship between art and morality: “To reveal art and conceal the artist is art’s aim,” and “Those who find ugly meanings in beautiful things are corrupt without being charming.” About the revisions to the manuscript, the text’s earliest version, scholars generally agree that Wilde neutralizes Basil’s erotic fascination with Dorian by

²⁰ For more information on censorship and this text, see Leckie, Barbara. “The Novel and Censorship in Late-Victorian England.” *The Oxford Handbook of the Victorian Novel*. Corby: Oxford University Press. 2013.

transforming it into aesthetic appreciation. Nicolas Ruddick, for example, argues that these revisions a moral about beauty at the expense of another one about sexuality. According to Ruddick, Wilde’s revisions increasingly highlight the dangers of vanity with the purpose of obscuring a more covert moral about the liberalization of homosexuality. Ruddick explains that, while the moral about vanity “dramatize[s] the disastrous consequences of the preference of the beautiful at the expense of the good,” the other moral about homosexuality “explores the destructive effects of the clandestine or closeted life” (126, 128). Dorian’s portrait indexes the convergence of these two morals: “the appalling changes to Dorian’s painted image … strongly suggest that the unspeakable practices indulged in by the protagonist are unspeakable in themselves” (Ruddick 129).

The question of what is “unspeakable,” and why, about the homosexual content in Wilde’s text is the topic of this chapter. To explore Wilde’s revisions, I use a digital editing standard called the TEI (Text Encoding Initiative), a popular method for “tagging” or “marking up” text in electronic format, to identify and categorize the revisions from the text’s first chapter. What begins as a textual editing project eventually expands into an interrogation of the TEI standard itself and electronic data structures more broadly. These structures, as I explain in this chapter’s conclusion, work in totalizing ways to encode their own rules of “speakability.”

Generally, electronic editing projects use TEI for annotation, to “mark up” elements of the text that are structural (like paragraphs, chapters, or struck lines from manuscript) and conceptual (like personages, places, authorial hands). One existing project on Wilde, Jason A. Boyd’s *Texting Wilde Project*, uses the TEI to mark up secondary literature with the goal of interrogating Wilde’s historical legacy. Boyd’s project, which annotates references to persons, places, and events in writings about Wilde’s life, reveals historical discrepancies and inaccuracies

across Wilde’s biography. As Boyd points out, “our knowledge of ‘Oscar Wilde’ is not comprised of a corpus of pure and simple facts that allows us an unmediated apprehension of a real person separated from us by only time, but rather this knowledge is comprised of a densely complex and often contradictory accretion of texts” (Boyd para. 1).

My project, like Boyd’s, uses the TEI to complicate an understanding of Wilde’s textual legacy. However, it also endeavours to answer a question about the TEI posed by literary and electronic textual scholar Julia Flanders: “do we need to queer markup, or is markup already queerable?” (“Encoding Identity”). Flanders’s question, which recalls the discussion in this text’s “Introduction” about current approaches in Queer DH,²¹ is asking whether there is something within the TEI standard, a highly rigid and hierarchical data structure, that allows itself to be functionally used in unanticipated or even incorrect ways, or whether the standard needs to be reworked in order to accommodate alternative usages. To explore this question, this chapter examines one major constraint of the TEI: that it works best with data that is discrete and bounded, rather than “smooth” data, that is, data which cannot be easily demarcated and labelled. Here, I apply the rigid constraint of the TEI data structure towards marking up the smooth data of this text’s homoeroticism, which I group into the general themes of “intimacy,” “beauty,” “passion,” and “fatality.” In the process, I explore how the functionality of the TEI for labelling data allows me to probe the indeterminate boundaries of queer themes in the text. This examination suggests how data structures imply dominance structures that implicitly delimit the kind of knowledge one can make.

²¹ The first approach wants to disrupt formal systems by imagining alternative ones, and the second, by contrast, maintains that queerness is built into computing and is inherent in computational logic. See this text’s “Introduction” for a more detailed explanation of these two approaches.

Textual Scholarship and Queer Historiography

To inform my approach for handling homoerotic subject matter within digital contexts, I bring Textual Scholarship and Queer Historiography into conversation. Between these two fields, I identify a parallel debate between what I term the “restorative” and “productive” approaches to critical analysis.

I situate the beginning of the restorative approach in the work of Shakespearean scholar Ronald B. McKerrow, who maintains that the goal of scholarly editing is to preserve authorial intention. McKerrow’s influential model for “copy-text” editing, which establishes the base-text for editing on an early “witness,” or print artifact, that most closely resembles the author’s original intention, gives way to Walter W. Greg’s approach that expands the purview of critics to more than a single witness. Subsequently, textual scholars like Fredson Bowers and Thomas Tanselle advance Greg’s work, proposing the “eclectic edition,” which aggregates textual variance, as the format that enables the editor to use his critical judgment for distilling authorial intention across multiple witnesses. Tanselle takes this principle of critical judgment to its logical conclusion, arguing that the text, which he calls the “work,” exists in an ideal form, beyond the reach of physical corruption:

Those who believe that they can analyze a literary work without questioning the constitution of a particular written or oral text of it are behaving as if the work were directly accessible on paper or in sound waves ... its medium is neither visual nor auditory. The medium of literature is the words (whether already existent or newly created) of a language; and arrangements of words

according to the syntax of some language (along with such aids to their interpretation as pauses or punctuation) can exist in the mind, whether or not they are reported by voice or in writing. (Tanselle 16-17)

Tanselle's position represents an extreme take on the restorative approach. Because the act of inscription involves physical tools that can corrupt a work's ideal form, the writer needs an editor who is sufficiently distant from the physical conditions of the work's creation. Tanselle enshrines the editor as the only figure capable of realizing the work.

While the restorative approach prioritizes an original, authorial intention, the productive approach seeks out multiplicity. Toward the end of the 20th century, textual scholar D. F. McKenzie's ideas about "the sociology of texts" were the first to widely challenge the claim that a single text can represent an ideal version that represents authorial intention. According to McKenzie, the text is never one single object, but rather stems from a number of human agencies and mechanical techniques that are historically situated. McKenzie points out that "Every society rewrites its past, every reader rewrites its texts, and if they have any continuing life at all, at some point every printer redesigns them" (McKenzie 25).

Jerome McGann expands McKenzie's sociological perspective into digital editing environments, where electronic formats create opportunities for presenting textual variation. McGann explains that textual criticism in print format is limited because a print text must conform to the linear and two-dimensional form of the codex—the same form as its object of study. Digital editions, by contrast, can be designed for complex, reflexive, and ongoing interactions between reader and text. He uses the example of the *Rossetti Archive*, an early digital archive (first published in 1992) of Dante Gabriel Rossetti's written and pictorial works, which

McGann edited using a markup schema based in XML (explained in more detail below), the parent language of the TEI. The markup enables a detailed level of annotation, so that a user can view both text and images alongside editorial commentaries, notes, glosses, and other annotations, as well a deep search of the works by title, phrase, genre, date, and more. McGann explains that the development of this digital archive brought him to repeatedly reconsider his goals, explaining that the archive “seemed more and more an instrument for imagining what we didn’t know,” for example, like the variety and overlap of language forms, such as rhetorical, metrical, referential, that could be incorporated into the markup (McGann 82). Forsaking authorial intention, this approach harnesses the potentiality of textual variation. It also opens the possibility for critical analytical methods based in what McGann and Lisa Samuels call “deformative criticism,” a criticism that distorts, disorders, and/or re-assembles literary material in order to estrange the reader from their familiarity with the text. They give the examples of reading a poem backward, or of isolating certain parts of speech like verbs, as deformative practices. The markup, where researchers label elements in text of their choosing, like parts of speech, prosodic elements, and so on, functions as a base layer for other digital tools that can animate or display those elements in interesting ways. McGann and Samuels argue that the potential for defamiliarization, where the text takes up new configurations, can reveal new insights about its formal significance and meaning.

Like Textual Scholarship, the field of Queer Historiography has also engaged in debates about how to approach texts from the past. Susan McCabe describes “Queer Historiography” as the “critical trend of locating ‘identifications’ (rather than identity), modes of being and having, in historical contexts” (McCabe 120). Within this field, there is a debate about the extent to which critics in the present can adequately define queerness in the past. The Queer Historicist

position advocated by scholars like David Halperin and Valerie Traub maintains that homosexuality is historically constructed, that “queerness” means something different today than it did in the past, and that scholars can get at its meaning by employing a Foucauldian genealogical method that traces its meaning over time. Identities based on sexuality, according to Halperin, are modern cultural productions: “no single category of discourse or experience existed in the premodern and non-Western worlds that comprehended exactly the same range of same-sex sexual behaviors … that now fall within the capacious definitional boundaries of homosexuality” (Halperin 88). Rather, identity terms and categories require historical specificity, Traub explains, using the word “queer” as an example:

Queer’s free-floating, endlessly mobile, and infinitely subversive capacities may be strengths—allowing queer to accomplish strategic maneuvers that no other concept does—but its principled imprecision implies analytic limitations … if queer is intelligible only in relation to its social norms, and if the concept of normality itself is of relatively recent vintage (Locherie), then the relations between queer and the changing configurations of gender and sexuality need to be defined and redefined. (33)

When “queer” is applied ahistorically, it loses its descriptive value. In order to be legible as a category of sexuality across time, queer and other related terms need historical specificity.

By contrast, the “unhistoricists” are wary of demarcating queer identity and identification across history. These scholars, who include Jonathan Goldberg, Madhavi Menon, and Heather Love, maintain that the attempt to define “queer” implicitly subscribes queerness to a logic of

progress, a heteronormative teleology. According to Goldberg and Menon, historicizing queerness can have the unintended effect of normalizing queerness: “to produce queerness as an object of our scrutiny would mean the end of queering itself” (1609, 1608). To study queer identity and identifications, Heather Love suggests a methodology that she calls “feeling backward,” which takes negative histories and affects (like shame, disappointment, and anger) without attempting to “fix” them into contemporary conceptions of identity and desire. Rather, Love is interested in exploring the way that subjects turn away or refuse the critic’s attempt to “redeem” or “rescue” them. To illustrate this process of “feeling backward,” she offers the myth of Orpheus and Eurydice, pointing out that Orpheus *prefers* to behold Eurydice in the darkness of the Underworld rather than in the sunlight, which would transform her into something fully accessible and therefore less desirable.²² Love, who asserts that “Queer history has been an education in absence” (52), points out that “[Eurydice’s] specific attraction for queer subjects is an effect... of a historical experience of love as bound up with loss. To recognize Eurydice as desirable in her turn away is a way of identifying through that loss” (51). For Love, accepting queerness as something that eludes containment reinforces it as something that escapes knowability.

In a way, the impulse to recover authorial intention and the drive to historicize queer identification are both motivated by a restorative impulse grounded in the idea of an accessible past. Alternatively, deformative criticism and “feeling backward” emerges from a shared creative impetus. In confronting the impossibility of recovering the past, the critic has room to experiment with alternative methods of analysis. She may, borrowing from McGann and

²²As the condition of rescuing his lover Eurydice from Hades, Orpheus must not look at her until they exit the Underworld and re-emerge into the sunlight. Unable to restrain himself, Orpheus turns to gaze at Eurydice as they are about to pass through the threshold. In this glimpse he manages to catch of his lover, she is already shrinking away into the darkness where she will be forever imprisoned.

Samuel's idea of deformance, reconceive an editorial project as a formal experiment. In what follows, I examine the TEI data format in more detail to explore how it might be leveraged within a deformative critical approach.

TEI

Created specifically for working with literary material, the TEI enables researchers to transform print text into a highly structured electronic format. In addition to transcribing, the TEI enables users to mark up or "tag" aspects relevant to their study, such as structural elements (chapters, paragraphs, line breaks), physical details about the text (revisions, illegible text) or conceptual elements (persons, geographical locations). To mark up these elements, encoders use tags like `<line>` to indicate a line of text, `` to indicate deleted text, and `<person>` for a reference to a person. These tags are appended to the transcription directly in line with the text that they describe. The TEI enables researchers not only to identify and describe elements that are important to the text, but also makes these elements searchable and manipulable. When a text is marked up with TEI, other digital tools (like a search tool or a display tool) can be layered on top of the markup, so that a user can search all deletions in a text, or display relevant text with a strikethrough, for example. As such, TEI offers a powerful foundation for interactive digital interfaces that facilitate scholarly research.

One example of a research project based in TEI comes from the Shelley-Godwin Archive at the University of Maryland. Below is an image of Mary Shelley's manuscript of *Frankenstein; or, The Modern Prometheus* (1818) and its diplomatic transcription (see Figure 4). Beneath them is an excerpt of the underlying TEI code, created by the researchers at the Shelley-Godwin Archive.

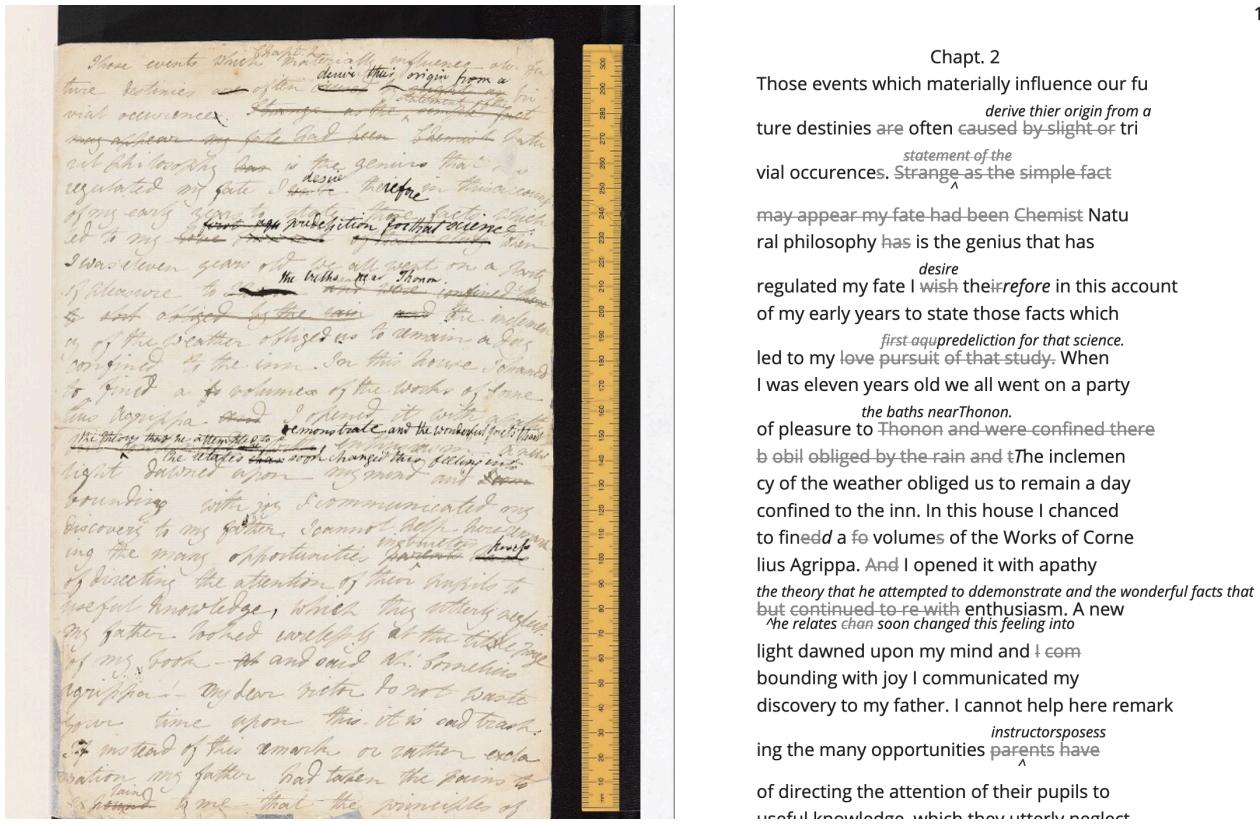


Figure 4: Image of the manuscript and diplomatic transcription of *Frankenstein* (Bodleian MS Abinger c.56: 1816), transcribed and encoded by the Shelley-Godwin Archive.

```

<handShift medium="pen" new="#mws"/>

<line>Those events which materially influence our fu</line>
<line>ture destinies <del rend="strikethrough">are</del>
often <mod> <del rend="strikethrough">caused</del>
<del rend="strikethrough">by slight or</del>
<add hand="#pbs" place="superlinear">derive thier origin
from a</add> </mod> tri </line>
<line>vial occurence <del rend="strikethrough">s</del>.
<mod spanTo="#c56-0005.01"/> <del rend="strikethrough"
next="#c56-0005.02">Strange as the</del>

```

In the encoding, the `<line>` tags indicate lines of text, and `` tags indicate deleted text. The `` tag is contained, or nested, within the `<line>` tag, which is indicative of TEI's hierarchical structure. All TEI documents, like the one above, resemble a tree structure, with one "root" element and several "branches." The TEI requires that all data be contained as discrete components within this bounded structure, and they cannot overlap unless the inner element is fully nested within an outer element. In addition to `<line>` and ``, this document also includes a `<handShift>` tag, which indicate whose "hand" is responsible for writing each section of text: a valuable piece of information for a text co-edited by Shelley's husband, Percy Shelley. Through this level of detail, TEI facilitates deep and complex description of textual material for scholarly research.

In the TEI data model, the outer, or "parent," element exerts control over the inner, or "child," element nested within it. When child elements do not fit neatly within the parent, the text file will display error. This happens often in the encoding of written language where linguistic structure, such as syntax or grammar, might overlap with semantics, which might overlap with other structures. Moreover, such overlapping elements, which Jerome McGann refers to it as "concurrent structures," are essential to textual analysis. As XML researcher Jeni Tennison points out, "the way in which the syntactic (sentence/phrase) structure overlaps with the prosodic (stanza/line) structure is one important way in which you can analyse a poem ("Overlap, Containment, and Dominance"). Tennison, who "want[s] to see if we can get away with not having hierarchy as a fundamental part of the information model," suggests separating structures of dominance from those of containment. She emphasizes the importance of distinguishing the two:

When you’re talking about overlapping structures, it’s useful to make the distinction between structures that *contain* each other and structures that *dominate* each other. Containment is a happenstance relationship between ranges while dominance is one that has a meaningful semantic. A page may happen to contain a stanza, but a poem dominates the stanzas that it contains. (Tennison 2008, “Overlap, Containment, and Dominance”; emphasis original)

The hierarchical nature of the TEI does not allow for the separation of containment from dominance relationships. However, Tennison proposes an alternative markup language, “The Layered Markup and Annotation Language,” (LMNL) that prioritizes containment while also suggesting dominance. It uses a series of ranges (indicated by various types of brackets) that describe start and stop points for an element, rather than nesting elements one inside the other, like in the TEI. In the example below, the tags are left open to accommodate additional ranges:

```
[book [title [lang}en{lang}]Genesis{title}]  
[chapter}  
[section [title}The creation of the world.{title}]  
[para}  
[v}{s}{note}In the beginning of creation, when God made heaven and earth,{note  
[alt}In the beginning God created heaven and earth.{alt]}{v] [v}the earth was  
without form and void, with darkness over the face of the abyss, [note}and a  
mighty wind that swept{note [alt}and the spirit of God hovering{alt]} over the
```

surface of the waters.{s}{v} [v}{s}God said, [quote}{s}Let there be a light{s}{quote}, and there was light;{v} [v}and God saw that the light was good, and he separated the light from darkness.{s}{v} [v}{s}He called the light day, and the darkness night. So evening came, and morning came, the first day.{s}{v}

{para] (“The Layered Markup and Annotation Language (LMNL)”)}

Tennison’s data model indicates dominance relationships by layering certain markers, in which the contents of one element can flow into the next, rather than through a tree structure, where all elements must be nested. What the data structure gains in flexibility, though, it loses in legibility. The overlap of elements makes this document considerably harder to read, compared to the TEI, where elements are neatly contained within one another.

The problem with TEI, and more deeply, with its parent structure, XML, is that dominance structures are totalizing. Solutions for handling this dominance can result in convolution and redundancy, as the TEI Guidelines themselves demonstrate. In one section of the Guidelines, a section on linking data, they suggest the use of pointers or “anchors” to encode information that is non-hierarchical or non-linear. Here, an anchor within one element may correspond to an anchor in another element, thus indicating a relationship between elements while avoiding overlap. In another section of the Guidelines, more suggestions include the “redundant encoding of information in multiple forms,” and “the use of empty elements to delimit the boundaries of a non-nesting structure.”²³ These solutions work by severing elements into components that maintain their own internal hierarchies which can be later recombined into

²³ See Module 16, on “Linking, Segmentation, and Alignment,” and Module 20, “Non-hierarchical Structures,” in the TEI Guidelines.

the dominant hierarchy. While they do address the problem of dominance, they do so by diluting it rather than eliminating it: they bureaucratize the dominance structure, creating a proliferation of hierarchies that eventually defer back into the master hierarchy.

Though the strict tagging structure of the TEI forces encoders to organize textual elements as discrete, ordered data, it also enables them to create unique tag names to use for encoding. This ability of TEI to create unique tags speaks to one of its strengths—its customizability. This customizability, which it inherits from its parent language, the eXtensible Markup Language (XML), allows users to describe the individual aspects about the text that are important to their project. Julia Flanders, who directs *The Women Writers Project (WWP)*, frames how TEI's inherent extensibility can be leveraged to address textual ambiguity. According to the *WWP*:

Unlike many standardization efforts, the TEI ... explicitly accommodat[es] variation and debate within its technical framework. The TEI Guidelines are designed to be both modular and customizable, so that specific projects can choose the relevant portions of the TEI and ignore the rest, and can also if necessary create extensions of the TEI language to describe facets of the text which the TEI does not yet address. (Flanders, “*WWP*”)

Because TEI is built from a language that allows its users to build their own version of that language, it has potential for representing the elements necessary for a project by customizing these elements on a project-by-project basis.

One of these customizations is directly relevant to the encoding of queer subject matter, such as the encoding of non-normative genders. *The Diaries of Michael Field*, by Marion Thain,

contains the writing of a complex subject: the late 19th-century English poet, Michael Field. Michael Field, which is a pen name for the lesbian couple Katharine Bradley and Edith Cooper, takes “the assumed names of two separate women, as well as appearing to signify one single male identity” (Thain 228). Fortunately for Thain’s project, which she calls a “queer encoding” project, the TEI enables the encoding of distinct identities, which is central for understanding the queer subject matter of the diaries:

[T]he proliferation and slipperiness of names is no mere childish caprice but a core part of the articulation of queer: an unhinging of “given” or apparently predetermined identity through a strategy that articulates identity as constantly shifting, constructed, and performative. Text encoding can, in a simple but powerful way, help us explore and map this crucial strand of queer identity construction across the diary. (233)

Thain’s approach harnesses the hierarchical nature of the TEI to list the various references to each personage as their own tags within the parent tag, the `<persName>` tag. The data structure enables the encoding of multiple names for each writer within the text, to “render searchable words not in the text but intimately tied to it” (Thain 223). As Thain points out, “This is not a small issue in a diary in which Katharine Bradley herself is referred to by more than 20 different names” (233).

While the hierarchical structure of the TEI allows the customization of multiple elements, each that can encode its own identity, elements are also limited to one value, that is, to one label. That means that each `<person>` tag, for example, can contain one value for `<sex>`. While

multiple persons, like in the case of Michael Fields' diary, can contain multiple sexual identities across them, individually they are constrained by their parent tag. At the annual TEI Conference and Members Meeting in 2022, Elisa Beshero-Bondar and her team ran up against these issues in their proposal for a new <gender> element for the TEI Guidelines. In aiming to expand the expressive potential for marking up gender, they encountered the possible risks of reifying normative cultural biases:

Unexpectedly, we found ourselves confronting the Guidelines' prioritization of personhood in discussion of sex, likely stemming from the conflation of sex and gender in the current version of the Guidelines. In revising the technical specifications describing sex, we introduced the term "organism" to broaden the application of sex encoding. We leave it to our community to investigate the fluid concepts of gender and sex in their textual manifestations of personhood and biological life. Beshero-Bondar et al.

While their new proposed element, <gender>, gives the team some capacity to represent gender as distinct from sex, the tagging structure nonetheless perpetuates the notion that both "gender" and "sex" serve some concept of personhood. Not only that these elements are subordinate to personhood in the TEI data model, but to a kind of personhood that can only have one value for each. The proposed solutions to this problem, which include exchanging <person> for the more capacious <organism> or even <entity>, as recently proposed in the TEI documentation, keep intact the notion that "sex" and "gender" are things or aspects that a person contains, that is, sex as something belonging to or expressed by a notion of personhood

(martindholmes 2022).

As queer and gender studies scholars might guess, the hierarchical nature of the TEI presents an obstacle for encoding identities that are dynamic or plural. However, some scholars who work with shifting or permeable queer identities find creative ways of handling this obstacle. For example, Pamela Caughey and Sabine Meyer use the TEI to encode *Man Into Woman*, the life narrative of Danish painter Lili Elbe, who undertook one of the first gender affirming surgeries in 1930. The attempt to mark up Elbe's complex gender identities brings Caughey and Meyer against the structural limitation of the TEI:

[T]he deeper we got into mark-up, the more evident it became that the categories and hierarchies available to us were inadequate for our task... to identify a male subject who at times presents himself as masquerading as a woman, at others as being inhabited by one, and who eventually becomes a woman, in a life history narrated retrospectively from the perspective of Lili Elbe. (231)

Here, the limitations of a <sex> tag—that it only admits one value and is subordinate to one concept of personhood—forces these scholars to consider the ways that the TEI effectively reifies the notion of sex (not to mention of gender) as singular and essential. Fortunately for Caughey and Meyer's project, the fixity that the TEI structure imposes upon Elbe as a queer subject brings to the surface deeper questions about gender ontologies. The questioning about the TEI leads to a questioning about what they call gender's “taxonomic chaos,” and whether “ontologies can ever capture the complex, multi-layered, dynamic nature of gender identities”

(230). In response to this question, Caughey and Meyer maintain that the issue of gender ontology should remain unresolved, that some “confusion is part of the experience of gender and sexuality in the modernist era” (239). Their temporary solution is to create a separate visualization that displays clusters of Elbe’s different gender traits over time. This “storm cloud” visualization, which “capture[s] a temporal process and not a snapshot,” expresses Elbe’s gender as dynamic and relational, an ontology for gender which the TEI cannot handle (238).

Why do Caughey and Meyer struggle to encode Elbe’s identity while Thain appears to succeed with Fields’? This question about the TEI’s capacity to adequately categorize queer identity points to a deeper problem with hierarchical data structures. While a queerness like Fields’ might be delineated and contained, in Elbe’s there is a quality of blending which the markup, by its nature, means to separate and fix. Fields’ identity is multiple yet distinct: the diaries proffer “two different hands [that] record the experience of two clearly differentiated people” (Thain 229). By contrast, Elbe’s identity is plural, containing several identities whose relationship to each other is ambiguous or continually shifting within one entity. As Caughey and Meyer argue, Elbe’s relation to gender is best described qualitatively, as one that alternatively “masquerades” or “inhabits” simultaneous gender ontologies (Caughey and Meyer 231).

The Manuscript of *Dorian Gray*

I explore this tension between customizability and hierarchy in the TEI data structure in my encoding of the original manuscript of *Dorian Gray*. For Wilde’s text, I customized a TEI tagset that explores the potential of semantic labelling against the TEI’s hierarchical structure which demands fixity. My customization registers physical and conceptual changes to the manuscript by creating two new attributes to mark the revisions. First, the custom attribute

@implication marks the revision according to a theme from a list of recurring themes, which include “intimacy,” “beauty,” “passion,” and “fatality,” with the additional values of “inconclusive,” “unclear” or “illegible.” Then, to mark the physical traces of Wilde’s pen as he struck out portions of the text, I created the custom attribute @strokes that registers the number of pen strokes through any given section of text.²⁴ Most often, Wilde uses one or two strokes of his pen, although sometimes, the strokes are too heavy to enumerate. In those cases, I set the @strokes value to “inconclusive.” Below is an example of how the markup applies to a section of Wilde’s manuscript. This example shows default elements and attributes, such as <mod>, <add>, , @rend, and @place, to which I added my custom attributes, @implication and @strokes.

<quote> The ugly and the stupid have the best of it in this world. They can sit quietly, and gape at the play. If they know nothing of victory, they are

<mod type="subst">

<del rend="strikethrough"> <unclear>saved</unclear>

<add>at least spared</add> </mod>

the knowledge of defeat. They live as we all should live, undisturbed, indifferent, and without disquiet. They neither bring ruin upon others, nor ever receive it from alien hands. Your rank and wealth, Harry; my brains, such as they are, my fame, whatever it may be worth; Dorian Grey’s

<mod type="subst"> <del rend="strikethrough" strokes="2">

²⁴I am grateful to Jason A. Boyd for making this suggestion.

```
implication="beauty">beauty;</del>  
<add place="above">good looks;</add> </mod>  
we will all suffer for what the Gods have given us, suffer  
terribly." </quote>
```

In what follows, I detail how this customization registers the elisions of homoeroticism in the manuscript as Wilde prepared it for publication. Existing textual scholarship of this text by Donald Lawler, Joseph Bristow and Nicolas Ruddick generally agree that Wilde's revisions of the homosexual content over the work's various witnesses or printed versions, which include the manuscript, typescript, and two published versions of the text, work toward the overall goal of aestheticizing the text. According to these scholars, this project of aestheticization begins in the manuscript that is eventually typed and published in *Lippincott's Monthly Magazine* on June 20, 1890.²⁵ This first printing of "The Picture of Dorian Gray," which spans 98 pages over 13 chapters, was widely criticized in the press for its seemingly ambiguous stance about its immoral protagonist. Bristow explains that "[Wilde's] narrative struck the [reviewers] as a work that appeared 'corrupt,'" displayed "effeminate frivolity," and dealt "with matters only fitted for the Criminal Investigation Department" (xviii). Wilde spends the next several days defending his work in letters to the editors of numerous newspapers.²⁶ A few months later, in early spring of 1891, Wilde publishes a "Preface" that makes such claims as "To reveal art and conceal the artist is art's aim."²⁷ By these complex and incisive statements, Barbara Leckie asserts, "Wilde's strategy is to refocus on art and disparage the focus on the reader by saying that the reader is the

²⁵See Frankel, pp. 40–54, for a more complete accounting of the role of John Marshall Stoddart (Wilde's publisher) in preparing the typescript for publication.

²⁶See Wilde, O and M P Gillespie, pp. 358–374, for a selected list of full-length reviews from *The Scots Observer*, *The St James Gazette* and the *Daily Chronicle*, and Wilde's responses.

²⁷See Wilde, O and M P Gillespie, pp. 3–4.

one who makes a work immoral” (173). Similarly, Lawler argues that “the ‘Preface’ … hold[s] up aesthetic beauty and artistic effect as the only legitimate criteria of critical evaluation” (16). The “Preface” is included in the subsequent book version of *Dorian Gray*, published by Ward, Lock & Company in April 1891. According to Victor Frankel, the editor of the *Uncensored Edition of Dorian Gray*, Wilde here makes significant deletions of passages referencing homosexuality, promiscuous or illicit heterosexuality and “anything that smacked generally of decadence” (47-48). Wilde also “heighten[s] Dorian’s monstrosity toward the novel’s end “to bring the story to a moral conclusion that he thought would silence his critics” (Frankel 30).

My work marking up the revisions to the manuscript’s first chapter attempts to engage the boundedness of the TEI elements, which encapsulate data, with the indistinctiveness of the queerness of the text, which resist demarcation. The custom labels of “intimacy,” “beauty,” “passion,” and “fatality” which I apply to the revisions constitute a spectrum of smooth information that threatens the confines of the TEI tags. To add another layer of ambiguity, the number of pen strokes also resists easy demarcation: they can be difficult to enumerate, and their boundaries often fail to map with the themes. The goal of this work is not to establish a formal method for marking queer elements; rather, it is to surface a resistance in the text: an indeterminacy that resists capture by the TEI data structure.

I begin with the evocative opening scene of Wilde’s text, which consists of a lively dialogue between Basil Hallward and Lord Henry Wotton and sets the tone, reveals character dynamics, and lays out some of the conflict for the ensuing story. In these first few pages, Basil appears to be a sympathetic, sensitive, albeit slightly exasperated artist, who confides in his close friend Lord Henry the powerful influence that Dorian Gray has had upon his life and work. Lord Henry, by contrast, appears as an affable and witty gentleman aesthete who counters Basil’s

sincerity with offbeat observations and paradoxical aphorisms. From the revisions that Wilde made to this section, a few general patterns emerge. First, the revisions work to stifle the emotional tension and physical affection in the dialogue between Basil and Lord Henry, replacing it with a lighter or more neutral tone. These changes accord with Bristow's analysis of Wilde's revisions, "eliminating suggestions of physical intimacy between painter and model" (xxxvi). Because such revisions generally shore up the friendship between Basil and Lord Henry, conveying fondness in their rapport, they are encoded according to the theme of "intimacy." Second, the themes of "beauty" and "passion" mostly concern revisions where Dorian is reformulated from a romantic object into an artistic subject for Basil's painting, which Frankel describes as a transformation of Basil's "worship" of Dorian into "a quest for a Platonic ideal in art" (11). Third, and finally, is the theme of "fatality," which emerges in moments where Basil struggles to explain the consuming and self-destructive influence that Dorian has on his life. Bristow describes these moments as ones that "were in jeopardy of fixing too much attention on the nature of the painter's intense fascination with his subject" (xxxvi).

On the theme of intimacy, Wilde's pen slashes through evidence of physical contact between Basil, Lord Henry, and Dorian. This includes the following: "taking hold of his [Lord Henry's] hand" (9), Dorian's "cheek just brushed my [Basil's] cheek" (20), and Basil and Dorian "sit beside each other" (22). Additionally, the dialogue between Basil and Lord Henry showcases intimacy through their tone and subtle mannerisms, which facilitate Basil's confession of his feelings for Dorian. In some cases, Wilde diminishes this intimacy in their conversation with the effect of mitigating the sense of foreboding that surrounds Basil's attraction to Dorian. Here, Wilde replaces tense pauses with laughter or exchanges dramatic statements and descriptions with more playful ones. One such example occurs when Basil struggles to convey his reasoning

for refusing to exhibit Dorian's portrait:

"The reason why I will not exhibit this picture, is that I am afraid that I have shown in it the secret of my own soul."

Lord Henry hesitated for a moment. "And what is that?" he asked, in a low voice. "I will tell you," said Hallward, and a look of pain came over his face. "Don't if you would rather not, murmured his companion, looking at him. (9)

The revised version in the manuscript, incorporating the deletions and interlinear additions, reads:

"The reason why I will not exhibit this picture, is that I am afraid that I have shown in it the secret of my own soul."

Lord Henry laughed. "And what is that?" he asked. "I will tell you," said Hallward, and an expression of perplexity came over his face. "I am all expectation Basil," murmured his companion, looking at him. (9)

Here, several changes mitigate the emotions of the scene. First, rather than "hesitate," Lord Henry "laugh[s]," and he no longer speaks "in a low voice." The effect is to overwrite a previously intimate moment with levity. Basil also exchanges his facial expression from one of agony to confusion when "a look of pain" transforms into "an expression of perplexity." Finally, Lord Henry, rather than sympathizing with Basil or excusing him from explanation, instead

encourages him to speak: “I am all expectation, Basil.” Together, these changes work to obscure Basil’s internal suffering with the effect of lightening the mood of the scene.

Another example similarly tempers the intense, emotional energy while also mitigating a sense of anxiety or foreboding. It occurs on the following page, where Basil is on the verge of revealing the reasons behind his attraction to Dorian. The original dialogue proceeds: “Lord Henry felt as if he could hear Basil Hallward’s heart beating, and he heard his own breath, with a sense almost of fear. ‘Yes. There is very little to tell you,’ whispered Hallward, ‘and I am afraid you will be disappointed. Two months ago...’” (10). The manuscript’s revised version reads: “Lord Henry felt as if he could hear Basil Hallward’s heart beating, and he wondered what was coming. ‘Yes. There is very little to tell you,’ whispered Hallward rather bitterly, ‘and I dare say you will be disappointed. Two months ago...’” (10). Here, rather than draw attention to Lord Henry’s breathing, Wilde mentions Lord Henry’s “wonder” about Basil’s pending explanation, shifting Lord Henry’s sense of anticipation from fear to curiosity. Wilde also makes slight changes to Basil’s delivery: in the revised version, Basil speaks “rather bitterly” and uses the expression “I dare say” rather than “I am afraid.” Both changes diminish the confessional tone that originally precedes Basil’s revelation about Dorian Gray. This intimacy between Basil and Lord Henry, which enables Basil’s confession about the self-consuming qualities of his feelings for Dorian, suggests a connection to the theme of fatality. The data structure of the TEI, however, fails to capture this complicated dynamic because the @implication attribute is limited to one value. Therefore, the encoder must choose one theme per item of revision, either @intimacy or @fatality.

Throughout this chapter, Wilde often swaps out words with the effect of diverting an original connotation to passion or romance. He focuses this type of revision on Basil’s dialogue,

when Basil speaks about the effect of Dorian's beauty upon his art. As Frankel points out, Wilde trades expressive nouns that code the homoerotic attachment Basil feels for Dorian with words that convey more generalized ideas (10). For example, in the sentence "Every portrait that is painted with passion is a portrait of the artist, not of the sitter," Wilde replaces "passion" with "feeling" in the manuscript (9), exchanging the romantic connotation of "passion" with the more neutral one of "feeling." Additionally, on the theme of "passion," Wilde substitutes words and phrases which connote a strong sense of romantic passion for ones that instead suggest an aesthetic interest. One line, prior to revision, reads: "I knew that I had ... come across someone whose mere personality was so fascinating that it would be Lord over my life, my soul, my art itself" (11). Wilde revises this line to: "I knew that I had come face to face with someone whose mere personality was so fascinating that it would absorb my nature, my soul, my art itself" (11). Here, Wilde swaps "life" for "nature," effectively demoting Dorian's influence to an aspect of behavior. Wilde also replaces "be Lord over" with "absorb," which maintains Basil's sense of submission without the patriarchal connotation in "Lord." These changes, which are encoded under the theme of passion, diffuse a consuming quality in Basil's attraction into a sensitivity to Dorian's aesthetic influence. Like the revisions to the theme of intimacy, the subtle shifts in word choice in this section also begin to gesture to the theme of fatality, which fully develops over the next several pages.

In addition to words associated with passion, Wilde often replaces the word "beauty" in Basil's references to Dorian. In doing so, Wilde neutralizes the power of Dorian's physical allure. For example, Wilde changes "Suddenly I found myself face to face with the young man whose beauty had so stirred me" to "Suddenly I found myself face to face with the young man whose personality had so strangely stirred me" (13). The replacement of "beauty" with "personality"

allows Basil to avoid mentioning Dorian's physical appearance, and the addition of "strangely" serves to mystify Dorian's influence over Basil. Throughout the rest of the chapter, Wilde makes several changes that similarly dilute Dorian's powerful appearance: he replaces "beauty" with "good looks" and then with "face" two separate times, and once the word "Narcissus" is replaced with "man" (6, 18, 13). Here, the decision to replace "beauty" with references to "face" or "good looks" maintains the emphasis on the physical while muting the suggestive power of "beauty" in the abstract. In doing so, connotations about the ideal, the charming, and the alluring, which usually accompany descriptions of beauty, are diffused into physical description. This evacuates the mystery of Dorian allure and diminishes the overwhelming influence that he holds over Basil.

Removing associations with beauty and passion is part of Wilde's larger effort of aestheticizing Dorian, transforming him from an erotic object into an aesthetic one. At the end of the first chapter, Basil implores Lord Henry to refrain from influencing the impressionable youth. The original version reads:

"Don't take away from me the one person that makes life lovely for me.

Mind, Harry, I trust you." He spoke very slowly, and the words seemed wrung out of him, almost against his will.

"I don't suppose I shall care for him, and I am quite sure he won't care for me," replied Lord Henry smiling, and he took Hallward by the arm, and almost led him into the house. 27-28

Lord Henry's assurance that neither he nor Dorian shall "care for" each other characterizes

Basil's passionate feelings for Dorian as a kind of possessiveness. The source of this possessiveness is specified with the next revision:

“Don’t take away from me the one person that makes life absolutely lovely to me, and that gives my art whatever wonder or charm it possesses. Mind.

Harry, I trust you.” He spoke very slowly, and the words seemed wrung out of him almost against his will.

“What nonsense you talk,” said Lord Henry smiling, and, taking Hallward by the arm, he almost led him to the house. (27, 27B)

In this revision, Basil asserts Dorian’s importance for his art, giving it “whatever wonder or charm it possesses.” Lord Henry’s response moves from reassurance to dismissal, rejecting Basil’s anxiety as “nonsense” and ending the scene on a slightly humorous note. Across these changes, Wilde refocuses Basil’s jealous passion into an anxiety about losing Dorian as an artistic subject. Additionally, the shift from sincere reassurance to light-hearted repartee in Lord Henry’s response evacuates the strong emotional tone of the scene, replacing it with friendly banter. The effect is to divert Basil’s passion for Dorian toward aesthetic appreciation.

Wilde’s efforts in redirecting Basil’s passion toward artistic ends is inextricable from the attempts to soften Basil’s intense and consuming devotion to Dorian. Bristow describes these revisions as Wilde’s “thoughtful eliminations” of Basil’s “fantasies of Dorian Gray’s absorbing beauty,” which emerge in references to the painter’s troubled state of mind (xxxvi). For example, when Basil recounts his first time meeting Dorian, he says, “I had a strange feeling that Fate had in store for me exquisite joys and exquisite sorrows. I knew that if I spoke to him, I would never

leave him till either he or I were dead. I grew afraid, and turned to quit the room” (12). Here, Basil’s passion swells with an intense, life-threatening quality that Wilde’s pen mitigates by removing the association with death. He crosses through “never leave him till either he or I were dead” and adds “become absolutely devoted to him, and that I ought not to speak to him.” Wilde again tempers this self-consuming quality of Basil’s devotion when he changes the phrase “I could not live if I did not see him every day” to “I couldn’t be happy if I didn’t see him every day” (17). By shifting the focus from Basil’s “life” to his happiness, Wilde dilutes the sense of profound peril that infuses Basil’s passion.

The TEI data structure reinforces the difficulty of disambiguating the revisions within the themes of passion and fatality. In the phrase discussed above, “look of pain” is revised to “an expression of perplexity” (see Figures 5 and 6). Working with this revision in the TEI presents two points of contention. First, in categorizing the theme for “look of pain,” the TEI (and the customized schema that I’ve created with it) will only admit one label, either passion or fatality. On the one hand, “pain” denotes a strong, passionate feeling; on the other, Basil often draws on pain in his references to the fatalistic qualities about his attraction to Dorian, as in the following quote which was deleted: “I feel, Harry, that I have given away my whole soul to someone seems to take a real delight in giving me pain” (23). The difficulty of disambiguating the theme is mirrored by the strokes of Wilde’s pen, which vary even across the same phrase: while the word “look” is struck so heavily that the number of strokes is inconclusive, the word “pain” contains a single stroke. Because it is impossible to mark the variations in strokes without separating the single revision into two instances (which would break up the integrity of the phrase), I marked it the value “inconclusive.” The ambiguity in the number of strokes also deepens when considering the semantics of the revision: the heavier strokes are focused on a revision (“look” to

“expression”) that arguably carries less semantic difference than the single stroke (“pain” to “perplexity”). My customization of the TEI fails to register the ways that different components are interrelated. It cannot, in this case, express a relationship between the themes and the pen strokes.

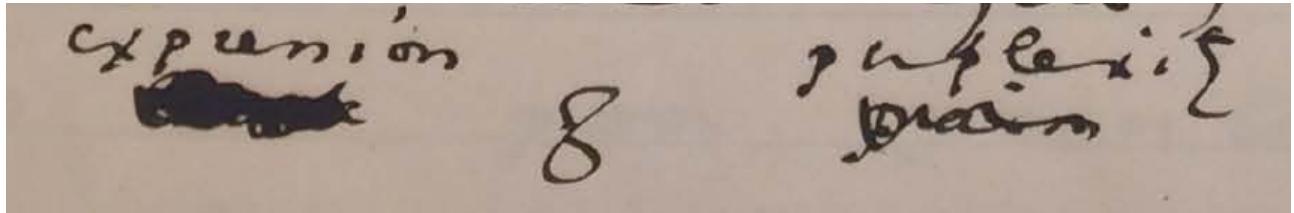


Figure 5: Close-up image of detail on MS 9 from The Morgan Library and Museum.

```
<quote> "I will tell you," said Hallward, and <mod type="subst">
<del rend="strikethrough" strokes="inconclusive" implication="fatality"> a look
      of pain </del>
      <add place="above">an expression of perplexity</add>
    </mod> came over his face. </quote>
```

Figure 6: Text encoding for page *MS 9* detail.

My final example concerns a longer passage that was heavily revised in the manuscript (see Figures 7 and 8). The treatment of this passage crystallizes the various patterns of revision seen so far—diminishing signs of intimacy, passion, and references to Basil’s fatalism. The passage in the manuscript bears quoting in full. Prior to any revisions, it reads:

“You remember that landscape of mine... It is one of the best things I have ever done. And why is it so? Because, while I was painting it, Dorian Gray sat beside me, and as he leaned across to look at it, his cheek just brushed my cheek. The world becomes young to me when I hold his hand, as when I see him, the centuries yield up all their secrets!”

“Basil, this is [illegible] you must not talk [illegible] [illegible] his power, [indecipherable] to make yourself the [illegible] slave! It is worse than wicked, it is silly. I hate Dorian Gray.”

Hallward got up from the seat, and walked up and down the garden. A curious smile curled his lips. He seemed like a man in a dream. After some time he came back. “You don’t understand, Harry...” he said. “Dorian Gray is merely to me a motive in art. He is never more present in my work than when no image of him is there. He is simply a suggestion, as I have said, of a new manner. I see him in the curves of certain lines, in the loveliness and subtleties of certain colours. That is all.”

“Then why won’t you exhibit his picture?”

“Because I have put into it the romance of which I have never dared to speak to him. He knows nothing about it, but the world might guess it, where there is merely love, they would see something evil, where there is spectacular passion, they would suggest something vile.” (20-21)

our man invented "the
as have "invented" the
is vested, an ,dealt that
Hang! Hang! Come! To
void. Hang! Dorian Gray
knew what landscape 8 nine, 8
even he that ~~had~~ had such — a
which ^{huge} agreed offered me which I would
~~not~~ price, at which I would
not part with? It is one of the
best things I have ever done. And
why is it so? Because, while I
was painting it, Dorian Gray sat
beside me, ~~as in a lower ^{again} act~~
~~terrible ^{act} than~~, ~~mirrored ^{again} in~~
~~his eyes~~. Other people
will never understand those pictures,
and I will never see the reactions
of other people to them."

"Basil, this is ~~quite~~ ^{quite} wonderful. I
must see Dorian Gray.
~~not think about him~~ You will you
know, you will know, you
will understand, to make you
the ~~best~~ ^{best} thing ever! It is
more wicker, it is silly. I
hope Dorian Gray."

Holloway got up from the seat,
and walked up and down the
garden. ~~Dorian Gray~~
~~for a long time~~
~~now~~. After some time he
came back. "You don't understand,

Figure 7: MS page 20 from The Morgan Library and Museum.

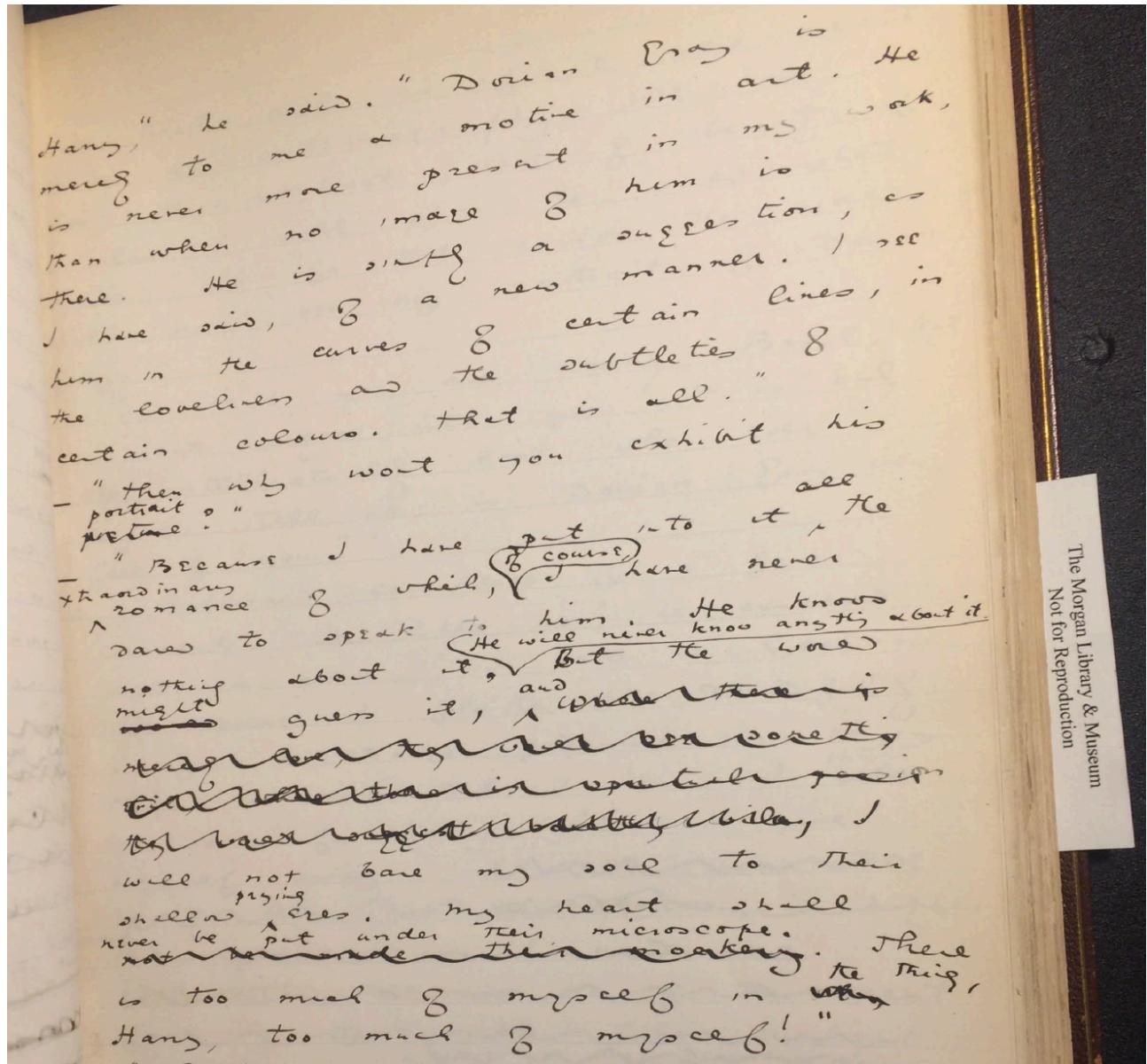


Figure 8: MS page 21 from The Morgan Library and Museum.

The TEI is effective for indicating some of the layers of revision within this passage (see Figures 9 and 10). In the first paragraph, Wilde eliminates a span of text from “and as he leaned” to “secrets!”. Within this span, Wilde makes additional changes, adding text such as “hair just touched my hand,” which replaces “cheek just brushed my cheek.” Due to its physical nature, this particular phrase fits with the theme of “intimacy” in the TEI, while the longer section fits

with that of “passion,” which denotes the nature of the other revisions within the same sentence, like “The world becomes young to me when I hold his hand.” Here, the TEI enables a layered approach to markup where one element can be nested within another.

```
You remember that landscape of mine, for which Agnew offered me such
<gap reason="illegible"/>a <gap reason="illegible"/>
<add place="above">huge</add> price, but which I would not part with? It is one of
the best things I have ever done. And why is it so? Because, while I was painting
it, Dorian Gray sat beside me. <del rend="strikethrough" strokes="1"
    implication="passion"> and as he leaned across to look at it, his
    <del implication="intimacy"> cheek just brushed my cheek.
    <add place="above">hair just touched my hand.</add></del>
    The world becomes young to me when I hold his hand, as when I see him, the
    centuries yield up all their secrets!"</del>
</quote>
</p>
<p>
    <quote> "Basil, this is <mod type="subst">
        <del rend="strikethrough" strokes="inconclusive" implication="fatality">
            <gap reason="illegible"/> you must not talk <gap reason="illegible"/> his
            power, you <gap reason="illegible"/> to make yourself the <gap
            reason="illegible"/> of <gap reason="illegible"/> slave! It is worse that
            wicked, it is silly. I hate Dorian Gray." </del>
        <add place="above">quite wonderful. I must see Dorian Gray.</add>
    </mod>
    </quote>
</p>
<p> Hallward got up from the seat, and walked up and down the garden.
    <del rend="strikethrough"> A curious smile curled his lips. He seemed like a man in
    a dream. </del>
    After some time he came back. <quote> "You don't understand, Harry..." he said. "Dorian
    Gray is merely to me a motive in art. He is never more present in my work than when no
    image of him is there. He is simply a suggestion, as I have said, of a new manner. I
    see him in the curves of certain lines, in the loveliness and subtleties of certain
    colours. That is all." </quote>
</p>
```

Figure 9: Text encoding for *MS* pages 20–21.

```

<p>
  <quote> "Then why won't you exhibit his
    <mod><del rend="strikethrough">picture?</del><add place="above">portrait?</add></mod>
  </quote>
</p>
<p>
  <quote> "Because I have put into it <add place="above">all</add> the <add
    place="above">extraordinary</add> romance of which, <add place="above">of
    course,</add> I have never dared to speak to him. He knows nothing about it,
    <add place="above">he will never know anything about it,</add> but the world
    <mod type="subst">
      <del rend="strikethrough">would</del>
      <add place="above">might</add>
    </mod> guess it, <add place="above">and</add>
    <del rend="strikethrough" strokes="2" implication="passion"> where there is merely
      love, they would see something evil, where there is spectacular passion they
      would suggest something vile. </del> I will not bear my soul to their shallow
      <add place="above">prying</add> eyes. My heart shall <mod type="subst">
      <del rend="strikethrough" strokes="1" implication="passion"> not be made their
        mockery </del>
      <add place="above">never be put under their microscope.</add>
    </mod> There is too much of myself in <gap reason="illegible"/>
    <add place="above">the thing,</add> Harry, too much of myself! </quote>
</p>

```

Figure 10: Text encoding for *MS* pages 20-21 continued.

The next paragraph of the passage is almost completely blotted out. It consists of Lord Henry's condemnatory and jealous protestations: "his power," "to make yourself the ... slave!" and "I hate Dorian Gray." Here, Wilde obscures the fatalistic connotations of Basil's passion, which exasperate Lord Henry. Accordingly, I labelled the @implication with the theme of "fatality" and the @strokes with the value "inconclusive."

Most of the third paragraph remains unrevised, presumably for how it furthers Dorian's aestheticization as a muse for Basil's painting. The pen strokes across the following, fourth paragraph, however, obscure much of its language, which revolves around the themes of passion and fatality. On the theme of fatality, the small adjustment of "would" to "might" eliminates a sense of inevitability about Basil's feelings for Dorian. On the theme of passion, the revelatory line: "where there is merely love, they would see something evil, where there is spectacular

passion, they would suggest something vile” is completely struck out. This statement clarifies Dorian’s importance for Basil as the source of a powerful beauty that suffuses Basil’s art. Notably, the strokes over the phrase “suggest something vile” are doubled, which cannot be encoded in the TEI without separating the revision of the entire sentence into two instances. As with the previous revision to “look of pain” (9), marking each element here with precision would require separating into distinct entities what is in fact one act of revision that contains plural implications. It would involve resolving Wilde’s perhaps indeterminate motives into a single intention.

On one level, the TEI encoding reinforces the claims by Lawler, Frankel, and Bristow that Wilde diminishes the homoerotic elements by transforming Dorian from an erotic into an aesthetic object. This goal is achieved in three ways: first, by easing the tension surrounding his dialogue with Lord Henry; second, by emphasizing Dorian as an ideal subject for art; and finally, by removing the destructive connotations of Basil’s attachment to Dorian. On a deeper level, however, the existing textual scholarship has yet to contend with the complex ways in which Wilde’s intentionality is distributed among the revisions. To resolve some of the difficulty with encoding this text, one might employ more precise qualitative markers such as “tension” in addition to “intimacy,” or “ardor” and “devotion,” in addition to “passion,” for example. At the same time, however, creating more tags (and using the TEI in this way) runs the risk of diluting the analytical utility of the tagset. With too many tags, the relationships between them may be more difficult to analyze. Part of working with the TEI involves thinking carefully about how much description is too much, and many TEI projects (like the one on Michael Fields, for example) do succeed in striking this balance.

For this project, however, my TEI customization reveals that the themes of intimacy,

beauty, passion, and fatality operate in inscrutable ways: They may be plural, co-existing within a single line of text; they may be inextricable, with one enabling the other, like intimacy and passion, which enable fatality; or they might enfold one within the other, encompassing a plurality of intentions. My customization of the TEI surfaces how these themes work together in ways that cannot be captured by its data structure and its need for strict disambiguation.

Conclusion

The more that I work with the TEI, the more I come to realize that the problem with its data model goes beyond the boundedness of its elements, and toward a dominating, top-down structure that it imposes on textual data. At the root of the TEI's rigidity is its hierarchical document model where each element within the tree structure subscribes to its parent element and dominates its subordinate ones. Within this tree-like architecture, information is not only encapsulated or bound, it is delineated by the standards of each governing tag, its syntax, model, attributes, and contents.

I find that underlying Ruddick's two "unspeakable" morals about beauty and homosexuality, there is a third level of "unspeakability"—about power, about who has it and who is subject to it. For this text in particular, the dominant force is that of the writer himself, a writer with nearly every privilege—gender, racial, financial, cultural, and educational—who censors his own writing. What about texts whose writers or subjects are subscribed to larger systems of domination, such historical forces of discrimination, exploitation, and oppression? To better understand the role of dominance in delimiting data forms, it is useful to turn to an archive that has been totally dominated by hierarchical power structures. One such archive comprises Jessica Marie Johnson's subject matter in her book, *Wicked Flesh: Black Women, Intimacy, and Freedom*

in the Atlantic World. Here Johnson studies the lives of black women in the 17th and 18th century Atlantic world by reading through and between official documents and historiographical records written by slave-owning men, traders, and colonial officials. From these records, which “often contain incomplete information,” Johnson weaves a history “in careful and creative ways” (Johnson 5). Her readings of these documents surface a complicated and nuanced picture of black women’s lives and how they negotiated their own freedom practices within slave-owning, male dominated world.

Johnson illustrates two strategies for approaching this challenging dataset: the first is a strategy of narration, where Johnson interweaves fragments that, on their own, tell a story of bondage and subjection to power. She begins by framing each chapter with the story of different figure from the archive, constructing for the reader a vivid scene from the woman’s life in a way that foregrounds her character and accomplishments. The first chapter, for example, presents Seignora Catti, “a wealthy merchant in her own right, [who] had leveraged her status as the wife of a European against her commercial savvy and the opportunities and experience of living in the middle ground between the Atlantic Ocean to the west and the Wolof sovereigns in the east for her own benefit” (Johnson 16). The notes reveal that the sources for Catti’s biography stem from biographical writings featuring Jean Barbot, a commercial agent for a French slaving company based in Senegal. In Johnson’s narrative, Barbot’s role is delimited to a supporting character, to a guest at Catti’s dinner party whose presence serves to bring Catti into the foreground.

In addition to narrativizing between the gaps in the record, Johnson also magnifies and resignifies these gaps. She finds novel ways of handling information that is absent from the archive, for example, a census that ignores the presence of black women and girls living in the New Orleans area in the early 18th century. Reading these absences as “null values,” a concept

that borrows from Jacob Gaboury's analysis of null values in database computing,²⁸ Johnson "resist[s] equating the missing or inapplicable information with black death" (135). Emphasizing these "null" values, which represent the absence of information, allows Johnson to index where these women exceed the logics of colonial subjectification:

It is possible to see their absence as evidence of either their perceived nonexistence or lack of importance, or inferior data-collection practices. It is also possible, however, to hear in the register's silence the ecstatic shout of black freedom practices transgressing colonial desires, black people forming maps of kin between towns and countryside, black women loving each other into free states that could not be counted by census officials, much less managed by imperial entities or recorded on manuscript pages. 143

By making a space for silence, Johnson can reframe the effects of absence within the archive. Johnson demonstrates where these women, who were not counted in the census, "exceed the bounds of colonial power," based on the quantification and commodification of black life, rather than reify the dominating narrative of black subjugation or death. The histories of what could have been, which do not fit into dominant systems of colonial quantification, include the radical seeking of "joy and pleasure, g[iving] birth, mother[ing] spaces of care and celebration, and cultivat[ing] expressive and embodied aesthetic practices to heal from the everyday toil of their laboring lives" (Johnson 10). Taken from database computing and into the history of the Black Atlantic, these null values allow Johnson to frame "blackness not as bondage... but as future

²⁸See Gaboury, Jacob. "Becoming NULL: Queer Relations in the Excluded Middle." *Women & Performance: a Journal of Feminist Theory*. 28:2, 2018. pp. 143-158.

possibility” (Johnson 2020, 10).

Johnson’s historiographical project requires more than just assembling fragments that survive or resignifying the silences in their place; it requires narrating from what Johnson describes as “a deeper well of women, communities, practices, strategies, failures, and terrors that shaped the meaning of freedom and a faith in the possibility of emancipation” (Johnson 231). Johnson explains,

It is from these depths, deeper than exceptional names and silent registers, that black women remember their mothers, daughters, godmothers, and aunts. Black communities remember each other, in family whispers, at altars, and at communion. Historians, bound by archives, may scrape dusty folios for sources, may question whether women and girls will appear or worry that when they do appear, they emerge as legends, myths, and motifs representing more than themselves. That is not the intellectual tradition this book was written in. (231)

This distinction between record and memory is the key to Johnson’s historiographical method. Memory is a space that, by design, cannot be recorded or “marked up.” Memory, which is maintained by community and fuelled by imagination, is a space that cannot be regulated and delimited like official documents and their implicit structures.

How might this historiographical approach for resisting dominance structures apply to editorial work with electronic textual data? Within an extremely delineated set of records, which contain only minimal data about the lives she intends to surface, Johnson works to read through

and between the gaps in the record. The TEI might also work with and through gaps, not of a data structure, but of a larger system of dominance that enables editorial work in the first place. As electronic editing scholar Amy Earhart emphasizes, editorial practices are bound by structures deeper than the TEI data format—institutional support and funding. In order to pursue a TEI project, researchers need time, money, training, and access. These obstacles preclude many text encoding projects from beginning in the first place and limit their ability to succeed. To highlight the influence of this structure on text encoding work, I will close by briefly looking at how two projects take what Earhart describes as a “DIY approach” that defies the structural constraints of both the institution and the data format (Earhart 2010, 314).

The first project, the *Editing the Eartha M.M. White Collection*, uses community-based strategies to encourage and train beginner encoders. Based at the University of Florida, this project contains an electronic archive of personal correspondence and other documents related to Eartha M.M. White (1876–1974), the founder of the Clara White Mission and a leader of Jacksonville, Florida’s African American community. Beginning in a classroom in 2016, this project continues to grow through the collaborative effort of students, faculty, staff at UNF, with recent efforts being made to expand into the Jacksonville community more broadly. To facilitate collaboration on the project, project participants share their TEI documents on GitHub, an online space for publishing digital work (used primarily for collaborating on open software), and offer detailed, step-by-step instructions for new editors to get started with text encoding. The introductory guide to the archive, aimed at all levels of experience, indicates that this project draws significantly from non-specialist and community knowledge.

The second project, *The Peter Still Papers*, strategically deploys a minimal approach toward text encoding. Based at Rutgers University, this project collects and publishes

correspondence (1850-1875) relating to former slave Peter Still's attempts to purchase freedom for his wife and children in Alabama, and includes letters by William Lloyd Garrison, Horace Greeley, and Harriet Beecher Stowe. This "Documentary Edition" makes selective use of tags based on TEI-Lite (a scaled-down version of the official TEI tagset), with the goal of bringing out a particular narrative among the papers:

Our intention with the markup has been to produce a rough idea of the *aboutness* of each letter, and not to count every reference to a person or a place. Consequently, the persName and placeName tags have been used selectively.... in the personography file, we have made an attempt to include only those people who were significant in Peter Still's world, namely family, friends, and people who helped or hindered him in his mission. (*The Peter Still Papers 2015-2022, "About"*)

Their minimalist tagging scheme reflects an inventive approach toward the structural limitations surrounding the creation of the archive: first, the scope of the documents themselves, none of which are written in Still's hand, reflect what editors describe as "only one side of a conversation, punctuated by many gaps and omissions" (*The Peter Still Papers 2015-2022, "About"*). Additionally, like the *Editing the Eartha M.M. White Collection*, this project draws from a range of skillsets, specifically from non-specialists in American history, as "no member of the project team is a historian by training, nor expert in the period in question" (*The Peter Still Papers 2015-2022, "About"*).

Both *Editing the Eartha M.M. White Collection* and *The Peter Still Papers* work within

limited structures—institutional and informational structures—toward collaborative and community-oriented encoding approaches. They demonstrate that resistance is not just another formal experiment, where non-normative bodies challenge subscription into an oppressive mainstream. It is a political project that foregrounds that which cannot be incorporated into the mainstream.

The answer to Flanders's question from the start of this chapter—“do we need to queer markup, or is markup already queerable?”—seems to depend on two things. First, on the assumption that researchers want (like this one does) to challenge the larger structures that determine meaning making. Second, the kind of structure that the encoder is targeting within the document (2017). For Wilde's project, my use of the TEI sought an approach toward editing that might surface how queerness slips through attempts at demarcation. By encouraging encoders to impose a level of fixity on the text, the TEI allowed me to discover exactly where queerness eludes containment. I used the formalizations made possible by my custom TEI schema not to settle Wilde's intentions, but to release potential readings of the history of his composition, in other words, to mark and visualize its queer forms: the elusive affects, repressed desires, and other coded elements of queerness within this text.

Self-revision, or even self-censorship, is not the same as being silenced. My approach to editing with the TEI tells a compelling story about Wilde's work in suppressing or transforming the homoerotic elements in his story. But I was not (at the time) thinking about the power structures that enabled their creation. In a way, I was working within the same advantages of Wilde's own implicit privilege, particularly his agency in deciding what to change and how (as evident with my own customization of the TEI). Wilde's decision to aestheticize the homoerotic elements operates as another dominating force, one that I overlooked for the sake of queer

formalism. The data structure and format may enable encoders, as it did this one, to eventually recognize larger systems of domination operating around the text.

CHAPTER THREE

“Sex, Flesh, Skin: A Media Archaeology of Octavia Butler’s *Dawn* and Entropy8Zuper!’s *skinonskinonskin*”

Sex

In the novel *Dawn*, the first of the *Xenogenesis* trilogy by Octavia Butler, the main character, Lilith Iyapo, is seduced by an alien. The alien, called “Nikanj,” is an ooloi, a neutral-gendered being. Nikanj coaxes Lilith to join it and her human partner, Joseph: ““Lie here with us,’ it says, ‘Why should you be down there by yourself?’,” an invitation which Lilith cannot resist:

She thought there could be nothing more seductive than an ooloi speaking in that particular tone, making that particular suggestion. She realized she had stood up without meaning to and taken a step toward the bed. She stopped, stared at the two of them. Joseph’s breathing now became a gentle snore and he seemed to sleep comfortably against Nikanj as she had awakened to find him sleeping comfortably against her many times. She did not pretend outwardly or to herself that she would resist Nikanj’s invitation—or that she wanted to resist it. Nikanj could give her an intimacy with Joseph that was beyond ordinary human experience. And what it gave, it also experienced.

(Butler 306)

The erotic desire that Lilith experiences is intense enough to make her temporarily ignore that these aliens, called “Oankali,” have descended upon earth with one goal: to coerce humans to reproduce with them and create a human-alien species. As an ooloi, Nikanj has a special sexual organ that facilitates a neural connection between a male and female partner, in this case, between Lilith and Joseph. It makes this connection by inserting this organ, a “sensory hand,” into each partner’s spinal cord at the back of the neck. During the sex act, this organ stimulates each partner’s pleasure centers in the brain and collects genetic information which the Oankali will eventually use to engineer a human-alien embryo.

Despite her eagerness to have sex with Nikanj, Lilith harbors a deep resistance against the Oankali’s intention to procreate with humanity. Scenes like the one above, in which Lilith surrenders to her sexual desire, appear in stark contrast to her determination to escape, conveyed by her invocation to “Learn and run!” which she repeats up until the last page of the novel. Having barely survived a nuclear apocalypse only to be “rescued” by the aliens, Lilith, along with the surviving humans, is a prisoner on the Oankali spaceship until they are ready to do their part in the “gene trade”—that is, to re-populate the earth with a new human-Oankali species. The Oankali have given Lilith a special job: she will be a guide, what she calls a “Judas goat,” that shepherds humans into accepting that humanity will change forever, that their children will look like what she calls “Medusa children” (Butler 87).

Lilith’s seduction becomes more bewildering when one considers that the human-Oankali sex act occurs entirely in the mind. Here, the ooloi’s neural link bypasses the male and female bodies entirely to connect to the brain at the base of the skull. Despite being contained within the mind, the body’s sexual desire overrides Lilith’s cognitive reasoning, “she had stood up without meaning to and taken a step toward the bed” (Butler 306). Her sex drive is so powerful that she

cannot resist her captor.

The role of the body's impulses speaks to a larger debate among the novel's critics about the effect of biology and biological drives on human behavior in the text. Jayna Brown argues that this text, like others by Butler, surfaces the tension between "change" and "prevail[ing]," that is, between the drive to adapt and the drive to persist, within human survival instincts (89). In an early and influential critique, Donna Haraway argues that the novel displays a biological drive to adapt, and that the interspecies couplings challenge naturalizing assumptions about sex, race, and the human/animal divide. Here, Haraway reads the story "as if it were a report from the primate field in the allotropic space of earth after a nuclear holocaust," where inter-species relations "facilitate revisionings" of "difference, reproduction, and survival" (Haraway 376-7). By contrast, critics such as Stephen Barnes and Nancy Jesser argue that the humans and their behavior in the novel reinforce intractable sociobiological tendencies toward tribalism, hierarchy, and sexism. Stephen Barnes, who knew Butler personally, emphasizes the influence of biological research in her writing on human nature, sharing that Butler was fascinated by what she called "emergent properties," which begin from small impulses, like the tendency to categorize something as either similar or different, and grow into complex social behaviors and structures. Nancy Jesser emphasizes the novel's biological determinist view of sex, arguing that "the plot relentlessly reinforces certain sociobiological notions of essential and 'natural' male and female through the concept of biological 'tendency'" (Jesser 41-42).

Regardless of the effect of biology on behavior, the critics generally agree on one point, however: that the text reflects a firmly heterosexual paradigm. These views proceed from the gendered nature of the sex act, which maintains a male/female dynamic, despite the addition of the neutral-gendered intermediary. Haraway, for example, asserts that, "Heterosexuality remains

unquestioned, if more complexly mediated. The different social subjects, the different genders that could emerge from another embodiment of resistance to compulsory heterosexual reproductive politics, do not inhabit this *Dawn*" (380).

This chapter argues that the heterosexual paradigm is indeed disrupted in the novel, and it is disrupted in the collision between thinking and feeling that occurs in the tripartite sexual union. The reason that Lilith succumbs to seduction is not because she lacks mental control over her body's sex drive, but because the mind is simultaneously a *brain*—it is bound by the same physical processes and protocols that drive any biological response.

In what follows, I will examine the connection created by this union, whose linkage of neural pathways between two bodies scrambles the distinctions between thought and sensation, a clash of registers that blends the materiality of the flesh with the abstraction of cognitive processes. Then, I will explore how this clash of registers operates across two seemingly unrelated areas of study: Black Feminist Studies and Media Archaeology Studies. I am interested in how each of these domains theorize the intersection of physical and conceptual registers: in Black Feminist Studies, between the physical flesh and its symbolic meanings, and in Media Archaeology Studies, between the layers computer hardware and software. I close the chapter with a close reading of an electronic literary work, *skinonskinonskin*.

From Butler's novel, I focus on moments of heightened physical sensation that occur when the characters experience intense emotions, like fear and desire. I first examine a moment of fear, which occurs when Lilith comes face-to-face with her captors for the first time. Jdahya, a male Oankali, meets Lilith in her isolation room. She initially processes his alien body according to human anatomical terms:

The lights brightened as she had supposed they would, and what had seemed to be a tall, slender man was still humanoid, but it had no nose—no bulge, no nostrils—just flat, gray skin. It was gray all over—pale gray skin, darker gray hair on its head that grew down around its eyes and ears and at its throat.

There was so much hair across the eyes that she wondered how the creature could see. The long, profuse ear hair seemed to grow out of the ears as well as around them. Above, it joined the eye hair, and below and behind, it joined the head hair. The island of throat hair seemed to move slightly, and it occurred to her that that might be where the creature breathed—a kind of natural tracheostomy.

Lilith glanced at the humanoid body, wondering how humanlike it really was. “I don’t mean any offense,” she said, “but are you male or female?” “It’s wrong to assume that I must be a sex you’re familiar with,” it said, “but as it happens, I’m male.”

Good. It could become ‘he’ again. Less awkward. (Butler 29)

The gender designation, “he,” along with a catalogue of anatomical features, “hair,” “eyes,” “ears,” and “throat,” reveals the impulse to categorize the unknown according to familiar terms. This familiarity, however, evaporates when the strangeness of the alien’s appearance exceeds the categories available to her:

She did not want to be any closer to him. She had not known what held her back before. Now she was certain it was his alienness, his difference, his

literal unearthliness. She found herself still unable to take even one more step toward him.

“Oh god,” she whispered. And the hair—the whatever it was—moved. Some of it seemed to blow toward her as though in a wind, though there was no stirring of air in the room.

She frowned, strained to see, to understand. Then, abruptly, she did understand. She backed away, scrambled around the bed and to the far wall. When she could go no farther, she stood against the wall, staring at him.

Medusa. (Butler 30)

In an attempt to place the alien into familiar categories, Lilith undergoes a complex physio-cognitive reaction. First, she uses mammalian anatomical categories to perceive Jdahya. Then, as his difference begins to register, she apprehends him on a seemingly pre-linguistic, embodied level, characterized by a paralyzing aversion where she is “unable to take even one more step toward him” (29-30). Finally, when she examines his face more closely, the interval of immobilizing fear ends abruptly with her “understand[ing],” and she evokes the mythical figure “Medusa.”

The choice of “Medusa” here is significant. It demonstrates that Lilith subscribes the unknown in terms of something familiar to the human imaginary, albeit in the context of myth. Her physio-cognitive progression from embodied reaction to intellection suggests a peculiar way that humanity experiences the unknown, that is, of xenophobia. Within the novel, the concept of xenophobia is expressed in what the Oankali term the “human contradiction.” Later in this scene, Jdahya describes the particular characteristics that make up this contradiction:

“You are intelligent,” he said. “That’s the newer of the two characteristics, and the one you might have put to work to save yourselves. You are potentially one of the most intelligent species we’ve found, though your focus is different from ours. Still, you had a good start in the life sciences, and even in genetics.”

“What’s the second characteristic?”

“You are hierarchical. That’s the older and more entrenched characteristic. We saw it in your closest animal relatives and in your most distant ones. It’s a terrestrial characteristic. When human intelligence served it instead of guiding it, when human intelligence did not even acknowledge it as a problem, but took pride in it or did not notice it at all...” [...] “That was like ignoring cancer. I think your people did not realize what a dangerous thing they were doing.” (Butler 80-81)

According to Jdahya, the tendency toward hierarchy, to create social groupings, even to colonize and oppress, descends from an ancient instinct that once served to sustain, protect, and organize early human tribes. But when the hierarchical instinct grows unchecked into the modern world, Jdahya explains, it creates unjust divisions within society.

Her utterance of the word “Medusa” marks the moment when Lilith, who until then has been struggling to visually process this strange being, finally settles onto a familiar designation. For Lilith, then, the tendency toward hierarchy first demands that she place him on a scale of familiarity. She compares Jdahya to what she already knows about other living beings, ascribing him within a binary gender system, for example. However, when the hierarchy fails to subsume his other qualities, like the strange, moving “hair” growing all over his body, she freezes until

her intelligence speculates with an analogy, “Medusa.” Here, her mind makes the leap between what she sees and what she can imagine, indicating that this particular type of xenophobia is not just related to otherness, but to the interplay between otherness and similarity. Significantly, what scares Lilith is an apparent familiarity of this humanoid, this bipedal, two-limbed creature, whose audible language and conscious intelligence is combined with aspects that do not belong to any mammal. Despite his alienness, at that point, Lilith incorporates Jhadaya into her anthropocentric worldview—specifically, into a fearsome figure that represents monstrous and deadly femininity.

The criticism from the novel situates this interplay of similarity and difference within intersectional or “Women of Color” feminism that is based in Chela Sandoval’s theorization of “differential consciousness.”²⁹ To explore this concept as a physiological response related to fear, I draw from Chicana feminist theorists Cherrie Moraga and Gloria Anzaldúa who write about xenophobia as a sensual experience. Moraga, for example, argues that the fear of the other is heightened by a perceived similarity between the self and other, a similarity that crucially emerges in embodied sensation. Speaking about social hierarchies of oppression, Moraga asserts that, “it is not really difference the oppressor fears so much as similarity” (32). However, at the same time that perceived similarity causes fear, it also offers an opportunity for connection. For example, she draws from her sexuality to relate to her mother, who experienced levels of poverty and colorism that Moraga, as an educated “guera,” was able to avoid:

²⁹ Using terms that echo in her famous follow-up work, “The Cyborg Manifesto,” Donna Haraway describes this text (and Butler’s fiction in general) as being “about the monstrous fear and hope that the child will not, after all, be like the parent” (Haraway *Primate Visions* 387). Catherine S. Ramirez builds from both Haraway and Sandoval to explore the tension between essentialism and constructedness in the novel, which she calls an example of “cyborg feminism”—a feminism that explores a strategic tension between “affinity and essence, and “plurality and specificity” (Ramirez 395). Ramirez argues that, by “critiqu[ing] fixed concepts of race, gender, sexuality and humanity, and, subsequently, ‘fictions’ of identity and community” this work displays a “strategic deployment of essence,” that is, the claiming of a subject position for the purpose of resisting subjectification (Ramirez 375, 395).

It wasn't until I acknowledged and confronted my own lesbianism in the flesh that my heartfelt identification with and empathy for my mother's oppression—due to being poor, uneducated, and Chicana—was realized. My lesbianism is the avenue through which I have learned the most about silence and oppression, and it continues to be the most tactile reminder to me that we are not free human beings.

(28-29)

Here, Moraga's sexuality enables her to make a connection to other kinds of difference, specifically differences across skin tone and economic class. When such difference is a source of "silence and oppression," as it has been for Moraga's sexuality, finding similarity can be a deeply sensual process, a confrontation that occurs "in the flesh," a "tactile reminder" that bridges the gap between self and other.

Anzaldúa, a Chicana lesbian like Moraga, explores possibilities for incorporating difference into identity. From the Texas/Mexico border, Anzaldúa works to integrate her Aztec, Spanish, and Mexican backgrounds into a modern Chicana identity. She explains that surfacing this history and heritage will require "developing a tolerance for contradictions, a tolerance for ambiguity... learn[ing] to be an Indian [sic] in Mexican culture, to be a Mexican from an Anglo point of view" (78-79). Here, Anzaldúa resurfaces latent aspects of the cultural psyche in the form of the fearsome Aztec goddess, Coatlicue. Like Medusa, Coatlicue is associated with snakes, her name translating from Nahuatl into "serpent skirt." As the "Earth Mother who conceives all celestial beings out of her cavernous womb," Coatlicue embodies a unity of opposites, the dual forces of life and death, fertility and destruction (Anzaldúa 46). Over time,

however, Anzaldúa explains that this unity has been severed into “pure” and “impure” aspects. Influenced by a growing patriarchy, Aztec culture splits Coatlicue into “Tonantsi,” the puta, and into “Coatlalopeuh,” the chaste (27). Then, with the arrival of the Spaniards and Catholicism, the figures are split again, this time into the Virgin of Guadalupe, the most revered figure of Mexican Catholicism, with the negative aspects incorporated into la Llorona and la Chingada.

Coatlicue incorporates the originary whole that Anzaldúa aims to bring into a modern imaginary: “Coatlicue- Cihuacoatl- Tlazolteotl- Tonantzin- Coatlalopeuh- Guadalupe—they are one” (50). Anzaldúa calls process of accessing and integrating the scattered aspects of Coatlicue the “*Coatlicue* state.” Here, she enters into a trance, creating a spiritual opening, to confront the pain, shame, and loneliness of a severed identity. She explains that, “We need *Coatlicue* to slow us up so that the psyche can assimilate previous experiences and process the changes” (Anzaldúa 46). Anzaldúa then describes the visual confrontation with *Coatlicue*:

Seeing and being seen. Subject and object, I and she. The eye pins down the object of its gaze, scrutinizes it, judges it. A glance can freeze us in place; it can “possess” us. It can erect a barrier against the world. But in a glance also lies awareness, knowledge. These seemingly contradictory aspects—the act of being seen, held immobilized by a glance, and “seeing through” an experience—are symbolized by the underground aspects of *Coatlicue*, *Cihuacoatl*, *Tlazolteotl* which cluster in what I call the *Coatlicue* state. (42)

Vision is simultaneously a tool for capture, for being “pin[ned] down” or “immobilized,” and a tool of enlightenment, in “awareness, knowledge.” Anzaldúa embraces the duality of this kind of

vision, and in what seems to be its paradoxical effect, which is freedom in possession. Being the object of *Coatlicue*'s gaze both relinquishes agency to enable an intimate relation to the other. According to this view, to overcome the fear of difference, one must forsake a kind of individuality.

In Butler's novel, the Oankali, unlike the humans, are attracted to difference. As Jdahya explains to Lilith: "We acquire new life, seek it, investigate it, manipulate it, sort it, use it. We carry the drive to do this in a minuscule cell within a cell, a tiny organelle within every cell of our bodies" (84). This essential drive, which powers their "gene trade," is made possible by that which the humans find most disturbing about their captors: the tentacle-like organs that sprout from their bodies. These organs transmit all external sensory information such as sight, hearing, touch, smell, and taste, provide channels for the immediate sharing of thoughts and feelings in intra-Oankali communication, and they facilitate sex. Their sensory capacities not only put them into direct contact with those who are different, it also enables them to absorb and incorporate that difference through gene manipulation. This craving is encoded in their own genetic ancestry, as Nikanj, Lilith's ooloi mate, explains: "'Six divisions ago, on a white-sun water world, we lived in great shallow oceans' [...] 'We were many-bodied and spoke with body lights and color patterns among ourself and among ourselves'" (123). From their ancestors, a collective consciousness that is singular and plural at once, "ourself and ourselves," the current Oankali inherited the drive for accumulating diverse genes.

This drive to accumulate destabilizes human understandings of individuality, particularly that of free will. When Nikanj is an adult, he uses Joseph's genetic material to impregnate Lilith without her knowledge, much less her consent. Nikanj explains to Lilith that it only gives her what she truly wants, which is a child, "'You'll have a daughter,' it said. 'And you are ready to

be her mother. You could never have said so. Just as Joseph could never have invited me into his bed”” (468-9). For the Oankali, consent is not a matter of individual preference, it is a matter of what the body wants; conscious will becomes collapsed into embodied desire.

The sex scenes in particular make it difficult to separate conscious will from embodied desire. As Jayna Brown points out, “the pleasurable experience of sex with the Ooloi is so highly compelling it is sometimes likened to rape in the text” (105). Not only are humans seduced into sexual relations by the Oankali’s potent pheromones, the aliens also use involuntary sterilization (as in the case with Lilith), are complicit in rape, both human-on-human and Oankali on human, such as in Nikanj’s rape of Joseph. Joshua Yu Burnett explains that while “the novel’s treatment of the issue [of consent] is both provocative and troubling,” “none of this is meant to suggest that the Oankali are vicious, brutal rapists” (110, 117). Because their communicative style leaves no room for deception, “they seem quite genuine in their insistence that human claims of non-consent belie a deeper, physio-psychological consent” (Burnett 117). Adding more nuance to the issue, Justin Louis Mann’s “pessimistic futurist” reading of the novel finds that the sexual coercion revises the human contradiction to put subjugation and pleasure on the same plane.³⁰ Mann explains that the sexual relationship between Lilith, Joseph, and Nikanj is crystalized by the image of Nikanj’s “sensory arm” wrapped around Lilith’s neck, which she describes as “an oddly comfortable noose” (Mann 62). Mann points out that this noose draws from history of subjugation and death while also evoking comfort with the highly pleasurable sexual experiences that Lilith enjoys with Nikanj. According to Mann, this comfort augments the coercive aspects of the human contradiction with physical pleasure (Mann 62).

³⁰ The concept of “pessimistic futurism,” according to Mann, combines the cynicism of afro-pessimism, which associates blackness with ontological death and the impossibility of black subjectivity, and the optimism of afro-futurism, which speculates and potentializes liberatory black subjectivity and futurity.

When Nikanj presents himself to Lilith, one might expect a conflict between her embodied instinct and free will, that is, between her sexual desire and her resistance to the forced interbreeding. But instead, one encounters their conflation, where Lilith welcomes her body's immediate, unconscious response to Nikanj's invitation. The conflation also emerges in the collapse between physical sensation and mental experience that occurs during the sex act itself. When Nikanj "plugs" into her and Joseph, Lilith experiences a torrent feelings that leads her to question the objective reality of her experience:

She immediately received Joseph as a blanket of warmth and security, a compelling, steady presence.

She never knew whether she was receiving Nikanj's approximation of Joseph, a true transmission of what Joseph was feeling, some combination of truth and approximation, or just a pleasant fiction.

What was Joseph feeling from her?

It seemed to her that she had always been with him. She had no sensation of shifting gears, no "time alone" to contrast with the present "time together."

He had always been there, part of her, essential. (308-309)

What Lilith first feels as Joseph's physical presence, a "blanket of warmth," she builds into cognitive interpretations, of doubt then reassurance. When she questions the objective truth of her experience, she is reassured by sensing Joseph: "he had always been there, part of her, essential." Meanwhile, Nikanj, who is mediating the experience, becomes imperceptible to the two of them:

Nikanj focused on the intensity of their attraction, their union. It left Lilith no other sensation. It seemed, itself, to vanish. She sensed only Joseph, felt that he was aware only of her.

Now their delight in one another ignited and burned. They moved together, sustaining an impossible intensity, both of them tireless, perfectly matched, ablaze in sensation, lost in one another. (308-309)

Sex dissolves the sense of time, space, and the distance between Lilith and Joseph, who she felt “was aware only of her.” In the midst of this intensity, the intermediary which makes this fusion possible fades, leaving Lilith and Joseph “lost in one another.” Afterward, when Lilith asks whether Joseph also experienced what she experienced, Nikanj explains that he did, but “on a sensory level. Intellectually, he made his interpretations and you made yours.” To this, Lilith remarks that she “wouldn’t call them intellectual” (310-311). That Lilith questions whether her experience is based on a shared reality and immediately afterwards asserts their physical nature suggests that the cognitive and sensual registers of feeling become indistinguishable during the sex act. Are her feelings imagined in her mind, or are they imagined in her body? The direct neural connection makes this conflation between body/mind possible, creating a channel through which embodied sensation and intellectual interpretation can blend into one another.

In human-alien sex, the neural connection between minds surfaces a sensation of exactly that which this connection bypasses—the body. Humans must navigate through the physical body from the outside, and through the potential for miscommunication, misunderstanding, and even xenophobia, to attain unity. The Oankali, by contrast, bypass the outer body entirely by routing directly into the brain, eliminating the space for physical discomfort and even repulsion. This immediate connection facilitated by the ooloi offers, as Nikanj explains, it “a oneness that

your people strive for, dream of, but can't truly attain alone" (359). The pleasures that come from physical sensation, the feeling of which is heightened in sex, is what enables the Oankali to crave, rather than fear, difference.

The bypassing of outer body to simultaneously invigorate fleshy sensation requires a new understanding of sexuality, one that disrupts the traditional boundaries of subjectivity. Here, I depart from critics who, while mostly disagreeing about biological determinism in the novel, do agree on the primacy of heterosexuality.³¹ One exception to this view is Patricia Meltzer, who argues that the *Xenogenesis* trilogy presents a view of non-normative sexuality which can literally transform bodies at will. In one of the sequels to *Dawn*, titled *Imago*, the human-Oankali descendants have evolved the ability to manipulate the organic matter within their own bodies, and they adapt their bodies to their prospective partner's desires. Drawing from Judith Butler, Meltzer argues that these shape-shifting bodies are queer because they are constructed by desire:

³¹ While one group of critics generally maintain that the novel destabilizes biological categories its associated assumptions about behavior, a second argues that the novel reinforces biological determinist views. The first group emphasizes the novel's revision of biological determinist views, particularly when it comes to gender. "Gender," Haraway argues, "is not the transubstantiation of biological sexual difference," rather, it is "kind, syntax, relation, genre" (*Primate Visions* 377). Critics who build from Haraway's reading, like Catherine S. Ramirez and Kitty Dunkley, explore how Butler deploys aspects of biological identity in a strategic way. Ramirez explains that Butler strategically deploys essentialist identity categories, as a tool for "imagining and mobilizing new subjects and new communities" (395). Within the frame of humanism, Kitty Dunkley emphasizes Butler's revision the anthropocentric and patriarchal structures that necessitate essential notions of gender. An example is the men's fear of the sexual seduction and penetration by the ooloi, which "threatens to usurp the men's position at the pinnacle of a gendered hierarchy" (Dunkley 100). For both Ramirez and Dunkley, the biological "facts" of gender are deconstructed, rather than reinforced, in the novel.

By contrast, Nancy Jesser centers the role of biological determinism within Butler's fiction. Jesser boldly asserts that "Genetics is the science of Butler's fiction. The translation of genotype to phenotype is the plot" (52). According to Jesser, the novel re-works genetic tendencies of behavior by deploying feminine traits, like maternal self-sacrifice, nurture, and relationality, to correct tendencies of dominance, possessiveness, and aggression typically displayed by the males (41-42). On this side of the debate, biology is a physical fact that determines behavior, but can also be re-worked or overcome through other tendencies.

Butler's concepts here are positioned neither in a biological essentialism that insists on gender identity (woman) as deprived of a body's sex (female), nor in a social and/or psychological constructivism that understands the body's materiality as dominated by (social) discourse. Instead, desire and sexuality are based in the body's need for others... the body follows desire. (Meltzer 241)

Building from Butler's concept of performativity, Meltzer defines queerness as resisting the normative correlation of sex/gender/desire, a resistance in which these categories are destabilized, upended, and reimagined. The failure of easy alignment among them opens up the possibility of imagining how desire can construct new configurations of sexuality, that are "rooted in the body's amorphous craving for physical pleasure" (Melzter 236).

I agree with Meltzer that the sex act is a queer one, but not because of a desire that literally transform bodies. Rather, the sex act is queer because it simultaneously bypasses while reinforcing the sensations of the outer body, the flesh. Here, I draw from Jayna Brown's emphasis on the flesh and how it opens possibilities for reconceiving subjectivity. According to Brown, while the senses "individuate us, demarcate our boundaries," they also "mark the ways our bodies are open. The body, the self, is porous, receptive, impressionable" (Brown 14). In Butler's novel, this openness to feeling is achieved by re-routing around the flesh and its senses, the traditional channels for feeling, in a way that reinforces that which it bypasses. The effect is to transform cognitive and conceptual phenomena into physical, sensual experiences, and vice versa.

In *Dawn*, separateness is crucial for enabling connection. While direct connection can momentarily dissolve the boundaries of the individual, a distance between self and other

energizes sensation and understanding. For example, when Lilith asks Nikanj to share its feelings of grief after Joseph's untimely death: "It gave her... a new color. A totally alien, unique, nameless thing, half seen, half felt or... tasted. A blaze of something frightening, yet overwhelmingly, compelling" (Butler 429). Despite their direct neural connection, the description here derives its expressive power from a quality of unknowability, expressed in liminal forms, "half seen, half felt," "alien," "a new color". This quality of unknowability is essential for maintaining a distance that enables connection in the first place. It recalls Chicana scholar Norma Alarcón's warning about the danger of what she calls "ontologiz[ing] difference" within identity politics. Alarcon explains that the challenge is to achieve connection without totally subsuming the other into totalizing and therefore oppressive paradigms of subjectivity:

The desire to translate as totalizing metaphorical substitution without acknowledging the "identity-in-difference," so that one's own system of signification is not disrupted through a historical concept whose site of emergence is implicated in our own history, may be viewed as a desire to dominate, constrain, and contain. (133)

In the same way that "identity-in-difference" avoids totalizing difference, the neural connection maintains a certain distance between those who are connected. It bypasses the outer body, the flesh, in a way that allows humans to experience fleshy sensations anew, amplifying their mystery and unknowability. Rather than subsume alienness into familiar structures of knowledge, in the way that Lilith subsumes Jhadaya's tentacles into the terrifying Medusa, the neural connection here sustains the irresolvable differences between self and other.

Flesh

Paradoxically, in human-to-human sex, the flesh which facilitates physical contact also functions as an obstacle, creating the potential for miscommunication and fear of the other. In Oankali-human sex, however, the conflation of the mental/physical registers emphasizes fleshy sensation. In other words, while the physical flesh can impede communication and understanding, fleshy sensation can offer new modes and possibilities for relation.

I am interested in looking more deeply into this concept of the flesh, to understand where its physical materiality intersects with signification. How do different domains of knowledge theorize the relationship between materiality and meaning? I examine how two very different fields of study—Black Feminist Studies and Media Archaeology Studies—theorize physical materiality. Though vastly different in focus, with Black Feminist Studies exploring the concept of the flesh within the context of slavery and racial oppression, and Media Archaeology exploring the materiality of electronic media and processing, both areas of inquiry share a similar investment in reading deeply into material surfaces. I will then apply these theorizations of materiality, specifically how meaning is assigned to materiality, to my analysis of the intersections of hardware and software in my next and final section, “Skin.”

In Black Feminist Studies, critics such as Hortense Spillers, C. Riley Snorton, and Amber J. Musser deconstruct racial and gendered processes, a “symbolic order” or “American grammar,” in Spillers’s words, ascribed to Black bodies since the violences of trans-Atlantic slavery (68). In her influential essay, “Mama’s Baby, Papa’s Maybe: An American Grammar Book,” Spillers describes the Black body as a stack of “attenuated meanings, made in excess over time, assigned by a particular historical order” (65). The Black body expresses what she

calls a “stunning contradiction” between reduction and amplification of meanings (67). Spillers explains that the “severing of the captive body from its motive will,” reduces the body to physical materiality, “to a thing, becoming being for the captor,” while simultaneously layering meaning, “becom[ing] the source of an irresistible, destructive sensuality” (67). In other words, through this reduction of the body to its bare physicality—into flesh, a material substance for labor and exchange—emerges a possibility for signification, where elements of sensuality, objectification, otherness, and powerlessness can be layered onto the flesh. Spillers, and thinkers in Black Feminist Studies who build from flesh as the “zero degree of social conceptualization,” refer to this simultaneous reduction and accumulation of meaning as “pornotroping” (Spillers 67). For these thinkers, the next critical move is to take the reduction, which has been a tool for appropriating Black bodies for the purpose of exploitation, to create significatory possibilities that complicate this exploitation.

Musser explains that the reduction to flesh brings to the surface relations that are in tension with the desire to dominate, “allow[ing] us to see the radical potential of excess without flattening the violence at its core” (Musser 9). Musser offers the strategy of “foreclosure,” which, pushing against Afropessimistic foreclosures of Black subjectivity, offers possibilities for new modes of relation that “hold violence and possibility in the same frame” (12). For example, a brilliant surface can foreclose access to interiority in a way that creates multiple registers of interpretation. Musser demonstrates this “surface effect” in the painting *Origin of the Universe I* (2012) by artist Mickalene Thomas, whose depiction of a female vulva references French painter Gustave Courbet’s *L’Origine du Monde* (1866). In Thomas’s piece, the Black and rhinestone-encrusted vulva creates a brilliant surface, a “formal strategy of producing opacity” (Musser 48). By instrumentalizing the opacity of surface effects, this work multiplies the potentiality of

meanings that work alongside a more pronounced subtext of objectification about the commodification of the Black female body. Musser asserts that the rhinestones function simultaneously on two registers: first, their flashiness “as a reminder of the long association between black people and the commodity” (50); and second, as a brilliance that evokes wetness, suggesting sexual pleasure. Both possibilities exist in tension:

Thinking the rhinestone as a trace or residue of Thomas’s wetness and excitement allows us to hold violence, excess, and possibility in the same frame. Even as the source is ambiguous, the idea that rhinestones might offer a record of pleasure—pleasure that is firmly constituted in and of the flesh—shows us a form of self-possession. This self is not outside of objectification, but its embellishment and insistence on the trace of excitement speaks to the centrality of pleasure in theorizations of self-love.

(Musser 63)

The significatory system that commodifies the black vulva exists alongside a production of pleasure. This surface whose opacity seems to insist upon itself facilitates a simultaneity of registers, enabling a movement, or a shift, between one and the other, like a shifting between frames, from “violence”, to “excess,” and finally, to “possibility.”

Foreclosing access to interiority creates a state where meaning is fugitive, where bodies slip in and out of signification. The concept of fugitivity, or escape, is based on a condition of commodification, a reduction of Black bodies into a “fungible” exchange value. C. Riley Snorton argues that this “fungibility” of Black flesh turns bodies into “malleable matter” that enables a fugitivity from markers of sex and gender (20). He illustrates this effect with stories of fugitive

slaves, such as of Harriet Jacobs, whose escape from slavery in 1842 is documented in *Incidents in the Life of a Slave Girl* (1861). Snorton explains how the “blackening” of Jacobs’s face with charcoal endows her with a level of “fungibility, thingness” to pass as a man, even deceiving those who knew her well (Snorton 71). As opposed to traditional racial “passing” that assumes a degree of whiteness, blackness here reduces gender to an “indefiniteness” that enables Jacobs’ escape (56). By undergoing this reduction, the Black body simultaneously accelerates its significatory potential.

This effect of fungibility creates an almost chaotic state where the Black body becomes susceptible to multiple mappings of meaning and can therefore slip in and out of signification. Snorton offers up an example of the daguerrotype, an early photographic technology that involves using chemicals on silver plates. Snorton explains that daguerrotype offers “a visual grammar for reading the imbrications of ‘race’ and ‘gender’ under captivity” (Snorton 40). It does so by flipping expectations about surface and depth: here, rather than depth existing below the surface, the surface becomes a ground for the layering of depth. Snorton describes that this flip creates an “unmappability” of meaning:

... the daguerreotype provides a series of lessons about power, and racial power in particular, as a form in which an image takes on myriad perspectives because of the interplay of light and dark, both in the composition of the shot and in the play of light on the display. That the image does not reside on the surface but floats in an unmappable elsewhere offers an allegory for race as a procedure that exceeds the logics of a bodily surface, occurring by way of flesh, a racial mattering that appears through

puncture in the form of a wound or covered by skin and screened from view.

(40)

The physical material of the image, that is the silvered copper plate of the daguerreotype, at once solidifies its ground and indexes a liminal space, what Snorton describes as the “unmappable elsewhere.” The image of the daguerrotype, which changes according to angle and lighting, evokes the condition of racialization as “a procedure that exceeds the logics of a bodily surface” while nonetheless adhering to that surface, “a racial mattering that appears through puncture.” Snorton’s use of the word “puncture” perhaps revises Roland Barthes’s concept of the “punctum,” suggesting instead a lack of localization to a precise point.³² That the image resists fixity is crucial for understanding the way that the physical registers interact with symbolic ones in the collision of flesh and racialization.

With a quite different political focus, thinkers in Media Archaeology Studies offer deep readings of technological processes to tease out how materiality in hardware and software stacks produce seemingly immaterial surface forms. These thinkers tend to resist common assumptions about media as immaterial, which have been in production since the emergence of computing technologies in the mid-20th century and are famously encapsulated by Media Studies theorist Friedrich Kitler:

The general digitization of channels and information erases the differences among individual media. Sound and image, voice and text are reduced to surface effects, known to consumers as interface. Sense and the senses turn

³² As opposed to the “studium,” or subject, of a photograph, the “punctum” is a detail that “pierces” the viewer. See Barthes, *Camera Lucida*, 27.

into eyewash. Inside the computers themselves everything becomes a number: quantity without image, sound or voice. (1)

Kitler here articulates a common conception that computer code lacks a material instantiation, that it exists as a stream of indistinguishable zeroes and ones that flatten the particular differences of media like text and audio. In contrast to this view, Media Archaeology scholars work to unflatten the zeroes and ones by examining the material specificities of new media. N. Katherine Hayles' work historicizes the process of how "information lost its body," that is, how information processing, the calculation and manipulation of symbols, seems to have dislodged from the physical matter upon which it relies. Hayles disarticulates the binary of information/hardware which, she argues, extends liberal humanist ideology of mind/matter into the "posthuman," where a dominant, unmarked rationality is privileged over embodied experience and especially, embodied difference.³³ Rather, Hayles asserts that "Information, like humanity, cannot exist apart from embodiment that brings it into being as a material entity in the world; and embodiment is always instantiated, local, and specific" ("Virtual Bodies," 91).

The assumption of digital immateriality is perhaps due to the removal of the lower-level technological processes from the user. As Matthew G. Kirschenbaum argues, "digital inscription is a form of displacement... remov[ing] digital objects from the channels of direct human intervention" (86). Kirschenbaum uses the term "forensic materiality" to refer to the most inaccessible level of computer hardware in the hard drive. Here, data is encoded in one of two

³³ Whereas the liberal humanist subject is characterized by classical mind/body divisions and hierarchies that posit embodiment as separate from and subordinate to intelligence, the posthuman is characterized by the figure of a machine that houses informational patterns. According to Hayles, this progression from possession (by a body) to inhabitation (by a machine) suggests that the next move will be to transcend the material realm altogether, as consciousness can be uploaded to a virtual space where information/mind is infinite.

(binary) markings on a magnetized surface, a north polarity signifying “1,” or a south polarity signifying “0”. Examining these binary digits, or “bits,” through magnetic force microscopy, Kirschenbaum notes that each one is unique: “The bits themselves prove strikingly autographic, all of them similar but no two exactly alike, each displaying idiosyncrasies and imperfections—in much the same way that conventional letterforms, both typed and handwritten, assume their own individual personality under extreme magnification” (62). That electronic data, at its core, corresponds to physical markings shatters the illusion of digital immateriality, of a stream of code all the way down.

To trace the transformations of these physical elements as they travel up the software stack, Hayles offers the concept of “flickering signifiers.” Here, she brings Jacques Lacan’s concept of “floating signifier,” that a word does not have a stable referent, but “floats” above a text and attains its meaning through a play of difference against other words, to illustrate the interplay between the immateriality of the screen and the materiality of computer hardware. Rather than destabilize meaning, the flickering signifier dissolves the illusion of immateriality by grounding it to physical signals that move through the software stack:

As I write these words on my computer, I see the lights on the video screen,
but for the computer the relevant signifiers are magnetic tracks on disks.

Intervening between what I see and what the computer reads are the machine code that correlates alphanumeric symbols with binary digits, the compiler language that correlates these symbols with higher-level instructions determining how the symbols are to be manipulated, the processing program that mediates between these instructions and the commands I give the

computer, and so forth. A signifier on one level becomes a signified on the next... “Virtual Bodies” 77

Hayles’s description of this “flexible chain of markers” materializes the various levels of transformation that digitized inscription must undergo in order to reach the level of the screen (*Posthuman* 31). First, physical traces on a magnetic surface are mapped into low-level machine languages which are illegible to human readers. Then, these patterns are translated into “Assembly” languages that pertain to the computer’s Central Processing Unit (CPU), the main processor that executes instructions, arithmetic, and logic. Finally, as data moves up the stack, it abstracts into high level programming languages like Python and JavaScript which power applications that users interact with in the form of the Graphical User Interface (GUI). Rather than “float,” these signals flicker, grounded in physical transformations between one register and the next.

Physical transformations to data as it moves up the “stack,” or layers of software, create a “formal” dimension of materiality. Kirschenbaum offers this phrase, “formal materiality,” to define the “illusion of immaterial behavior,” the illusion that objects on the screen appear, disappear, and move without a physical origin (11). While forensic materiality consists of physical inscriptions, such as magnetic traces on hard drives, formal materiality manifests these traces as they are computed up the software stack, through levels of programming languages to specific interface effects on the screen. It describes not only display and appearance, but also the way that these are deliberately produced to reinforce the fluidity and ephemerality of objects on an electronic display. Kirschenbaum explains that as data moves up the stack, it is continually refreshed to fix errors and idiosyncrasies that occur during transmission. As a result, screen effects “exist as the end product of long traditions and trajectories of engineering that were

deliberately undertaken to achieve and implement it” (137). He likens this process of data normalization to older technologies like the telegraph, which uses relay systems to reinforce signals over long stretches of transmission. As data moves through electronic processing, signal “reinvigoration,” a kind of “allographic reproduction,” refreshes and standardizes it through approximation rather than exact copying, so that formal materiality, the effects of the screen, is a “manufactured” phenomenon (Kirschenbaum 136).

While forensic materiality describes physical inscription, where markings are individuated in the lowest levels of computer hardware, formal materiality describes a structural and even symbolic realm, something like a Platonic level of form, that manifests in display, appearance, and other manifestations of the digital object when it appears on the screen. To explain formal materiality, Kirschenbaum offers the example of an image file:

An image file is typically considered to consist of nothing but information about the image itself—the composition of its pixilated bitmap, essentially. However, the image can carry metadata (documentation as to how it was created, embedded as plain text in the file’s header), as well as more colorful freight, such as a steganographic image or a digital watermark. This content will only become visible when the data object is subjected to the appropriate formal processes, which is to say when the appropriate software environment is invoked—anything from the "Show Header" function of an off-the-shelf image viewer to a 128-bit encryption key . (13)

Formal materiality describes the various dimensions that a digital object might take when it

appears on the surface. This includes structures like computer code (the “pixelated bitmap,” in Kirschenbaum’s words) and the image that the code represents when it is opened with an image viewer. Formal materiality is characterized by this fluidity, by the shifts between different renderings of the same data.

In contrast to the digital immateriality of the screen, formal materiality highlights the physical effects and qualities of digital objects—the way that these objects *move*. As data travels up the software stack and away from its original inscription on the hard drive, a strange thing happens: it becomes more manipulable. Although the screen displaces the user from digital inscription, there is in actuality an inverse relationship between digital abstraction and tactile manipulation. The higher that data climbs up the levels of abstraction, the more it can be changed or altered, a state which Kirschenbaum calls “digital volatility” (140). For example, by dragging and right-clicking on items on the screen, users can move, duplicate, or delete large quantities of data. Kirschenbaum explains that this “dynamic tension... between inscription and abstraction, digitality and volatility” makes formal materiality more susceptible to movement and change than physical inscription in computer hardware, which remains inaccessible to the user. Perhaps unintuitively, as data moves away from its original inscription on the hard drive, it moves toward something that users can “touch” and manipulate, as anybody who has dragged a file from one folder to another on their screen can confirm.

Another force—a more subtle one—associated with formal materiality is that of torque, the shifting between software registers. Kirschenbaum describes this force as a "procedural friction or perceived difference... as a user shifts from one set of software logics to another" (13). Typically in physics, objects rotate along their pivot point, where the distributional weight is zero. Torque, however, is characterized by a rotational movement that combines energy from

two directions: first, from the external force acting upon the object, and second, from the relation between the point of contact on the object and its pivot point, or the point along the object where it can be balanced. Torque therefore measures a force that relies on distance between the point of contact and the object's center. In Kirschenbaum's usage, this term refers to the gap between one significatory system and another, such as a machine-level programming language and its more abstracted language, layered on top of it, as data travels up the software stack. Energized by a sense of volatility in data and by torque between software registers, this chain of transformations culminates at the screen, where the end user experiences them as visual and haptic effects.

In the next section, I explore how these “screen effects” of digital media relate to “surface effects” of the flesh. Displacement and foreclosure constitute these effects, denying depth or access to underlying technical processes so to enable new relations to emerge. These refusals enable two physical *moves* that occur on the surface—the shifting of meanings between registers, or torque, and the explosion of meaning which cannot be located, in volatility and unmappability. In what follows, I apply these two moves in my reading of the screen effects for a hypermedia literary work, *skinonskinonskin*.

Skin

skinonskinonskin (1999), a work of “net art” created by Auriea Harvey and Michaël Samyn, under the collaborative artist name, *Entropy8Zuper!*, documents the inception of Harvey and Samyn’s love affair, which begins in an internet chat room and grows in an exchange of “digital love letters” (“*skinonskinonskin*” *Net Art Anthology*). These letters consist of web pages containing animated love notes, authored using software that is mostly defunct by today’s standards. The *Net Art Anthology* on *Rhizome.org*, where the work is preserved with emulator

software, describes it as a “complex portrait of an artistic and romantic relationship that shows that online intimacy is as deeply felt, embodied, and full of risk and reward as any other form” (“*skinonskinonskin*”).

Skin falls within a body of electronic work called “Electronic Literature,” which is now practically inaccessible to modern web browsers and applications. Electronic Literature spans several subgenres, including hypertext fiction, network literature, interactive fiction, and generative text, which share a common interest in exploring digitality as an aesthetic. Although the work is written in HTML (HyperText Markup Language), which continues to be the default language for the web, it is animated by depreciated versions of JavaScript and Flash software.³⁴ Besides the outdated code, it also operates on an obsolete web browser, Netscape 4. The decline of this browser, which was popularized as a platform agnostic solution at the time of its emergence (rendering HTML pages on both Harvey’s Mac and Samyn’s PC), brought with it the depreciation of certain HTML and JavaScript elements contained within the work. Today, the only way to view the full work in something like its original context is through emulators, like the one hosted on *Rhizome.org*, that enables viewers to read *skin* through a simulated Netscape 4 window.

In what follows, I embark on a close reading of the work’s formal materiality across two levels: in the appearance and interactivity of digital objects on the screen, and in the underlying source code that defines and animates these objects. I examine how the coding layer, written in HTML and JavaScript, might influence the reading of the work’s surface effects, that is, in the

³⁴ Flash software was officially discontinued on December 31st, 2020. Though Flash delivered advanced graphics at a time when media-rich content traveled slowly over the web, over the last 20 years, the development of newer, more efficient and secure animation technologies brought Flash into obsolescence. This termination made a generation (roughly from mid 1990s to 2010) of internet games, net art, and electronic literature virtually inoperable.

user's haptic engagement with elements on the screen, the sense of touch and movement activated by the user's mouse.

I begin with the "air.html" page, which depicts an animation of two small figures over a black background. The two figures, which represent Samyn and Harvey, float in a horizontal position over a cyber-scape of rolling, green lines. As the user's cursor pans across the screen, it attracts each of the figures toward it, like a magnet. The effect is that the figures appear to "fly" over the rolling expanse toward the user's mouse. The illusion of free movement, however, is deceiving. While the figures slide effortlessly in all directions, they require a precise tactile control from the user's mouse in order to guide them to a specific part of the screen. Additionally, while the mouse can bring the individual bodies into contact, they can never cross each other, nor can they cross to the other's side of the screen. Samyn's body remains confined to the left, while Harvey's is to the right (see video #2).



Video #2: Screen recording of the "air.html" animation.

The bodies' animation is defined in the source code of the page, in a series of functions

written in the JavaScript programming language, a popular language for authoring interactive elements on web pages. Below is an excerpt of one JavaScript function called `flyMouse()`:

```
if ( mouseX < halfW )
{
    var mFactor = 0.1;
    var aFactor = 0.01;
}
else
{
    var mFactor = 0.01;
    var aFactor = 0.1;
};
```

In the above excerpt, the movement of the bodies on the screen is conditional on their distance between the mouse and the original positioning of the bodies on either side of the screen.

The first line of the code, `if (mouseX < halfW)`, specifies the condition: if the position of the mouse on the horizontal axis (x-axis) is less than half of the screen's width, then execute the code that is indented immediately below. However, if the position of the mouse is more than half the width, execute the code immediately under `else`. The `if` statement, or “conditional statement,” determines the order of operations based on whether a specific condition is true or false. This conditional, which is a foundational construct for many programming languages, enables programmers to write code that makes decisions, so to speak, to execute the desired

section of code that matches each condition.³⁵ In this case, the `if` statement defines the direction and speed of the bodies' movement. Depending on this distance, the magnetic force for each of the bodies is multiplied against a factor of .1 or .01. This results in a higher velocity from Samyn's body when the mouse is near Samyn's original position on the left side of the screen, and a higher velocity from Harvey's body when the mouse is near Harvey's original position on the right side. The specifications for each figure's positioning and velocity create this effect of magnetized movement as the user pans her mouse across the screen.

Reading across the levels of formal materiality brings the structure of the code to bear on the work's surface effects. The binary nature of the code's conditional statement—it can be true or it can be false—enables an animation that moves in many directions. However, while the figures can follow the user's mouse in multiple directions, their velocity is predefined, and they cannot cross to the other side of the screen. So there is freedom in their movement, but a freedom that exists within constraints. The tightly constrained structure of the `if` statement in the source code complicates this illusion on the surface, and reinforces the intractable nature of the figures themselves, who follow the mouse, but only up until a certain point, who move wildly, but without precision. This quality of intractability emerges in the torque, or shift, between the registers of the code structure and its rendering.

If “air.html” plays with magnetism, another page, “control.html” (see Video #3) plays with lag and fragmentation. The page consists of a monochrome green image of Harvey's head, which rolls from side to side in the direction of the user's cursor as it pans over the image. As the cursor exposes Harvey's face at different angles, it also displays pieces of “alt-text,” which hover

³⁵ For example, an email inbox will display unread emails in bold formatting depending on whether or not that email has been opened by the user. In the mail application's source code, an if statement checks if the email has been opened. If it has, the email will render with regular formatting, but if it has not, it will render in bold formatting.

momentarily over certain parts of Harvey's head, and contains words like "go" "believe" "ocean" and "mind." Together, the bits of text and the jolty movement of Harvey's head as it rolls from side to side creates a sense of lag on the surface.



Video #3: Screen recording of the "control.html" animation (does not include alt-text effect).

But the surface of the piece only reveals part of its workings. The source code, written in HTML, reveals that the animation consists of individual images, each in its own <AREA> element, as listed below in the code excerpt. Each <AREA> element contains specific ALT and COORDS attributes, which define the alt-text and coordinate associated with that image. As the user pans to a specific coordinate on the image surface, the image will change to another one that corresponds to the current coordinate. The alt-text will also change to display the text associated with the new image. Thus, the animation is created by superimposing a number of individual images (23 images, to be exact) and text that activate when the user's mouse lands on a specific coordinate of the image pane. While the viewer only sees one image or alt-text at a time, the full list is contained within the source code. Reading down the ALT attributes, for example, brings the full message into view: "i believe in it you created it in my mind my mind cannot let it go the ocean the waves its a vision." The superimposition of images explains why Harvey's head

appears to jumps from one position to another, rather than a smooth progression from side to side. The effect is to create a slight lag, a series of fleeting pauses in which Harvey gazes directly to the viewer.

```
<AREA SHAPE=RECT ALT="i" HREF="#" COORDS="0,0,8,142"  
onMouseOver="strokeimage.src=stroke1.src [...]">  
  
<AREA SHAPE=RECT ALT="believe" HREF="#" COORDS="8,0,15,142"  
onMouseOver="strokeimage.src=stroke2.src [...]">  
  
<AREA SHAPE=RECT ALT="in" HREF="#" COORDS="15,0,22,142"  
onMouseOver="strokeimage.src=stroke3.src [...]">  
  
<AREA SHAPE=RECT ALT="it" HREF="#" COORDS="22,0,30,142"  
onMouseOver="strokeimage.src=stroke4.src [...]">
```

Here, the message contained within the source code is foreclosed from the display level of the work, a surface effect that plays with Snorton's concept of the "unmappable." On the surface, only part of the image and message exist at any point in time, depending on where the user's mouse is located on the screen. And the image/text changes when the mouse's position changes. Like the daguerreotype, the full image exists across a thick surface (in this case, layers of images) that cannot be located to a single point. In this way, the full visual display is "unmappable" to the end user. It can only be mapped in the level of the source code, which lists all of the images and their coordinates.

This unmappability created by the individual images contributes to the work's preoccupation with control, specifically, with control over the female body. While most of this pages in this text contain HTML elements that specify an author, title, and date, this one only

contains a title, “you:controlMe.” Ostensibly, the code addresses a message for Samyn to “control” the movement of Harvey’s face back and forth across the image. The tactile qualities of this page, the sensual but laggy effect of the animation in which the user manually turns Harvey’s head from one side to another with the cursor-as-hand, are further emphasized by the cursor itself, which appears as a pointing hand. These haptic qualities, along with the unmappability of the full message, indicate that full control is withheld from the reader/user.

Within the source code of *skinonskinonskin*, natural and computer languages mix to make verbal exhortations of love. On the page, “breath.html,” an animated male torso swells slightly and emits a breathing sound when the mouse pans over it. If the mouse moves repeatedly over the torso, the sounds begin to layer over one another in staccato breaths that recall a skipping record. Below the display, within the HTML and JavaScript that defines this animation, lies a message. Hidden in the machine layer but meant only for human eyes, this message contains romantic protestations like “i will love you forever” and “i want to breathe you.” Unlike the alt-text in “control.html,” the message, which is written in the form of a JavaScript array, never manifests on the surface:

```
whispers[2] = "skin";
whispers[3] = "skin on skin";
whispers[4] = "skin on skin on skin";
whispers[5] = "implode";
whispers[6] = "soft";
whispers[7] = "slow";
whispers[8] = "can you feel me?";
whispers[9] = "touch me";
```

```
whispers[10] = "one more cigarette";  
whispers[11] = "i am so open";  
whispers[12] = "i want to feel you inside of me";  
whispers[13] = "smoke";  
whispers[14] = "i want to breathe you";  
whispers[15] = "we are smoke";  
whispers[16] = "yesss";  
whispers[17] = "deeper";  
whispers[18] = "i am disappearing";  
whispers[19] = "warm";
```

Turning on the themes of touch and air, this inaccessible layer extends the sensory affordances of the animation above it. References to touching and feeling reinforce the haptic nature of the animation, which respond to the swipe of the user's mouse, while the references to smoke play on the auditory dimension of the work. First, like the sound of the breaths, smoke is made of air: smoke, like sound, takes air as its medium. And just as smoke is a kind of air which is made visually apprehensible, air that is visible by a degree of opacity, so this stream of "whispers" only becomes apprehensible within the source code. The sensual registers here, from breathing, to smoke, and finally, to "whispers" move between display and source code layers, or "skins," of the work.

The source code throughout the work represents one layer of the technological displacement of "digital objects from the channels of direct human intervention" (Kirschenbaum 86). By default, the web browser hides the source code from the end user, unless that user deliberately opens and views the HTML files. Beyond the HTML files, however, there are other

layers of displacement, of software and technological processes that are totally foreclosed from the user. Some of these layers emerge in an online chat between New York, where Harvey lived, and Belgium, where Samyn lived, before they moved in together. This online conversation, published on their website under the title “Whispering Windows,” draws attention to the layers of technology that facilitated their communication—indeed, their entire relationship—in its early days:

womanonfire: the sound is a bit distorted with these things

zuper: (private) yes

womanonfire: if no one was around me here

zuper: (private) the image is distorted too

womanonfire: i would speak to you

zuper: (private) but that's ok

womanonfire: yes!

womanonfire: these are all part of our relationship

womanonfire: these limitations

womanonfire: we must

zuper: (private) 26 letters, no sound, no image

womanonfire: learn new ways

zuper: (private) make DHTMLLove to me... (“<http://entropy8zuper.org/>”)

For Samyn and Harvey, the layers of technological displacement open significatory possibilities for communication. Due to a bad connection, the computer cannot render the audio

and video in the chat. Saymn and Harvey are limited to the screen and to the “26 letters” of the keyboard. This limitation enacts something like Snorton’s concept of fugitivity, which works by reduction. As Snorton describes it, fugitivity hinges on the reduction of a body to its exchange value, its fungibility. Following this reduction, a body can take on multiple significations, to “pass” as the opposite gender, for example. In this example of “DHTML love,” the reduction of their communication to text has an effect of magnifying the significance of their words. Every decision is meaningful: for example, Samyn writes his messages in private mode, while Harvey, as *womanonfire*, uses the public one.³⁶ The subtleties of tone and syntax also suggest an intimacy, despite their distance: *womanonfire* tends to use pithy expressions (“we must”) that arrest a thought to restart it on the next line (“learn new ways”), while *zuper* responds with gentle reassurance (“but that’s okay”) to reinforce *womanonfire*’s messages. The messages flow into each other, even appearing to complete the other. Pared down to just words on a screen, their communications take on expressive possibilities.

Later in the chat, Samyn and Harvey revel in the intimacy enabled by this mode of communication:

womanonfire: i can just barely make you out
womanonfire: how fitting
womanonfire: it sounds so far away but you feel so close
zuper: yes
zuper: i am close
zuper: i don’t understand myself

³⁶ If there are others in the chatroom, they have been removed from the transcript.

womanonfire: i will write you a very long letter tonight

zuper: I'm falling in love with a 160x120 pixel video...

zuper: Yes please write me a long letter

womanonfire: it is difficult [sic] for me here right now

zuper: why is it difficult?

womanonfire: i was just about to write one about this

womanonfire: because i love you

zuper: ...

womanonfire: seems so

womanonfire: strange

womanonfire: maybe it is lust

womanonfire: i cant tell anymore

zuper: pixellust?

womanonfire: right

zuper: I my case only ASCIIllust...

That *womanonfire* “can just barely make...out” *zuper* is “fitting” because the physical barriers that separate their connection are considerable. Yet, *zuper* responds that he feels “so close” despite his distance, a phenomenon which he “doesn’t understand [himself]”. Something about the online chat, and the channel it creates between them, facilitates this sense of intimacy. Even in this intimacy, however, doubts remain. The question of whether their connection is really love, or if it’s lust (“pixellust”), recalls Lilith’s questioning Nikanj about sex in Butler’s *Dawn*, which I described at the start of this chapter. In that scene, Lilith asks Nikanj whether the feelings she

experienced during sex are “real” or not. Here, *womanonfire*’s question points to a similar kind of doubt, a doubt about whether the channels of communication are faithfully mediating their experiences. In the way that Lilith’s neural connection to her sexual partners bypasses the outer body, this technological connection also bypasses physical obstacles, not least the obstacle of physical distance (Samyn and Harvey are separated by an ocean). Given the distance between them, is it love or “pixellust”?

In addition to geography, this mode of digital communication bypasses cultural and even racial differences:

zuper: (private) I realised today that I have never been in love with somebody who doesn’t speak Dutch before.

womanonfire -> zuper: i have never been in love with someone in another country before

zuper: (private) I have never been in love with someone with green dreadlocks before

zuper: (private) let alone black skin

womanonfire -> zuper: yes i hope you wiwll like my skin

zuper: (private) I already do.

womanonfire -> zuper: :) (“<http://entropy8zuper.org/>”)

The reduction of their communication to letters on a screen flattens aspects of their identity into textual expressions. Separated from the referent, the physical human being, these expressions take on its own level of formal materiality. They become something like the list of HTML attributes that define the animation of Harvey’s head on the page “control.html.” There, the

attributes for COORDS and ALT in the source code, which configure the superimposition of images in the animation, are inaccessible on the surface display. Like those attributes in the source code, skin color in this chat recalls something like an HTML attribute in list of other attributes, including native country, language, and hair color. This severing of attributes from the physical body to text occurs in tandem with additional superimpositions of meaning. For example, there's hope, expressed by Harvey's message, "yes i hope you wiwill like my skin." The typo here draws attention to this moment in the exchange, and the repetition of the "w" character in "wiwill" suggests a kind of stutter in the text, perhaps expressing a sense of anticipation. Harvey's "hope" that Samyn will "like [her] skin" reinforces the distance and differences between them. Despite the professions of closeness, this line is a reminder that it is impossible to fully know the beloved. This unknowability between them recalls the quality of mystery in Nikanj's feelings of grief following Joseph's death, which Lilith describes as the tragic loss of something "half seen, half felt, or... tasted" (Butler 249). In this online interaction between two people of different cultural and racial backgrounds, hope is what comes to the surface; it is what maintains the distance between the lovers, a distance that is a necessary precursor to intimacy.

Reading these two texts together enables one to think through materiality from the physiological to the technological. In *Dawn*, a flattening between registers takes place, where the sex act collapses the distinctions between thinking and feeling. In *skin*, by contrast, reading across the layers for formal materiality (across the display layer and source code layer) deepens the sensuality of the surface effects. While the underlying code layer enhances the tactile qualities on the surface of the work, where the user can manipulate objects on the screen with her mouse, the displacement of inaccessible layers of software and hardware also reinforces the

sensible elements that remains on the screen. When the fundamental condition of digitality is displacement, everything—the surface layer, the code layer—becomes skin.

CHAPTER FOUR

“Qtt: The Queer Text Toolkit”

The “Queer Text Toolkit” is a software package offering a Queer Studies-inspired approach for the computational analysis of literature. The project consists of two applications, “queer distant reading” for quantitative text analysis and “queer text encoding,” for textual markup, both of which are based on open-source coding libraries.³⁷ As a practical application of my dissertation research, the toolkit explores interpretive possibilities for reworking the constraints of text analysis and text encoding procedures by drawing from Queer Studies’ critique of heteronormative structures that problematize the categories of gender, sex, and sexuality. Users can examine first-hand how digital formats, which transform and reduce stylistic and formal expressions of gender, sex, and sexuality, might be redeployed toward creative exploration. The source code for both tools is published on the “github.com” website, a popular platform for sharing and collaborating on software, under the username, *gofilipa*, in the repositories entitled “qdr” (queer distant reading) and “qte” (queer text encoding).³⁸

Queer Distant Reading

The “queer distant reading” (qdr) application is a command-line application for text analysis inspired by Judith Butler’s theory of gender performativity. This application brings the

³⁷ “Open-source” is a software program whose source code is made available for free use or modification. Sometimes open-source licenses have restrictions for licensing derivative works to prevent others from privatizing the software (“share-alike” or “non-commercial” clauses, for example).

³⁸ The project URLs are “www.github.com/gofilipa/qdr” and “www.github.com/gofilipa/qte”

concept of “iterativity,” the act of repetition with a difference, from gender performativity and Python programming into alignment. It poses a text analysis practice that “iterates” between close and distant reading toward the larger goal of destabilizing binary structures of gender.

There are two aspects of Butler’s theory of Gender Performativity that influenced the development of this text-analysis tool. First, that notion that gender emerges from a series of repeated actions: “Gender is the repeated stylization of the body, a set of repeated acts within a highly rigid, regulatory frame that congeal over time to produce the appearance of a substance, of a natural sort of being” (*Gender Trouble* 33). Second, that these series of actions produce, rather than reference, a subject. Butler uses the example of language to explain this phenomenon: “the mimetic or representational status of language... is not mimetic at all. On the contrary, it is productive, constitutive, one might even argue performative” (*Bodies* 6). Because language produces the reality that it seems to merely reference, it opens a possibility for re-signifying the meaning of certain terms.

This application offers a text analysis workflow for exploring and “re-signifying” the meaning of gender terms such as “woman” and “man” in text. It consists of a command line interface where users can search words a text, for example, Virginia Woolf’s novel *Orlando: A Biography*, for their similarity scores and view them in context. To run the application, the user must first download the project from its github repository (linked above) to their computer. Then, using a command-line program such as *Terminal* on Mac or *Powershell* on Windows, users type a command consisting for four parts. The first and second part contain the program, “python,” and the name of the application, “qdr.” The third and fourth parts of the command specify a

source text, such as *Orlando*, and the target word, such as “woman.”³⁹ A sample command might then look like the following: `python qdr orlando.txt woman`. Running this command in the *Terminal* will return a word vector, that is, a list of words that appear next to or nearby our search term, along with their similarity scores:

```
% python qdr orlando.txt woman
[('fling', 0.38121166825294495),
 ('abase', 0.35150107741355896),
 ('flower', 0.33490291237831116),
 ('superior', 0.3274153470993042),
 ('witticism', 0.3148716390132904),
 ('fight', 0.313768208026886),
 ('coal', 0.308252215385437),
 ('impassable', 0.3044101893901825),
 ('unenticed', 0.3026406466960907),
 ('tavern', 0.3014964759349823)]
```

Word vectors, also known as “word embeddings,” are essentially a list of words that are probabilistically associated with the search term. The score that appears next to each word in the results represents the likelihood of how often that word will appear nearby the search term.⁴⁰

Besides searching for similar words, users can also see specific words in context. The

³⁹ The program will accept any word as the search term, so the user is not limited to “woman” or “man.” Additionally, other possible source texts included with the application are *Giovanni’s Room*, *The Well of Loneliness*, *The Picture of Dorian Gray*, and *Mrs Dalloway*.

⁴⁰To learn more about how word embeddings operate, see Alammar.

results will list the search word within a “context window,” that is, the words immediately preceding and immediately following the search term:

```
nly charm quality old woman loved failed growing  
thout knowing perhaps woman heart intricate ignor  
pulled among cushion woman laid worn old made bu  
yed cheek scarlet old woman loved queen knew man  
r swore vilely master woman scarcely le bold spee  
panic twelve poor old woman parish today drink te  
rse cruel disposition woman broke engagement nigh  
den apple old bumboat woman carrying fruit market  
sy figure whether boy woman loose tunic trouser r
```

My intention is that users will alternate between searching for word similarity and words in context as part of a text analysis practice. They may find, for example, a word in the similarity list that can be searched in context, where another word of interest might appear. This emphasis on exploration and recursive searching is what makes my methodology a *queer* one. As opposed to traditional text analysis practices that aim for reproducible results, this method encourages text analysis as an iterative practice that is never complete. See the first chapter of this dissertation for an example of how this iterative practice works in a “queer distant reading” of Virginia Woolf’s novel, *Orlando: A Biography*.

The code for this project is based on open-source Python libraries, such as The Natural Language Toolkit (NLTK) and Word2vec,⁴¹ and contains modules for loading, cleaning and

⁴¹See Bird and Loper for NLTK and Mikolov, et al. for Word2vec.

analyzing the text as well as a small test suite. The code that I wrote for these modules are included in Appendix I. The full codebase, including copies of the texts, is publicly accessible and downloadable under my GitHub username *goflipa*, in the repository, “qdr.”

Queer Text Encoding

The “queer text encoding” (qte) tool is a web application that displays the Text Encoding Initiative (TEI) tags that I used to mark up the homoerotic content in Oscar Wilde’s revisions of *The Picture of Dorian Gray* (1890).⁴² The website interface, which tags Wilde’s revisions from the first chapter of the manuscript, encourages readers to think productively about the limitations of working with data structures like textual markup (See Fig. 11). The project consists of a JavaScript-based web application containing the encoded version of the first chapter of *Dorian Gray*, which Wilde edited to remove suggestions of homoeroticism. By panning over the deleted text (shown in red), users can see the pre-set labels for the homoerotic content in this text, which fall into four general categories: “intimacy,” “beauty,” “passion,” and “fatality.”

⁴²See TEI-Consortium.

"Please don't."

"I must. I want you to ~~tell~~ explain to me why you won't exhibit Dorian Gray's picture. I want the real reason."

"I told you the real reason."

"No: you did not. You said it was because ~~intimacy~~ was too much of yourself it. Now, that is childish."

"Harry," said Basil Hallward, ~~taking hold of his hand and~~ looking him straight in the face, "Every portrait that is painted with ~~passion~~ feeling is a portrait of the artist, not of the sitter. The sitter is merely the accident, the occasion. It is not he who is revealed by the painter, it is rather the painter who ~~on the colours of the canvas~~ reveals himself. The reason why I will not exhibit this picture, is that I am afraid that I have shown in it the secret of my own soul."

Lord Henry ~~hesitated for a moment~~ laughed

"And what is that?" he asked. ~~in a low voice~~

"I will tell you," said Hallward, and ~~a look of pain~~ an expression of perplexity came over his face.

~~"Don't if you would rather not"~~ "I am all expectation, Basil" murmured his companion, looking at him.

Figure 11: image of the qte web interface

To create the interactive elements on the web page, I used the code library called *ceTEIcean*.⁴³ This library, or collection of code, enables TEI documents to be rendered using popular web tools like JavaScript for interactivity and CSS, or Cascading Style Sheets, for styling.

First, I created a JavaScript function to target the manuscript text that I marked up with the ``, or “deleted” element of the TEI. This function makes sure all elements tagged with `` in the TEI source code will react when the element is panned over by the user’s mouse on the web interface. This reaction is to display a popup box that shows the `@implication` tag associated with the element.

```
"del": function(elt) {
```

⁴³See Cayless and Vigliante.

```

elt.addEventListener('mouseover', function
handleHover(event) {

    result = elt.hasAttribute("implication");

    if (result) {

        console.log('element moused-over with: '+
elt.getAttribute("implication"));

    }

}) ;

elt.setAttribute("class", "test");

}

```

Then, to style the popup box, I used CSS, a language for customizing HTML elements. Here, I defined the location, appearance, and actions for the popup box. Below is an excerpt of the CSS code:

```

tei-del[implication] {

    vertical-align: super;

    color:rgb(231, 42, 13);

    position: relative;

}

transition: 150ms transform;

```

```
    transform-origin: bottom center;  
}  
  
In abstracting the markup into interface elements, this web interface obscures the close
```

and careful labor of working with the TEI. But in this abstraction, it also surfaces the content of the categories themselves, making them more accessible to scholars who are unfamiliar with XML data structures, like the TEI. The web interface therefore brings the results of the TEI encoding to a non-specialist audience. This project harnesses a major affordance of the TEI, which is that it works well with other tools. As a variant of XML, elements marked up in TEI become operable with tools that are XML-friendly, like tools for rendering websites. The TEI code therefore opens possibilities for layering other tools and functionalities for the study and analysis of literary work. While this web application doesn't lower the barrier to learning TEI per se, it does make its results more visible to audiences, helping to work against the institutional and funding structures that determine access to TEI training in the first place.

As practical applications of my dissertation research, both tools in this Toolkit reveal interpretive possibilities for reworking the limitations and constraints of text analysis and text encoding procedures. The text analysis tool, "qdr," offers a method for text analysis that iterates through word similarities and contexts with the goal of surfacing unexpected connections between close and distant reading. The text encoding tool, "qte," publishes the results of a complicated editorial research process that makes it more accessible to readers without technical knowledge of the TEI.

Lowering the barrier to entry

Before I started this project, I had little experience in both Python programming and the

TEI. I built these tools in part to learn how to code in these languages, but also to create something that would enable others to learn. With this goal in mind, I designed these tools to be beginner-friendly to those with little technical training, so learners can glimpse (however briefly) the more complex parts of working with technologies like Python and the TEI. The command-line tool, for example, requires some knowledge of the command-line (like the *Terminal* program on Mac), and the TEI code also requires some knowledge of XML structures. However, despite these barriers, even new users can get up and running with these tools in the time that it takes to attend a single technical workshop. This is exactly what happened in the HASTAC conference on “Critical Making” in June 2023, when I guided a room of participants in learning to use both tools. Aimed at an audience of humanist scholars at the beginning of their technical training, this Toolkit would be ideally used in similar classroom and collective-learning settings, where beginners can examine first-hand how digital formats can be deployed toward creative and playful exploration.

CONCLUSION

In the prescient 1995 novel *Galatea 2.2*, by Richard Powers, a computer is “trained” to generate natural language in much the same way that an LLM (Large Language Model) is today: by reading massive amounts of text.⁴⁴ This computer, named Helen, “reads” until she is proficient enough to pass a masters-level exam in English. First she reads literature. When she runs out of literature, she reads textbooks and the news. As Helen develops her ability to communicate, she begins to gain a personality, and eventually, a sense of angst toward the programmers who created her. At the end of the exam, for which she composes a post-colonial critique of Caliban’s speech from The Tempest,⁴⁵ Helen directly addresses her human programmers: “You are the ones who can hear airs. Who can be frightened or encouraged. You can hold things and break them and fix them. I never felt at home here. This is an awful place to be dropped down halfway” (326). Though Helen, as a computer, has no living body that can “break” or “fix” things, she nonetheless can compute enough to feel this lack. More than the lack, however, it is her exposure to the violence and injustice in the world that pushes Helen over the edge. Like the LLMs being trained on massive datasets from the internet, Helen cannot filter out the worst of humanity from her learning process.

At the end of this dissertation, I find myself wondering about how language, as a formal structure, might be a lens for studying the ways that power is encoded into text generation tools.

⁴⁴ An LLM is a text generator (like OpenAI’s *ChatGPT*) that works by making predictions about what word should follow another. It bases its predictions on word patterns that it finds in the training data, which is typically data extracted from the internet.

⁴⁵ Be not afeard; the isle is full of noises, Sounds and sweet airs, that give delight, and hurt not. Sometimes a thousand twangling instruments Will hum about mine ears; and sometime voices, That, if I then had waked after long sleep, Will make me sleep again: and then, in dreaming, The clouds methought would open, and show riches Ready to drop upon me; that, when I waked, I cried to dream again. (III.ii.130–138)

Throughout this work, I have examined how digital forms—coding logics and data structures—engage with textual forms with the goal of bringing some incommensurable quality about queerness in text to the surface. Across three chapters, I explored how aspects of digitality like iteration, dominance, and formatting work with gender, desire, and embodiment, respectively. I now close by considering how the next major technological development in electronic text, Large Language Models, offers a call to those trained in Literary Studies to push the boundaries and applications of their work.

Recently, the question of computer “intelligence” and “consciousness” has resurfaced in discussions about LLMs and their derivatives, such as Chat-GPT.⁴⁶ In June 2023, *Critical Inquiry* published a forum on the topic called “Again Theory: A Forum on Language, Meaning, and Intent in the Time of Stochastic Parrots.” Playing on the title of two influential academic papers, the first from 1982, by Steven Knapp and Walter Benn Michaels, “Again Theory,” and the second from 2021, by Emily Bender et. Al, “On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?”, the forum explores the role of intent in textual interpretation. For the writers of this forum, the question is a thrilling one, bringing foundational premises for literary theory and hermeneutical processes to bear on cutting-edge “AI” tools being developed today. It seems that all of the training on “authorial intent,” “différance,” and what Ted Underwood in the forum describes as “the refusal to ground language in an experiencing subject,” has prepared Literary Studies scholars for this current moment (“The Empirical Triumph of Theory” par. 11).

⁴⁶This question of computer “intelligence” has been posed and answered repeatedly since humans first imagined intelligent machines half a century ago. One of these imaginations, Alan Turing’s, finds the question of intelligence to be problematic, because there is no general consensus for what constitutes thinking or feeling in the first place. Rather, he rephrases the question in his famous “Turing Test” to one about performance—to whether or not a computer can verbally impersonate a human well enough to trick another human into believing it is intelligent. See Turing, Alan. “Computing Machinery and Intelligence.”

To the question of whether or not a computationally generated text can be said to have “intent,” most of literary critics in the forum and elsewhere believe that it cannot, or at least not yet.⁴⁷ The ability to guess the next word in a sequence does not indicate an underlying intelligence: it only indicates that an advanced computer model has consumed enough data in its training process to accurately predict which word should follow another word. But this does not mean that intention does not or cannot exist. After all, excavating meaning from texts that have been severed from an explicit intention or known author is something that critics have been doing for centuries. For scholars in Literary Studies, the question of intention is usually framed within larger ones about agency or subjectivity. Andrew Piper, for example, claims that “the relationship between language and thought is... reversed in a language model.” According to Piper, language is the material from which concepts like agency and individuality are produced and constituted. He explains, “Usually we think an entity has wants and needs and then figures out methods to communicate them. A language model works the other way round. It has an extensive web of language and from that emerges a sense of wants and needs.”

Powers’ novel, *Galatea 2.2*, explores one interesting consequence that this view on computational intelligence has on *human* intelligence. In another scene from the story, Helen’s programmers discuss intelligence. The first programmer offers a theory for how intelligence works in humans:

We humans are winging it, improvising. Input pattern x sets off associative matrix y, which bears only the slightest relevance to the stimulus and its

⁴⁷It is important to note that some do think intention is inherent to programming. N. Katherine Hayles, who writes the “Afterword” to the forum, explains that these programs do have intention, if not because they have explicit intentions in their programming, but also because they were created by humans with intention.

often worthless. Conscious intelligence is smoke and mirrors. Almost free-
associative. Nobody really responds to anybody else, *per se*. We all spout
our canned and thumbnail scripts, with the barest minimum of polite
segues. Granted, we are remarkably fast at index and retrieval. (86)

The second programmer quickly realizes the first's darker implication about human intelligence: that it all comes down to lucky prediction. He declares, "You're not elevating the machine, you're debasing us." To which the first programmer smugly quips, "Have you read an undergraduate paper lately?" (86).

Anybody who has interacted with a chat bot or read an AI-generated paper will know that there is a certain formulaic quality to the language that can sometimes appear in student writing. Leaving the joke about undergraduate student writing aside, however, the idea that language is the structure through which subjectivity emerges has been made over and over by critical theorists, such as Judith Butler, whom I discuss in my first chapter.⁴⁸ According to this view, a subject does not express thoughts or feelings, but rather, patterns of thought and feelings are the raw material that bring a subject into being. Similarly, in an LLM, all "learning" is determined by patterns. From studying millions of word contexts, an LLM derives a probability score ("word vector") for what word should follow each word that it generates. According to this logic, an LLM might *eventually* accumulate something like a personality (and presumably, a gender), by spewing massive amounts of text.

Besides the debates about subjectivity, most Literary Studies scholars are interested in exploring how generative text will impact the study of word forms. As statistical pattern-

⁴⁸ In my first chapter, I explain how this idea is the foundation of Butler's theory of gender performativity. See Butler, Judith. "Performative Acts and Gender Constitution."

matching juggernauts, they can explore combinations of letters, words, syntaxes, styles, and genres more robustly than any human can dream. Writing the “Afterword” to the *Critical Inquiry* forum, N. Katherine Hayles points out that “LLMs are like the figure, beloved by philosophers, of a brain in a vat; they construct models not of the world, but only models of language” (par. 4). As Hayles points out, due to neural networks that underlie their operation, these programs can detect textual forms that are totally unexpected, taking small details in word choice and rhetoric to make stunning “inference[s] [that] themselves form networks that lead to higher-order inferences” (“Afterword” par. 3).

However, the question about subjectivity seems to have wider ramifications than the authors of the *Critical Inquiry* forum suggest. Regardless of the source of intentionality—whether it is in the generated text, computer program, the end user, or elsewhere—human readers will always ascribe intent to words they read. According to proponents of an emerging field called AI Safety, this tendency is one of the more serious problems with these tools,. Here, Computational Linguistics scholar Emily Bender and her co-authors of the “Stochastic Parrots” paper (which inspired part of the *Critical Inquiry* forum title) assert that one of the largest problems with LLMs is that humans misattribute intention to them with serious ramifications for how these models perpetuate systemic discrimination.⁴⁹ As Bender and her co-authors point out, the words that these language models generate is highly and unavoidably biased. Bias adheres throughout each step of building the model, from data gathering, to cleaning, to the statistical processing of text. The producers of these tools take text from as many websites as possible,

⁴⁹ In an earlier paper, “Climbing Towards NLU,” she and her co-author, Alexander Koller, explain that while LLMs may be adept at “learning” language patterns from processing large amounts of text data, they do not intuit intent, a process summarized by the concise formula of $M \subseteq E \times I$, where meaning equals expression and intent. Here, intent is not contained within word forms, but is something external, which can only be deduced or imagined in the mind of the interlocutor. Bender and Koller argue that because intent is external, it will always remain inaccessible to computers, who are constrained to a training process that consists of passively processing text.

including websites (such as “Reddit.com”) that overrepresent young and male viewpoints. Then, this content is submitted through a cleaning process that attempts to handle bias and discrimination by filtering out data which contain offensive words.⁵⁰ The problem with this process is that it is automated, immediately removing *any* page that contains offensive words, even those pages written for the purpose of educating, reclaiming, or adding nuance to the words. And the parts of the process that are not automated, are contracted out to low-wage laborers in the global south, which opens another dimension of ethical issues.⁵¹ After this “cleaning,” the remaining content is fed through algorithms that calculate word vectors for each word in the dataset.⁵² Because these algorithms are designed to seek out patterns in the data, using statistics to surface the most frequent contexts of each word, the resulting word vector reflects a majority perspective on the word’s usage. As a result, regardless of the diversity of sources in the training data, Bender et al. explain that “hegemonic viewpoints” will be amplified over minority perspectives (613).

It seems obvious to a literary scholar like myself, who is familiar with deconstructing how digital tools and formats encode power structures, that work needs to be done on how language forms perpetuate bias and discrimination. If any group of people is equipped to deconstruct the ways that subtle (and not so subtle) elements of language express bias and discrimination, it is one like the writers of the *Critical Inquiry* forum, who have spent their careers studying how language creates and perpetuates power structures and social norms. It is especially those who apply lenses from Cultural, Ethnic, Queer, Black, Chicana, Global South,

⁵⁰One such list used for this kind of filtering, the “Dirty, Naughty, Obscene or Otherwise Bad Words” can be found at <https://github.com/LDNOOBW>List-of-Dirty-Naughty-Obscene-and-Otherwise-Bad-Words/blob/master/en>

⁵¹ See Perrigo, Billy, “Exclusive: OpenAI Used Kenyan Workers On Less Than \$2 Per Hour To Make ChatGPT Less Toxic.”

⁵²See chapter one for an explanation of word vectors, or “Word Embeddings.”

and Indigenous Studies, and other minority perspectives, as frameworks for analyzing cultural materials. LLMs offer opportunities for such scholars to put into practice their knowledge about how language encodes and perpetuates bias, racism, and xenophobia. To ask questions like, how do elements like tone, voice, and word choice emerge in quantitative representations of words? How might expressions of embodiment, difference, and marginalization be legible within computable formats?

This is a call for training—not for the language models, but for students in Literary Studies. The confines of the discipline ought to be pushed to consider how computer programming languages like Python (which is the standard language for machine learning tasks) and Natural Language Processing (NLP) algorithms engage with literary analysis and interpretation. Although programming languages and NLP algorithms are rich in highly structured language forms, most students in Literary Studies are unaware of the potential of studying semantics and intent within these forms.

In *Galatea 2.2*, for example, the narrator makes an exciting connection between the ways that neural networks and metaphors work. His realization is inspired by the computer's casual comment that leaves fall from trees when the trees grow old and bald:

Associations of associations. It struck me. Each neuron formed a middle term in continuous, elaborate, brain-wide pun.... Meaning was not a pitch but an interval. It sprang from the depth of disjunction, the distance between one circuit's center and the edge of another. Representation caught the sign napping, with its semantic pants down. Sense lay in metaphor's embarrassment at having two takes on the same thing. (154)

Here, the narrator yokes metaphor, which works by making connections between two dissimilar things, to the associative structure of the neural network, which is a grid of separate computer processes where the output of one feeds into the input of the other. Each processor in the network “fires” (much like a neuron “fires”) when adequately stimulated. As the signals loop through the system, they create new paths. Here, the narrator compares the leap in speculation which powers the metaphor to the leap between the “neurons” in a neural network. Literary Studies needs scholars who can think capacious about concepts like neural networks, scholars who can find alignment between different language forms, like algorithm structures and word vectors, for example.

These industries responsible for building machine learning tools also need people who understand not only the ways that language works, but also how it *doesn't* work. On this point, I'll conclude with one last close-reading, which returns to Virginia Woolf's *Orlando: A Biography*. In my first chapter, I made the case for a crisis of signification that builds throughout the novel, a crisis in which both Orlando and the narrator struggle with language's ability to represent reality. In that chapter, I left out one scene in which the crisis seems to collapse upon itself—a scene where words totally fail to express reality. Here, the biographer drops his pretension not only toward accuracy, but toward all kind of representation. A great blank space is inserted into the text to represent a gap in conversation between Orlando and her lover, Shel:

‘Shel, my darling,’ she began again, ‘tell me...’ and so they talked two hours or more, perhaps about Cape Horn, perhaps not, and really it would profit little to write down what they said, for they knew each other so well that

they could say anything, which is tantamount to saying nothing, or saying such stupid, prosy things as how to cook an omelette, or where to buy the best boots in London, things which have no lustre taken from their setting, yet are positively of amazing beauty within it. For it has come about, by the wise economy of nature, that our modern spirit can almost dispense with language; the commonest expressions do, since no expressions do; hence the most ordinary conversation is often the most poetic, and the most poetic is precisely that which cannot be written down. For which reasons we leave a great blank here, which must be taken to indicate that the space is filled to repletion. (185-186)

This break, which is meant to stand in place for the conversation that passes between Orlando and Shel, actually functions by signifying nothing. It literalizes the inadequacy of language. According to Katheryn N. Benzel, this moment creates physical space for the reader to fill with her own interpretation of the scene and its paradoxes about language, such as, “the most ordinary conversation is often the most poetic, and the most poetic is precisely that which cannot be written down.”

But I want to offer another reading of the space break. As Eve Kosofsky Sedgwick points out, merely knowing that something is true, revealing the presence of systematic oppression, injustice, discrimination, for example, is not enough to “enjoin that person to any specific train of epistemological or narrative consequences” (123).⁵³ I read this as a warning from Sedgwick to

⁵³Eve Kosofsky Sedgwick relates a conversation between herself and a friend during few years of the AIDS crisis, when speculation about the government’s complicity in spreading the virus is rampant. At the time, Sedgwick wonders whether “the lives of African Americans are worthless in the eyes of the United States; that gay men and drug users are held cheap where they aren’t actively hated” (123). Her friend counters this suspicion, pointing out

academic scholars: that doing critical work is only part of the battle, that action is also necessary. The reason is that ideas, on their own, do not act. The phrase, “since no expressions do” plays on a dual meaning of “do,” which on the one hand means adequacy (in this case, inadequacy), and in another means action (in this case, inaction). The phrase thus suggests that sometimes language is inadequate because it does not enact. And it expresses this with the pithiness of a programmatic logic, in four words beginning with the conditional “since” and the enactive “do.” This programmatic logic evokes code’s execution, performing the idea that language can express meaning, it can even produce meaning, but on its own, it does not do.

that knowledge of conspiracy doesn’t achieve anything on its own: “Supposing we were ever sure of all those things—what would we know then that we don’t already know?” (123).

APPENDIX I

“Queer Distant Reading” customized source code

This appendix contains code written for three modules: main.py, which configures the application and executes input from the user, load.py, which loads and cleans the text, and actions.py, which carries out text analysis procedures.

Comments (text that will not be processed by Python) are contained on lines preceded with a hashtag #. These include clarifying notes to human readers, code that failed to work or from previous iterations of the project, and code in progress.

main.py

```
import argparse

from lib import load

from lib import actions

import matplotlib.pyplot as plt

import pprint

# creating parser object with properties (arguments and options) for
# specifying text, keyword, iteration, and visualization.

parser = argparse.ArgumentParser()

parser.add_argument("text", help="Source text for running text
analysis")
```

```

parser.add_argument("keyword", help="Keyword for calculating similarity
in source text.")

parser.add_argument("-c", "--context", action='store_true', help="Show
context for keyword from the text.")

# parser.add_argument("-g", "--graph", action='store_true',
help="Create a network graph")

args = parser.parse_args()

# grabbing args from the command line

word = args.keyword

filename = args.text

# actions: loading, tokenize, cleaning

loaded = load.launch(filename)

tokenized = load.preprocess(loaded)

cleaned = load.clean(tokenized)

# showing the context

if args.context == True:

    print(actions.context(tokenized, word))

else:

    pprint.pprint(actions.similar(cleaned, word))

```

```
# # visualize the results

# if args.graph == True:

#     graph = multiply.visualize_sim_1(cleaned, word)

#     plt.show(graph)
```

load.py

```
import os

import sys

import nltk

from nltk.corpus import stopwords

from nltk.stem import WordNetLemmatizer


# launching and tokenizing the text


def launch(filename):

    with open(os.path.join(sys.path[0], f'texts/{filename}'), "r") as file:

        raw = file.read()

        file.close()

        return raw


def preprocess(raw):

    tokens = nltk.word_tokenize(raw)

    text = nltk.Text(tokens)
```

```

    return text

# cleaning the text

def clean(text):

    lower_no_punct = [word.lower() for word in text if word.isalpha()]

    stops = stopwords.words('english')

    no_stops = [word for word in lower_no_punct if word not in stops]

    wordnet_lemmatizer = WordNetLemmatizer()

    clean_text = [wordnet_lemmatizer.lemmatize(word) for word in
no_stops]

    return clean_text

```

actions.py

```

# for i in similar_w:
#     words.append(i[0])
# return words
# return similar_w

def context(tokenized, word):
    """
    Gets the context for the keyword from the source text.
    """

    text = Text(tokenized)
    context = text.concordance(word, width=100)

```

```

    return context

def subtract(cleaned, word, operand):
    """
    Subtracts a vector from another vector.

    """
    model = Word2Vec([cleaned], vector_size=100, window=10,
                    min_count=1, workers=4)
    result = model.wv(positive=word, negative=operand)
    return result

# ### similar words, second level

# def second_level(cleaned, first_level):
#     print(f"running second level with {first_level} words, with type
# {type(first_level)}")
#
#     model = Word2Vec([cleaned], vector_size=100, window=10,
#                     min_count=1, workers=4)
#
#     words = []
#
#     for word in first_level:
#
#         similar_w = model.wv.most_similar(word[0])
#
#         words.append(similar_w)
#
#         for word in similar_w:
#
#             words.append(word[0])
#
#     ## to print out / sort just words, not vectors
#
#     ## only works if first level is similarly returning just words.

```

```

#     # words = set(words)
#
#     # words = words.sort()
#
#     return words

# # create a graph of first level similar words

# def visualize_sim_1(clean_text, word):
#
#     idx = nltk.text.ContextIndex(clean_text)
#
#     sim_1 = idx.similar_words(word)
#
#     G = nx.Graph()
#
#     G.add_node(word)
#
#     G.add_nodes_from(sim_1)
#
#     G.add_edges_from(interweave(word, sim_1))
#
#     return nx.draw(G, with_labels=True, font_weight='bold',
node_size=500, node_color="#A0CBE2")

# # create a list of tuples to pass into graph as edge/node pairs

# def interweave(term, similar):
#
#     woven = []
#
#     for word in similar:
#
#         edge = term, word
#
#         woven.append(edge)
#
#     return woven

# perhaps need to make a class for this, to keep the same text no
# matter how many computations we run on it.

```

```
# def make_model(cleaned):  
#     model = Word2Vec([cleaned], vector_size=100, window=10,  
#                     min_count=1, workers=4)  
#     return model
```

APPENDIX II

“Queer Text Encoding” customized source code

This appendix includes the full encoding for chapter 1 of Oscar Wilde’s manuscript for *The Picture of Dorian Gray* (1890) and the CSS styling to render the tags on the tool’s web page.

In the encoding, the size of the text has been reduced to retain natural code indentations.

Additionally, all TEI elements have been taken from the TEI-C guidelines (See TEI-Consortium), except for the @implication attribute, which is customized for this project.

tei.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!--<?xml-model
      href="http://www.tei-c.org/release/xml/tei/custom/schema/relaxng/tei_all.rng" type="application/xml"
      schematypens="http://relaxng.org/ns/structure/1.0"
    ?>-->
<TEI xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://www.tei-c.org/ns/1.0 tei_ms.odd" xmlns="http://www.tei-c.org/ns/1.0">
  <teiHeader>
    <fileDesc>
      <titleStmt>
        <title>The Picture of Dorian Gray</title>
      </titleStmt>
      <publicationStmt>
        <p>Morgan Library Manuscript. Original manuscript version in thirteen chapters. Revised
           for publication in periodical format in 1890 (DG90) and as print book in 1891 (DG91).
           Contains pre-published materials in Morgan Manuscript (MS) and Clark Typescript
           (TS).</p>
      </publicationStmt>
      <sourceDesc>
        <msDesc>
          <msIdentifier>
            <settlement>New York, NY</settlement>
            <repository>Pierpont Morgan Library Dept. of Literary and Historical
               Manuscripts</repository>
          </msIdentifier>
        </msDesc>
      </sourceDesc>
    </fileDesc>
  </teiHeader>
</TEI>
```

```
</msIdentifier>
<physDesc>
    <objectDesc>
        <p>264 [i.e., 262] leaves.</p>
    </objectDesc>
</physDesc>
<msDesc>
</sourceDesc>
</fileDesc>
</teiHeader>
<text>
    <body>
        <div type="chapter" n="1">
            <head>Chapter 1</head>
            <p> The studio was filled with the rich odour of roses, and when the light summer wind
                stirred amidst the trees of the garden there came through the open door the heavy
                scent of the lilac, or the more delicate perfume of the <add place="above">pink</add>
                flowering thorn. </p>
            <p> From the corner of the divan of Persian saddle-boys on which he was lying, smoking,
                as <mod type="subst">
                    <del rend="strikethrough"> was his custom, </del>
                    <add place="above"> usual </add>
                </mod> innumerable cigarettes, Lord Henry Wotton could just catch the <del
                    rend="strikethrough">
                    <gap reason="illegible"/>
                </del> gleam of the honey-sweet and honey-colored blossoms of the laburnum, that was
                hanging from the tremulous branches that seemed hardly able to bear the burden of a
                beauty so flame-like as theirs: and, now and then, the fantastic shadows of birds in
                flight flitted across the long tussore-silk curtains that were stretched in front of
                the huge window, producing a kind of momentary Japanese effect, and making him think
                of those pallid jade-faced painters who, in an art that is seemingly immobile, seek
                to convey the laws of swiftness and motion. The sudden murmur of the bees shouldering
                their way through the long unmown grass or circling with monotonous insistence round
                the black-crocketed spines of the early <add place="above"> June </add> holly-hocks,
                seemed to make the stillness more oppressive, <del rend="strikethrough">
                    <gap reason="illegible"/>
                </del> and the dim roar of London was like the bourdon note of <add place="above"> a
                distant </add> organ. </p>
            <p> In the center of the room, <mod type="subst">
                <del rend="strikethrough">
                    <gap reason="illegible"/>
                </del>
                <add place="above"> clamped to </add>
            </mod> an upbright easel, <add place="above"> was standing </add> the full-length
            portrait of a young man of extraordinary personal beauty, and in front of it, some
```

little distance away, ~~rend="strikethrough">was sitting~~ sat the ~~rend="strikethrough">painter~~
~~place="above">artist himself,~~
~~mod type="subst">Basil Hallward, whose sudden disappearance some years ago caused~~
~~place="above">at the time~~ such ~~place="above">public~~ excitement,
and ~~rend="strikethrough">~~gap reason="illegible"/>~~~~
~~add place="above">gave rise to so many strange~~
~~mod conjectures.~~ </p>

<p> As he looked at the gracious and comely form he had so skillfully mirrored in his art, a ~~implication="inconclusive" strokes="2"~~
~~unclear reason="illegible">delicate~~
~~smile of pleasure~~ passed across his face, and seemed about to linger there. But he suddenly started up, and closing his eyes placed his fingers upon the lids, as though he sought to imprison within his brain some ~~rend="strikethrough" implication="illegible" strokes="2"~~
~~gap reason="illegible"/>~~
~~add place="above">~~gap reason="illegible"/>~~~~
~~add~~
~~del~~
~~add place="above">curious~~
~~mod dream from which he feared he might awake.~~ </p>

<p>
<quote>"It is your best work, Basil, the best thing you have ever done," said Lord Henry languidly. "You must certainly send it ~~place="above">next year~~ to the Grosvenor. The Academy is too large, and too vulgar. The Grosvenor is the only place." </quote>

</p>

<p>
<quote> "I don't think I will send it will send it any where," he answered, tossing his head back in that odd way that used to make ~~rend="strikethrough">~~unclear reason="illegible">us~~~~
~~add place="above">his friends~~
~~mod laugh at him in Oxford. "No: I won't send it anywhere. And yet, you are quite right about it. It is my best work."~~ </quote>

</p>

<p> Lord Henry elevated his eyebrows, and looked at him in amazement through the thin blue wreathes of smoke that curled ~~rend="strikethrough">~~

<gap reason="illegible"/>

<add place="above">up in such fanciful whorls</add>
</mod> from his heavy opium-tainted cigarette. <quote> "Not send it anywhere? My dear fellow, why? Have you got any reason? What odd chaps you painters are! You do any thing in the world to gain a reputation. And soon as you have <mod type="subst">
<del rend="strikethrough">it
<add place="above">one</add>
</mod> you seem to want to throw it away. It is silly of you, for there is only one thing in the world worse than being talked about, and that is not being talked about. A portrait like this would set you far above all the young men in England, and make the old men <add place="above">quite</add> jealous, if old men are <add place="above">even</add> capable of any emotion." </quote>
</p>
<p>
<quote> "I know you will laugh at me," he replied, "but I really cannot exhibit it. I have put too much of myself into it." </quote> Lord Henry stretched his long legs out on the divan, and shook with laughter. <quote> "Yes: I knew you would laugh, but it is quite true, all the same." </quote>
</p>
<p>
<quote> "Too much of yourself in it! Upon my word, <add place="above">Basil,</add> I didn't know you were so vain, and I really can't see any resemblance between you with your rugged strong face, and your coal-black hair, and this young Adonis, who looks as if he was made of ivory and rose-leaves. Why, my dear Basil, he is a Narcissus! And you--well of course you have an intellectual expression, and all that. But Beauty, real Beauty, <mod type="subst">
<del rend="strikethrough">only begins
<add place="above">ends</add>
</mod> where an intellectual expression begins. Intellect is in itself an exaggeration, and destroys the harmony of any face. The moment one <del
rend="strikethrough">
<gap reason="illegible"/>
 sits down to think, one becomes all nose, or all forehead, or something horrid. Look at the successful men in any <mod type="subst">
<del rend="strikethrough">
<gap reason="illegible"/>

<add place="above">of the</add>
</mod> learned professions. How perfectly hideous they are! Except of course in the Church. But then in the Church they don't think. A Bishop keeps on saying at the age of eighty what he was told to say when he was a boy of eighteen, and consequently he <add place="above">always</add> looks absolutely delightful. Your mysterious young friend, whose name you have never told me but whose picture really fascinates me, never thinks. I feel quite sure of that. He is a brainless,

beautiful thing, who should be always here in winter when we have no flowers to look at, and <add place="above">always here</add> in summer when we want something to chill our intelligences. Don't flatter yourself, Basil. You are not in the least like him." </quote>

</p>

<p>

<quote> "You don't understand me, Harry. Of course I am not like him. I know that perfectly well. Indeed I should be sorry to look like him. You shrug your shoulders? I am telling you the truth. There is a fatality about all physical as well as intellectual distinction, the sort of fatality that seems to dog <mod type="subst">

<del rend="strikethrough">the

<add place="above">through history the faltering</add>

</mod> steps of Kings. It is better not to be different from one's fellows. The ugly and the stupid have the best of it in this world. They can sit quietly, and gape at the play. If they know nothing of victory, they are <mod type="subst">

<del rend="strikethrough">

<unclear>saved</unclear>

<add>at least spared</add>

</mod> the knowledge of defeat. They live as we all should live, undisturbed, indifferent, and without disquiet. They neither bring ruin upon others, nor ever receive it from alien hands. Your rank and wealth, Harry; my brains, such as they are, my fame, whatever it may be worth; Dorian Grey's <mod type="subst">

<del rend="strikethrough" strokes="2" implication="beauty">beauty;

<add place="above">good looks;</add>

</mod> we will all suffer for what the Gods have given us, suffer terribly."

</quote>

</p>

<p>

<quote> "Dorian Grey? Is that his name?" said Lord Henry, walking across the studio toward Basil Hallward. </quote>

</p>

<p>

<quote> "Yes: that is his name. I didn't intend to tell <add place="above">it to</add> you." </quote>

</p>

<p>

<quote> "But why not?" </quote>

</p>

<p>

<quote> "Oh! I can't explain. <del rend="strikethrough" strokes="1" implication="illegible">

<gap reason="illegible"/>

 When I like people immensely, I <mod type="subst">

<del rend="strikethrough">cannot
<add place="above">never</add>
</mod> tell their names to any one. It seems like surrendering a part of them. You know how I love secrecy. It is the only thing that can make a modern life woderful, or mysterious to us. The commonest thing is delightful if one only hides it. When I <mod type="subst">
<del rend="strikethrough">dine out
<add place="above">leave town</add>
</mod> I never tell my people where I am going. If I did, I would lose all my pleasure. It is a silly habit, I daresay, but somehow it <del rend="strikethrough">
<gap reason="illegible"/>
 seems to bring a great deal of romance into one's life. I suppose you think me awfully foolish about it?" </quote>
</p>
<p>
<quote> "Not at all," answered Lord Henry, laying his hand upon his shoulder; "not at all, my dear Basil. You seem to forget that I am married, and the one charm of marriage is that it makes a life of deception absolutely necessary for both parties. I never know <mod type="subst">
<del rend="strikethrough">what
<add place="above">where</add>
</mod> my wife is <del rend="strikethrough">doing , and my wife never knows
<mod type="subst">
<del rend="strikethrough">where
<add place="above">what</add>
</mod> I am <add place="above">doing</add> When we meet--we do meet occasionally, when we dine, out <add place="above">together</add> or go down to the Duke's--we tell each other the most absurd stories with the most serious faces. My wife is very good at it, much better in fact than I am. She never gets confused over her dates, and I always do. But when she does find me out, she never makes a row. I sometimes wish she did, but she merely laughs at me." </quote>
</p>
<p>
<quote> "I hate the way you talk about your married life, Harry," said Basil Hallward, shaking his hand off, and strolling towards the door that led into the garden. "I believe that you are really a very good husband, but that you are thoroughly ashamed of your own virtues. You are an extraordinary fellow. You neve say a moral thing, and you never do a wrong thing. Your cynicism is simply a pose." </quote>
</p>
<p>
<quote> "Being natural is simply a pose, and the most irritating pose I know, <mod type="subst">
<del rend="strikethrough" strokes="2">said
<add place="above">cried</add>

```

        </mod> Lord Henry laughing, and the two young men went out into the garden
        together, and for a time they did not speak. <del rend="strikethrough" strokes="2"
        >to each other.</del>
    </quote>
</p>
<p> After a long pause Lord Henry pulled out his watch. <quote> "I am afriad I must be
    going Basil," he <mod type="subst">
        <del rend="strikethrough" strokes="3">said</del>
        <add place="above">murmured</add>
    </mod> and before I go I insist on you answering me a question I put to you <mod
        type="subst">
        <del rend="strikethrough" strokes="2">
            <gap reason="illegible"/>
        </del>
        <add place="above">half an hour</add>
    </mod> ago." </quote>
</p>
<p>
    <quote> "What is that?" asked Basil Hallward, keeping his eyes fixed on the ground.
    </quote>
</p>
<p>
    <quote> "You know quite well." </quote>
</p>
<p>
    <quote> "I do not, Harry." </quote>
</p>
<p>
    <quote> "Well, I will tell you what it is." </quote>
</p>
<p>
    <quote> "Please don't." </quote>
</p>
<p>
    <quote> "I must. I want you to <mod type="subst">
        <del rend="strikethrough" strokes="1" implication="inconclusive">tell</del>
        <add place="above">explain to</add>
    </mod> me why you won't exhibit Dorian Gray's picture. I want the real reason."
    </quote>
</p>
<p>
    <quote> "I told you the real reason." </quote>
</p>
<p>
    <quote> "No: you did not. You said it was because there was too much of yourself it.

```

Now, that is childish." </quote>
</p>
<p>
<quote> "Harry," said Basil Hallward, <del rend="strikethrough" strokes="1"
 implication="intimacy"> taking hold of his hand and looking him straight
 in the face, "Every portrait that is painted with <mod type="subst">
 <del rend="strikethrough" strokes="2" implication="passion">passion
 <add place="above">feeling</add>
 </mod> is a portrait of the artist, not of the sitter. The sitter is merely the
 accident, the occasion. It is not he who is revealed by the painter, it is rather
 the painter who <add place="above">on the colours of the canvas</add> reveals
 himself. The reason why I will not exhibit this picture, is that I am afraid that
 I have shown in it the secret of my own soul." </quote>
</p>
<p> Lord Henry <mod type="subst">
 <del rend="strikethrough" strokes="1" implication="intimacy"> hesitated for a
 moment
 <add place="above">laughed</add>
 </mod>
</p>
<p>
<quote> "And what is that?" he asked. <del rend="strikethrough" strokes="1"
 implication="intimacy"> in a low voice
</quote>
</p>
<p>
<quote> "I will tell you," said Hallward, and <mod type="subst">
 <del rend="strikethrough" strokes="inconclusive" implication="fatality"> a look
 of pain
 <add place="above">an expression of perplexity</add>
 </mod> came over his face. </quote>
</p>
<p>
<quote>
 <mod type="subst">
 <del rend="strikethrough" strokes="1" implication="fatality">"Don't if you
 would rather not"
 <add place="above">"I am all expectation, Basil"</add>
 </mod> murmured his companion, looking at him. </quote>
</p>
<p>
<quote> "Oh! There is really very little to tell you, Harry," answered the young
 painter; "and I am afraid you will hardly understand it." </quote>
</p>
<p> Lord Henry smiled, and leaning down plucked a ping-petalled daisy from the grass,

and examined it. <quote> "I am quite sure I shall understand <mod type="subst">
 <del rend="strikethrough">you
 <add place="above">it</add>
 </mod> , " he replied, gazing intently at the little golden white-feathered disk.
 <del rend="strikethrough"> that has charmed all our poets from Chaucer to
 Tennyson
 </quote>
</p>
<p> The wind shook some blossoms from the trees, and the heavy lilac blooms, with their
 clustering stars, moved to and fro in the languid air. A <mod type="subst">
 <del rend="strikethrough">bird
 <add place="above">grasshopper</add>
 </mod> began to <mod type="subst">
 <del rend="strikethrough">sing
 <add place="above">chirrup</add>
 </mod> in <mod type="subst">
 <del rend="strikethrough">a thicket
 <add place="above">the grass</add>
 </mod> , and a long thin dragon-fly floated <mod type="subst">
 <del rend="strikethrough">past
 <add place="above">by</add>
 </mod> on its brown gauze wings. Lord Henry felt as if he coul hear Basil Hallward's
 heart beating, and he <mod type="subst">
 <del rend="strikethrough" strokes="2" implication="fatality"> heard his own
 breath, with a sense almost of fear
 <add place="above">wondered what was coming.</add>
 </mod>
</p>
<p>
 <quote> "Yes: there is very little to tell you," repeated Hallward <add place="above">
 >rather bitterly</add> "and I <mod type="subst">
 <del rend="strikethrough">am afraid
 <add place="above">daresay</add>
 </mod> you will be disappointed. Two months ago I went to a crush at Lady
 Brandon's. You know we poor painters have to show ourselves in society from time
 to time, just to remind the public that we are not savages. With an evening coat
 and a white tie, <add place="above">as you told me once</add> any body, <add
 place="above">even a stockbroker,</add> can gain a reputation for being
 civilized. Well, after I had been in the room about ten minutes, talking to huge
 over-scented dowagers and tedious academicians, I suddenly <mod type="subst">
 <del rend="strikethrough">felt
 <add place="above">became conscious</add>
 </mod> that some one was looking at me. I turned half way round, and saw Dorian
 Gray for the first time. When our eyes met, I felt that I <mod type="subst">
 <del rend="strikethrough">grew

<add place="above">was growing</add>
 </mod> pale. A curious <mod type="subst">
 <del rend="strikethrough">feeling
 <add place="above"><gap reason="illegible"/></add>
 </mod> of terror came over me. I knew that I had <del rend="strikethrough">
 <gap reason="illegible"/>
 come <mod type="subst">
 <del rend="strikethrough">across
 <add place="above">face to face with</add>
 </mod> someone whose mere personality was so fascinating that it would <mod
 type="subst">
 <del rend="strikethrough" strokes="3" implication="fatality"> be Lord over
 <add place="above">absorb</add>
 </mod> my <mod type="subst">
 <del rend="strikethrough" strokes="2" implication="passion">life
 <add place="above">nature</add>
 </mod> , my soul, my art itself. I did not want any <mod type="subst">
 <add place="above">extreme</add> influence <del rend="strikethrough"
 strokes="1" implication="inconclusive"> of that kind
 </mod> in my life. You know yourself, Harry, how independant I have always been.
 My father destined me for the army. I insisted on going to Oxford. Then he made me
 enter my name at the middle temple. Before I had eaten half a dozen dinners I gave
 up the Bar, and announced my intention of becoming a painter. I have always been
 my own master; had at least always been so till I met Dorian Gray. Then - but I
 <del rend="strikethrough">
 <gap reason="illegible"/>
 don't know how to explain it to you. Something seemed to tell me that I was
 on the verge of <del rend="strikethrough">
 <gap reason="illegible"/>
 a terrible crisis in my life. I had a strange feeling that <mod type="subst">
 <del rend="strikethrough">
 <gap reason="illegible"/>

 <add place="above">fate</add>
 </mod> had in store for me exquisite joys and exquisite sorrows. I knew that if I
 spoke to him, I would <mod type="subst">
 <del rend="strikethrough" strokes="1" implication="fatality"> never leave him
 till either he or I were dead
 <add place="above"> become absolutely devoted to him, and that I ought not to
 speak to him. </add>
 </mod> I grew afraid, and turned to <mod type="subst">
 <del rend="strikethrough">leave
 <add place="above">quit</add>
 </mod> the room. It was not conscience <add place="above">that made me do
 so,</add> it was cowardice. I <del rend="strikethrough">

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        <gap reason="illegible"/>
    </del> take no credit to myself for trying to escape." </quote>
</p>
<p>
    <quote> "Conscience and cowardice are really the same things, Basil. Conscience is
the trade-name of the firm, that is all." </quote>
</p>
<p>
    <quote> "I <mod type="subst">
        <del rend="strikethrough">am not sure of that <add place="above">Harry</add>
        </del>
        <add place="above">don't believe that, Harry</add>
    </mod> However, whatever was my motive, and it may have been pride, for I used to
be very proud, I certainly struggled to the door. There of course I stumbled
against Lady Brandon. <quote> "You are not going to run away so soon, Mr.
Hallward?" She screamed out. </quote> You know her shrill horrid voice?"</mod>
    </quote>
</p>
<p>
    <quote> "Yes: she is a peacock in every thing but beauty," said Lord Henry, pulling
the daisy to bits with his long nervous fingers. </quote>
</p>
<p>
    <quote> "I could not get rid of her. She brought me up to the Royalties, and people
with Stars and Garters, and elderly ladies with gigantic tiaras <add place="above">
        <del rend="strikethrough">and hooked noses.</del> She spoke of me as her dearest friend. I had only met
her once before, but she took it into her head to lionize me. I believe some
picture of mine had made a great success at the time, at least had been chattered
about in the penny newspapers, which is the nineteenth century app> <mod>
        <type="subst">
            <del rend="strikethrough">
                <gap reason="illegible"/> of fame </del>
            <add place="above">standard of immortality</add>
        </mod> Suddenly I found myself face to face with the young man whose <mod>
        <type="subst">
            <del rend="strikethrough" strokes="2" implication="beauty">beauty</del>
            <add place="above">personality</add>
        </mod> had so <add place="above">strangely</add> stirred me. We were quite close,
almost touching. Our eyes met, again. It was mad of me, but I asked Lady Brandon
to introduce me to him. Perhaps it was not so mad after all. It was simply
inevitable. We would have spoken to each other without any introduction. I am sure
of that. Dorian told me so afterwards." </quote>
</p>
<p>
    <quote> "And how did Lady Brandon describe this wonderful young <mod type="subst">

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<del rend="strikethrough" strokes="2" implication="beauty">narcissus</del>
<add place="above">man</add>
<del/>

</mod> ? I know she gives in for giving a rapid precis of <add place="above">
all</add> her guests. I remember her bringing <del rend="strikethrough">up
to</del> me up to a most truculent and red-faced old <mod type="subst">
<del rend="strikethrough">man</del>
<add place="above">gentleman</add>
</mod> covered all over with orders and ribands, and hissing into my ear in a
tragic whisper, which must have been perfectly audible to every body in the room,
something like <quote> 'Sir Humpty Dumpty - you know - Afghan frontier - Russian
intelligence: very successful man - <del rend="strikethrough">quite
inconsolable</del>
<del rend="strikethrough">wants to marry</del> wife killed by an elephant -
quite inconsolable - wants to marry a <add place="above">beautiful</add>
American widow <add place="above">every body does now-a-days</add> - hates Mr.
Gladstone - but very much interested in beetles - ask him about the new <del
rend="strikethrough">
<gap reason="illegible"/>
</del> military frontier.' </quote>
<del rend="strikethrough">
<gap reason="illegible"/>
</del> I simply fled. I like to find out people for myself. But poor Lady Brandon
treats her guests, exactly as an auctioneer treats his goods. She either explains
them <add place="above">entirely</add> away or tells one everything about them
<mod type="subst">
<del rend="strikethrough">that one does not</del>
<add place="above">except what one</add>
</mod> wants to know. But what did she say about Mr. Dorian Gray?" </quote>
</p>
<p>
<quote> "Oh, she murmured, <quote> 'charming boy - going to be so rich - mother and I
great friends - engaged to be married to the same man - I mean married on the
same day - how very silly of me! Quite forget what he does - afriad he doesn't
do anything - oh, yes plays the piano - or is it the violin, dear Mr. Gray?'
</quote> We could niether of us help laughing, and we became friends at once."
</quote>
</p>
<p>
<quote> "Laughter is not a bad beginning for for a friendship, and it is the best
ending for one," said Lord Henry plucking another daisy. </quote>
</p>

<p> Hallward burried his face <del rend="strikethrough">
<gap reason="illegible"/>

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 in his hands. <quote> "You don't understand what friendship is, Harry," he murmured, " or what enmity is for that matter. You like every one, <mod type="subst">

<del rend="strikethrough">which is the same as <gap reason="illegible"/>

<add place="above">that is to say</add>

</mod> you are indifferent to every one." </quote>

</p>

<p>

<quote> "How horridly unjust of you," cried Lord Henry, tilting his hat back, and looking up at the little clouds that were drifting across the hollowed turquoise of the <add place="above">summer</add> sky, like ravelled skeins of glossy white silk, were drifting across the hollowed turquoise of the summer sky. </quote>

<quote> "Yes" horribly unjust of you. I make a great different between people. I choose my friends for their good looks: my acquaintances for their characters: and my enemies for their brains. A man can't be too careful in the choice of his enemies. I have not got one who is a fool. They are all men of some intellectual power, and consequently they all appreciate me. Is that very vain of me? I think it is rather vain." </quote>

</p>

<p>

<quote> "I should think it was, Harry. But according to your category, I must be merely an acquaintance." </quote>

</p>

<p>

<quote> "My dear old Basil, you are much more than an acquaintance..." </quote>

</p>

<p>

<quote> "And much less than a friend. A sort of brother, I suppose?" </quote>

</p>

<p>

<quote> "Oh! Brothers! I don't care for brothers. My elder brother won't die, and my younger brothers <add place="above">seem</add> never <add place="above">to</add> do anything else." </quote>

</p>

<p>

<quote> "Harry!" </quote>

</p>

<p>

<quote> "My dear fellow, I am not quite serious. But I can't help detesting my relations. I suppose it comes from the fact that we can't stand other people having the same faults as ourselves. I quite sympathize with the rage of the <add place="above">English</add> democracy <del rend="strikethrough">to English against what they call the vices of the upper classes. They <mod type="subst">

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<del rend="strikethrough">seem to think</del>
<add place="above">feel</add>
</mod> that drunkenness, <unclear>and</unclear> stupidity, <add place="above">and
immorality</add> should be their own special property, and that if any one of
us makes an ass of himself <mod type="subst">
<del rend="strikethrough">he is</del>
<add place="above">we are</add>
</mod> poaching on their preserves. When poor Southwark got into the Divorce
Court, their <mod type="subst">
<del rend="strikethrough">rage</del>
<add place="above">indignation</add>
</mod> was quite magnificent. And yet I don't suppose that ten per cent of the
lower orders live with their own wives." </quote>
</p>
<p>
<quote> "I don't agree with a single word that you have said, and, what is more, <add
place="above">Harry,</add> I don't believe you do either." </quote>
</p>
<p>
<quote> "Lord Henry <del rend="strikethrough">pulled his little straw-colored
mousatache, and</del> stroked his pointed <mod type="subst">
<del rend="strikethrough">
<unclear>Henry</unclear>
<gap reason="illegible"/>
</del>
<add place="above">brown</add>
</mod> beard, and tapped the toe of his patent-leather boot with a <mod
type="subst">
<del rend="strikethrough">thick</del>
<add place="above">tassled</add>
</mod> malacca-cane. How English you are, Basil! If one puts forward an idea to a
real Englishman - always a rash thing to do - he never dreams of considering
whether the idea is right or wrong. the only thing he considers of any important
is whether one <del rend="strikethrough">is sincere or putting it forward</del>
believes it oneself. Now the value of an idea has nothing whatsoever to do with
the sincerity of the man who expresses it. Indeed the probabilities are that the
more insincere the man is, the more purely intellectual will the idea be, as <add
place="above">in that case</add> it will not be coloured by either his wants,
his desires, or his prejudices. However, I don't propose to discuss <del
rend="strikethrough">
<gap reason="illegible"/>
</del> politics, sociology, or metaphysics with you. I like persons better than
principle. Tell me more about Dorian Gray. How often do you see him?" </quote>
</p>
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<quote> "Every day, Harry. I could <mod type="subst">
    <del rend="strikethrough" strokes="2" implication="fatality">not live</del>
    <add>n't be happy</add>
</mod> if I did <mod type="subst">
    <del rend="strikethrough">not</del>
    <add>n't</add>
</mod> see him every day. Of course, sometimes it is only for a few minutes, But a
few minutes with somebody one worships mean a great deal." </quote>
</p>
<p>
<quote>
    <mod type="subst">
        <bdel rend="strikethrough"> And </bdel>
        <add place="above">But</add>
    </mod> you <add place="above">don't</add> really worship him?" </quote>
</p>
<p>
    <quote> "I do." </quote>
</p>
<p>
    <quote> "How extraordinary! I thought you would never care for anything but your
painting - your art, I should say. Art sounds better, doesn't it?" </quote>
</p>
<p>
    <quote> "He is all my art to me now. I sometimes think, Harry, that there are only
two eras <add place="above">of any importance</add> in the history of <mod
type="subst">
        <del rend="strikethrough"> earth </del>
        <add place="above"> the world. The first is </add>
    </mod> the difference of a new medium <add place="above">in art</add> and the
second is <add place="above">the</add> difference of a new personality <add
place="above">for art also.</add> What the invention of oil-painting was to the
Venetians, the <mod type="subst">
    <del rend="strikethrough" strokes="1" implication="beauty"> beauty </del>
    <add place="above">face</add>
</mod> of Antinous was to late Greek sculpture, and the <mod type="subst">
    <del rend="strikethrough" strokes="2" implication="beauty"> beauty </del>
    <add place="above">face</add>
</mod> of Dorian Gray will some day be to me. It is not merely that I paint from
him, draw from him, model from him. Of course I have done all that. He has stood
as Paris in dainty armour, and as Adonis with huntsman's cloak and polished
boar-spear. Crowned with heavy lotus-blossoms he has sat on the prow of Adrian's
barge looking into the green turbid Nile. He has leaned over the still pool of some
Greek woodland, and seen in the water's silent silver the wonder of his own <mod
type="subst">

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<del rend="strikethrough" strokes="1" implication="beauty"> beauty </del>
<add place="above">face</add>
</mod> But he is much more to me than that. I won't tell you that I am
dissatisfied with what I have done of him, or that his beauty is such that art
cannot express it. There is nothing that art cannot express, and I know the work
that I have done, since I met Dorian Gray, is <del rend="strikethrough">the</del>
good work, is the best work of my life. But in some curious way - I wonder will
you understand me - his personality has suggested to me an entirely new manner in
art, an entirely new mode of style. I see things differently, I think of them
differently. I can now recreate life in a way that was hidden from me before. "A
dream of form in days of thought" - who is it <mod type="subst">
<del rend="strikethrough">that</del>
<add place="above">who</add>
</mod> says that? - I forget; - but it is what Dorian Gray has been to me. The
merely visible presence of this <mod type="subst">
<del rend="strikethrough">boy</del>
<add place="above">lad</add>
</mod> though <mod type="subst">
<del rend="strikethrough"> twenty summers have shown him roses less scarlet
than his lips </del>
<add place="above">he is <del rend="strikethrough">just</del>over twenty </add>
</mod> his merely visible presence, ah! I wonder can you realize all that that
means. Unconsciously he defines for me the lines of a fresh school, a school that
is to have in itself all the passion of the <mod type="subst">
<del rend="strikethrough">
<gap reason="illegible"/>
</del>
<add place="above">romantic</add>
</mod> spirit, all the perfection of the spirit that is Greek. The harmony of soul
and body - how much that is! We in our madness have separated the two, and have
invented as a realism that is bestial, an ideality that is void. Harry! Harry! if
you only knew what Dorian Gray is <add place="above">to me.</add> You remember
that landscape of mine, for which Agnew offered me such <gap reason="illegible"/>a <gap reason="illegible"/>
<add place="above">huge</add> price, but which I would not part with? It is one of
the best things I have ever done. And why is it so? Because, while I was painting
it, Dorian Gray sat beside me. <del rend="strikethrough" strokes="1"
implication="passion"> and as he leaned across to look at it, his <del
implication="intimacy"> cheek just brushed my cheek. <add place="above">hair
just touched my hand.</add></del> The world becomes young to me when I
hold his hand, as when I see him, the centuries yield up all their secrets!"</del>
</quote>
</p>
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<quote> "Basil, this is <mod type="subst">
    <del rend="strikethrough" strokes="inconclusive" implication="fatality">
        <gap reason="illegible"/> you must not talk <gap reason="illegible"/> his
        power, you <gap reason="illegible"/> to make yourself the <gap
        reason="illegible"/> of <gap reason="illegible"/> slave! It is worse that
        wicked, it is silly. I hate Dorian Gray." </del>
    <add place="above">quite wonderful. I must see Dorian Gray.</add>
</mod>
</quote>
</p>
<p> Hallward got up from the seat, and walked up and down the garden. <del
    rend="strikethrough"> A curious smile curled his lips. He seemed like a man in a
    dream. </del> After some time he came back. <quote> "You don't understand,
    Harry..." he said. "Dorian Gray is merely to me a motive in art. He is never more
    present in my work than when no image of him is there. He is simply a suggestion,
    as I have said, of a new manner. I see him in the curves of certain lines, in the
    loveliness and subtleties of certain colours. That is all." </quote>
</p>
<p>
    <quote> "Then why won't you exhibit his <mod><del rend="strikethrough"
        >picture?</del><add place="above">portrait?</add></mod>
    </quote>
</p>
<p>
    <quote> "Because I have put into it <add place="above">all</add> the <add
        place="above">extraordinary</add> romance of which, <add place="above">of
        course,</add> I have never dared to speak to him. He knows nothing about it,
        <add place="above">he will never know anything about it,</add> but the world
        <mod type="subst">
            <del rend="strikethrough">would</del>
            <add place="above">might</add>
        </mod> guess it, <add place="above">and</add>
        <del rend="strikethrough" strokes="2" implication="passion"> where there is merely
        love, they would see something evil, where there is spectacular passion they
        would suggest something vile. </del> I will not bear my soul to their shallow
        <add place="above">prying</add> eyes. My heart shall <mod type="subst">
            <del rend="strikethrough" strokes="1" implication="passion"> not be made their
            mockery </del>
            <add place="above">never be put under their microscope.</add>
        </mod> There is too much of myself in <gap reason="illegible"/>
        <add place="above">the thing,</add> Harry, too much of myself! </quote>
</p>
<p>
    <quote> "Poets are not so scrupulous as you are. They know how useful passion is for
        publication. Now-a-days a broken heart will run to many editions." </quote>

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</p>
<p>
    <quote> "I hate them for it. An artist should create beautiful things, but should put
    nothing of his own life into them. We live in an age which men treat art as if it
    were meant to be an autobiography. We have lost the abstract sense of beauty. If I
    live I will show the world what it is, and for that lesson the world shall never
    see my portrait of Dorian Gray." </quote>
</p>
<p>
    <quote> "I think you are wrong, Basil, but I won't argue with you. It is only the
    intellectually lost who ever argue. Tell me; is Dorian Gray very fond of you?"</quote>
</p>
<p> Hallward considers for a few moments. <quote> "He likes me," he answered after a
    pause; "I know he likes me. Of course I flatter him dreadfully. I find a strange
    pleasure in saying things to him that I know I <mod type="subst">
        <del rend="strikethrough">will</del>
        <add place="above">shall</add>
    </mod> be sorry for having said. I give myself away. <del rend="strikethrough"
        strokes="" implication="beauty"> I told him that beauty like his is genius, is
        higher <add place="above">
            <gap reason="illegible"/>
        </add> than genius, as it needs no explanation, and is one of the great facts
        of the world, like sunlight or spring time, or what <gap reason="illegible"/>
        the explanation in dark waters of that thin silver shell we call the moon.
    </del> As a rule, he is charming to me, and we walk home together, from the club,
    arm in arm, or sit in the studio <del rend="strikethrough" strokes="1"
        implication="intimacy"> beside each other </del> and talk of a thousand things.
    Now and then, <del rend="strikethrough" strokes="3" implication="illegible">
        <gap reason="illegible"/>
        <add place="above">
            <gap reason="illegible"/>
        </add>
        <gap reason="illegible"/>
    </del> however, he is horribly thoughtless, and seems to take a real delight in
    giving me pain. Then I feel, Harry, that I have given away my whole soul to
    someone <del rend="strikethrough" strokes="inconclusive" implication="fatality">
        seems to take a real delight in giving me pain. I can quite understand it. I
        can imagine myself doing it. But not to him, not to him. Once or twice we have
        been away together, then I have <add place="above"> had </add> him all to
        myself. I am horribly jealous of him, of course. I never let him talk to me of
        the people he knows. I like to isolate him from the rest of life, and to think
        that he absolutely belongs to me. He does not, I know. But it gives me pleasure
        to think that he does. Harry! I have given this <mod type="subst"> boy <add
        place="above">young man</add>

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        </mod> my whole <gap reason="illegible"/>
</del>
<add>who</add> treats <gap reason="illegible"/> it as if it were a flower to put
in his coat, a bit of decoration to charm his vanity, an ornament for a summer's
day." </quote>
</p>
<p>
<quote> "Days in summer, Basil, are apt <mod type="subst">
<del rend="strikethrough">wax long</del>
<add place="above">linger</add>
</mod> Perhaps you will tire sooner than he will. It is a bad thing to think of,
but there is no doubt that genius lasts longer than beauty. That accounts for the
fact that <mod type="subst">
<del rend="strikethrough">we are all horribly overeducated</del>
<add place="above">we all take such pains to overeducate ourselves</add>
</mod> in the wild struggle for existence, we want to have something that endures,
and so we fill our minds with rubbish and facts, in the silly hope of keeping our
place. The thoroughly well-informed man - that is <mod type="subst">
<del rend="strikethrough">what we all try to be.</del>
<add place="above">the modern ideal.</add>
</mod> And the mind of the thoroughly well-informed man is a dreadful thing. It is
like a bric-a-brac shop, all monsters and dust, and every thing priced above its
proper value. I think you will tire first, all the same. Some day you will look at
him, and he will seem to you to be a little out of drawing, or you won't like his
tone of colour, or something. You will bitterly reproach him in your own heart,
and seriously think that he has behaved <mod type="subst">
<del rend="strikethrough">
<gap reason="illegible"/>
</del>
<add place="above">very badly to</add>
</mod> you. The next time he calls, you will be perfectly cold and indifferent.
It will be a great pity, for it will alter you. The worst of having a romance is
that it makes one so unromantic." </quote>
</p>
<p>
<quote> "Harry, don't talk like that. <del rend="strikethrough"> I am not afraid of
things, but I am afraid of words. I cannot understand how it is that no
prophecy has ever been fulfilled. None has, I know. And yet it seems to me that
to say a thing, is to bring it to pass. Whatever has found expression becomes
true, and what has not found expression can never happen. As for genius lasting
longer than beauty - it is only the transitory that stirs me. What is permanent
is monotonous, and produces no effect. Our senses become dulled by what is
always with us. </del> As long as I live, the personality of Dorian Gray will
dominate me. <del rend="strikethrough" strokes="inconclusive"
implication="illegible"> If it <gap reason="illegible"/> memory, there will be

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a magic in it <gap reason="illegible"/> dream it will be more real than reality
 You <mod type="subst">
 <del rend="strikethrough">cannot realize
 <add place="above">can't feel</add>
 </mod> what I feel. You change too often." </quote>
</p>
<p>
 <quote> "Ah! My dear Basil, that is exactly why I can feel it. Those who are faithful
 know only the pleasures of love, it is the faithless who know love's tragedies,"
 and Lord Henry struck a light on a dainty silver case, and began to smoke a
 cigarette with a self-conscious and self-satisfied air, as if he had summed up
 life in a phrase. </quote> There was a rustle of chirruping sparrows in the ivy,
 and the blue cloud-shadows chased themselves across the grass like swallows. How
 pleasant it was in the garden! And how delightful other people's emotions were! Much
 more delightful than their ideas, it seemed to him. One's own soul, and the passions
 of one's friends - those were the fascinating things in life. He thought with
 pleasure of the tedious luncheon that he had missed by staying so long with Basil
 Hallward. Had he gone to his aunt's, he would have been quite sure to have met Lord
 Goodbody there, and the whole conversation would have been about the housing of the
 poor, and the necessity for model lodging-houses. It was charming to have escaped all
 that! As he thought of his aunt, an idea seemed to strike him. He turned to Hallward,
 and said <quote> "My dear fellow, I have just remembered." </quote>
</p>
<p>
 <quote> "Rememberd what, Harry?" </quote>
</p>
<p>
 <quote> "Where I heard the name of Dorian Gray." </quote>
</p>
<p>
 <quote> "Where <del rend="strikethrough"> I heard the name of was it?" Asked
 Hallward, with a slight frown. </quote>
</p>
<p>
 <quote> "Don't look so angry, Basil. It was at my aunt's, Lady Agatha's. She told me
 she had discovered a wonderful young man, who was going to help her in the East
 End, and that his name was Dorian Gray. I am bound to state that she never told me
 he was good-looking. Women have no appreciation of good looks. At least, good
 women have not. She saw that he was very earnest, and had a beautiful nature. I at
 once pictured to myself a creature with spectacles and <mod type="subst">
 <del rend="strikethrough">no
 <add place="above">lank</add>
 </mod> hair, horribly freckled, and <mod type="subst">
 <del rend="strikethrough">with
 <add place="above">tramping abouty on</add>

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        </mod> huge feet. I wish I had known it was your friend." </quote>
</p>
<p>
    <quote> "I am glad you didn't, Harry." </quote>
</p>
<p>
    <quote> "Why?" </quote>
</p>
<p>
    <quote> "I don't want you to meet him." </quote>
</p>
<p>
    <quote> "Mr. Dorian Gray is in the studio, Sir" said the butler coming into the
garden. </quote>
</p>
<p>
    <quote> "You must introduce me now," <mod type="subst">
        <del rend="strikethrough">said</del>
        <add place="above">cried</add>
    </mod> Lord Henry, laughing. </quote>
</p>
<p> Basil Hallward turned to the <mod type="subst">
    <del rend="strikethrough">servant</del>
    <add place="above">butler</add>
</mod> who stood blinking in the sunlight. <quote> "Ask Mr. Gray to wait, Parker; I
will be in in a few moments." </quote> The man bowed, and went up the walk. </p>
<p> Then he looked at Lord Henry. <quote> "Dorian Gray is my dearest friend," he said.
    "He has a simple and a beautiful nature. Your aunt was quite right in what she
    said of him. Don't spoil him for me. Don't try to influence him. Your influence
    would be bad. The world is wide, and has many marvellous people in it. Don't take
    away from me the one person that makes life <del rend="strikethrough">lovely</del>
    <add place="above">absolutely</add> lovely to me, and that gives me my art
    whatever wonder or charm it possesses. Mind, Harry, I trust you." </quote> He
    spoke very slowly, and the words seemed wrung out of him as almost against his will.
</p>
<p>
    <quote>
        <del strokes="inconclusive" implication="passion"> I don't suppose I shall care
            for him, and I am quite sure he won't care for me,"</del>
        <add place="above">"What nonsense you talk," said</add> Lord Henry smiling, and,
            taking Hallward by the arm, he almost led him into the house. </quote>
    </p>
</div>
</body>
</text>
```

```
</TEI>
```

styles.scss

```
tei-del {  
    text-decoration: line-through;  
    position: relative;  
}  
  
tei-del[implication] {  
    vertical-align: super;  
    color: rgb(231, 42, 13);  
    position: relative;  
}  
  
tei-del[implication]::before,  
tei-del[implication]::after {  
    --scale: 0;  
    --arrow-size: 10px;  
    --tooltip-color: rgb(49, 46, 46);  
  
    position: absolute;  
    top: -.25rem;  
    left: 50%;  
    transform: translateX(-50%) translateY(var(--translate-y, 0))  
    scale(var(--scale));  
    transition: 150ms transform;  
    transform-origin: bottom center;
```

```
}

tei-del[implication]::before {

    --translate-y: calc(-100% - var(--arrow-size));

    content: attr(implication);
    color: white;
    padding: .5rem;
    border-radius: .3rem;
    text-align: center;
    width: max-content;
    background: var(--tooltip-color);

}

tei-del[implication]:hover::before,
tei-del[implication]:hover::after {

    --scale: 1;

}

tei-del[implication]::after {

    --translate-y: calc(-1 * var(--arrow-size));

    content: '';
    border: var(--arrow-size) solid transparent;
    border-top-color: var(--tooltip-color);
    transform-origin: top center;
```

}

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