Contents

1 Counter-Code: Computational Methods for Working with Language

1.1 topic:

- Computational methods for working with language about queerness.

1.2 book questions:

1. What do concepts from Queer Studies and adjacent fields offer to computational tools for working with text?
2. How do computational methods constrain the expressive potential of language into data?
3. How do concepts from Queer Studies and adjacent fields work against constraints in language data?

Template answers to questions:

1. What do concepts from Queer Studies and adjacent fields offer to computational tools for working with text?
    - [queer theory concept], offers an approach to [computational tool] that [does this to text].

(a) The Queer Studies concept of Gender Performativity offers an approach to text analysis that surfaces multiplicity in language meaning.
(b) QOCC's concept of dis-identification offers an approach to textual markup that delineates irreconcilable interpretations of language choices.
(c) Black Feminist Studies' concept of the flesh offers an approach for analyzing text display that is grounded in the physicality and materiality of the screen.
(d) Trans Studies' concept of normativity offers an approach to text generation that reveals shared investments across identity and subject groups.

2. How do these computational tools constrain the expressive potential of language into data?

- [Constraint] [does something] to language [to make it this].
  (a) In text analysis, "loops" strip language of idiosyncracies in order to count its common features.
  (b) In textual markup, "tags" disambiguate and fix language to sort it into discrete elements within an ordered hierarchy.
  (c) In text display, layers of computer software displace language processing away from human awareness in order to streamline interface effects.
  (d) In text generation, algorithmic prediction aggregates language expressions to generalize and approximate patterns of language use.

3. How do concepts from Queer Studies and adjacent fields work against constraints in language data?

- Queer studies [concept] [does a thing to work within and against constraint]
  (a) From the concept of iteration, the emphasis on repetition influences a text analysis practice that multiplies and resignifies word meaning.
  (b) From the concept of dis-identification, the appropriation of dominant codes influences a markup strategy that delineates the boundaries of tagging structures.

(c) From the concept of the flesh, the foreclosure of depth suggests a close reading strategy that unleashes potential screen effects.

(d) From the concept of normativity, the generalization of language suggests a focus on shared investments between polarized perspectives.

1.3 book argument

Concepts from Queer Studies and adjacent fields offer methodological approaches to computational tools that work with text-based data. Such tools, which are used for tasks like text generation, preservation, and display, tend to constrain the expressive potential of language, stripping its idiosyncrasies and ambiguities, to turn it into computable units of data. Queer Studies and adjacent fields inspire methodologies for working against these constraints—methodologies that destabilize authoritative and delimiting structures, and open novel readings of language data. By engaging closely and attentively with these computational processes, users can resist the reductive ways that technology works upon them.

1.4 evidence

1.4.1 main examples or case studies:

- Computational tools and underlying processes.
- Theoretical concepts from minoritarian fields, queer theory mostly.
- Literary sources.
- Critical work in DH and Media Studies

1.4.2 chapter by chapter evidence base

- Chapter 1: Refers to text analysis methods and processes, the loop in python programming, word vectors, Queer Theory's concept of Gender Performativity, V Woolf's Orlando.
- Chapter 2: Refers to text encoding practices and projects, the XML data structure, Queer Theory's concept of dis-identification, Oscar Wilde's MS for The Picture of Dorian Gray.

- Chapter 3: Refers to media archaeological theory and practices, Black feminist studies theory, software layers and abstraction, Octavia Butler's Dawn and Entropy8Zuper's skinonskinonskin.
- Chapter 4: Refers to ML/text generation methods and practices, ML processes of training, Trans Studies theory on normativity and embodiment, popular discourse on transphobia and Reality TV.

1.5 chapter snapshots

- Chapter 1:
  - topic: text analysis to study gender
  - scope and evidence type:
    - Computational text analysis algorithms like Logistic Regression, Burrow's Delta.
    - the Queer Studies Theory of Gender Performativity,
    - Woolf's *Orlando*, Rosenberg's *Confessions of the Fox* or *Nightwood* or *Fun Home*.
  - main claims:
    - That dominant methods in text analysis use algorithms in a way that close off the kinds of readings we can peform on gender.
    - Python processes text to diminish peculiarities and move toward abstract connections.
    - One can iterate over binary structures in algorithms to open up, rather than collapse, possible associations in gender terms.
- Chapter 2:
  - topic: text preservation/markup to study sexuality
  - scope and evidence type:
    - Work and theory in textual scholarship and queer historiography.
    - TEI technology and projects that attempt to markup complex sexual IDs,
    - The first 3 chapters of the manuscript of Dorian Gray, maybe *Nightwood*, *Confessions*.
  - main claims:

        * TEI imposes not just disambiguation between elements but also a power structure which delimits what can and cannot be said.
        * The hierarchical nature of the TEI imposes a top-down control over all child elements; a situation that multiplicity will not solve.
        * We cannot mark up what has been lost, but we can see our own complicity in power structures.

- Chapter 3:
    - topic: text display to study sex
    - scope and evidence type:
        * Media archaeology theorizing on materiality.
        * Black feminist theorizing on the flesh.
        * The novel Dawn by Octavia Butler and *skinonskinonskin*
    - main claims:
        * That the collision/indeterminacy between thinking and feeling is a queer method of resisting circumscription within power structures.
        * Across layers of display and source code, surface effects are unmappable, fugitive, displaced, enabling significatory possbilities that resist technological constraints.
        * The pairing down to surface enables connectivity, intimacy.

- Chapter 4:
    - topic: text generation to study embodiment
    - scope and evidence type:
        * Trans studies on normativity
        * Machine learning technology and training process
        * Popular discourse in online journalism and reality tv
    - main claims:
        * Machine learning is a tool of approximation, reducing meaning to common denominators and flattening perspectives to univocality.
        * It can be used to find similar investments across polarizing perspectives.

1.6 organizing principle

Each chapter takes a different process for working with text, identifies a computational constraint that reduces textual detail in some way, and finds a way of working the constraint into a close-reading practice.

- process for working with text -> constraint
- text analysis, cleaning -> iteration (loops)
- text preservation, encoding -> containment (tags)
- text display, transformation -> abstraction (display)
- text generation, normalization -> approximation (prediction algoirthms)
- constraint -> what it does to data -> how to resist
- iteration -> regularizes/homogenizes data -> repeat with difference
- containment -> leaves out data -> narrate between gaps
- abstraction -> displaces data -> close reading source code
- approximation -> approximates data -> description?

1.7 topic, claim, and metacommentary

Chapter 1:

- topic: Text analysis and gender
- claim: Text analysis methods that reduce complexity and variability of gender expression into binary forms can be "iterated" through different vantage points (close and distant) to surface multiplicity.
- metacommentary: Words have inherent multiplicity, meaning is always expanding beyond the binary. (But also, meaning is discursive, disembodied–lacking material realities, whitewashed).

Chapter 2:

- topic: Text encoding and sexuality
- claim: Hierarchical formats that categorize data can also suggest implicit power structures that delimit what is sayable and permissable.

- metacommentary: Meaning is inherent in organization and structure, controlling what can and cannot be signified. (Markup, inclusion into systems, isn't enough).

Chapter 3:

- topic: Text display and sex
- claim: Materiality exists even in abstracted forms, and points to significatory possibilities that resist circumscription.
- metacommentary: HOWEVER, the materiality of the sign offers a way of working within reductive signification processes.

Chapter 4:

- topic: Text generation and embodiment
- claim: Approximation of meaning finds commonalities between polarized perspectives.
- metacommentary: HOWEVER, univocality is a way of finding shared investments.

1.8 TODO model books:

1. heavy processing
2. queer data studies?
3. The Fabric of Interface Mobile Media, Design, and Gender, Stephen Monteiro, 2017 Topic: Contemporary digital media's connection to textile arts/production.

   Claim: our everyday digital practice has taken on traits common to textile and needlecraft culture, and textile metaphors used to describe computing (weaving code, threaded discussions, zipped files, software patches, switch fabrics) represent deeper connections between digital communication and "homecraft" or "women's work."

   Evidence base:

   - the production of hardware and software from their conception in the nineteenth century through twentieth-first-century globalized electronics industries

- textual and visual discourses around the digital, interactive, integrative practices of contemporary digital devices and their networked users
- needlecraft and textile techniques, handloom or quilting frame, mechanics of sewing and needlework
- augmented reality (AR) and VR systems such as Google Glass, Google Cardboard, and Oculus Rift

It's a good fit. Considering both everyday digital practices and textile practices. Drawing analogies between these.

4. Mechanisms New Media and the Forensic Imagination, Matthew G. Kirschenbaum, 2012
5. Image Objects: An Archaeology of Computer Graphics, Jacob Gaboury. 2023 The MIT Press DOI: `https://doi.org/10.7551/mitpress/11077.001.0001`
6. A User's Guide to the Age of Tech, Grant Wythoff, 2025 U of Minnesota Press

1.9 book narrative outline

Paragraph 1: What does my book as a whole do?

☒ my book's topic: Computational methods for working with language about queerness.

☒ book argument (see above)

☒ implicit lesson:

- By engaging closely and sensually with a technology, we can find ways of resisting its reductions, the ways it works upon us.
- Experimenting with how something works in depth and in a sensual way will liberate us from being used and being users

☒ To answer this question, I apply concepts from QS and related fields to work against constraints in computation using examples from literature as my test case. [or see evidence base above].

Paragraph 2: How does this book as a whole proceed? (how do the arguments unfold over the chapters)

☒ organizing principle (see above): Each chapter takes a different process for working with text, identifies a computational constraint within that process, and finds a way of working that constraint into a close-reading practice.

☒ narrative arc (chapter 8)

- moving from simple concepts to the complex processes.
  - introducing humanists to how computers work on a fundamental level. We start with the simple, with counting and categorizing, then we get deeper into stacks and machine learning.
  - the first two chapters are about simpler processes, counting and tagging, and the latter chapters are about more complex processes, abstraction and prediction.
    - I see other parallels between the two parts: the first part being about creating destabilization, and the second part about re-stabilizing; the first about queer theory and its methods, the second about adjacent fields and it's methods.

☒ describe book structure (chapter 11):

- The book is divided into two parts: part one, which explores core concepts in computation: chapter 1 explores counting, which is the bedrock of all analysis tasks; chapter 2 explores tagging which is the foundation of data formatting and structure. Then, part two explores more complex processes: chapter 3 explores interface/display processes, and chapter 4 explores text generation. The second half builds on concepts from the first to show more complex tools. Word vectors (ch 1) -> neural net training (ch 4), markup languages (ch 2)- > html code interacting with javascript (ch 3).

Paragraphs for body chapters:

☐ what does this chapter do in service of the book?

☐ start with a topic sentence from "what stays the same, what changes":

- from chapter one to chapter two: We move from text analysis to text encoding, from counting to markup. They are both basic,

foundational acts of working with text data, but while analysis is about regularizing data to be counted, markup is about appending descriptive information to sort and structure data.

    * Impact:
        · Markup shows the implicit ways that data formats predetermine what kind of information can be contained within them. This information has to do with power structures that delimit what can and cannot be said. "Occluding whiteness".
        · It also brings to the surface (in another way) how QS has looked over race and materializations. In the previous chapter, we found that the trope of fluidity overlooks material reality. In this chapter, we find that there is no formalization that will recuperate what has been left out of the structure. That the task must be otherwise.

– from chapter two to chapter three: Looking at a more complex process, which is abstraction and display of data. Moving into Black Feminist studies, to find ways of addressing material concerns. We return to the materiality of the word, a stabilizing force.

    * Impact:
        · Now we can really "go deeper" than we did in previous chapters, where we merely dipped our toes.
        · We are zooming out to look at how a larger process, of abstraction, works on data. There is more complexity, we've learned more about how computation works to get here, regularizing data, plain text formatting, in particular, which helps the reader understand data stacks and how they work.

– from chapter three to chapter four: Looking at algorithmic prediction and how that works to normalize data, similar to what we discussed in the first chapter. Moving to Trans Studies, to address underlying investments in normativity.

    * Impact:
        · The approximation of language revealing shared investments across political poles. Like the previous chapter, something shared, something solid.

☐ chapter snapshots (see above) on scope, evidence, and claims.

☐ book answers for each chapter (see above)

1.10 TODO book narrative

Queer Computing / Queerware / Counter-Code

Methods for Resisting Computational Constraints of Text-based Data; Re-thinking language tools; Queer Deviance and the Reimagining of Language Technologies; Queer and Feminist Revisions of Language Technologies; Close reading language technologies to destabilize power.

This book explores computational processes that work with text. It applies concepts from humanities fields to push against the ways that computational processes reduce and flatten the complexity of language data. It shows how certain computational tasks, like text generation, preservation, and display, tend to constrain the expressive potential of language, stripping its idiosyncrasies and ambiguities, to turn it into computable units of data. Humanities fields like Queer Studies, Black Feminist Studies, and Trans Studies inspire methodologies for working against these constraints—methodologies that destabilize authoritative and delimiting structures, and open novel readings of language data. In its experiment with these new methodologies, this book uses examples of Queer literature as a test case, applying methods to *read* elements of literary form in computational structures and processes. By engaging closely and attentively with these computational processes, the reader discovers tools for resisting the ways that technology works upon language, moving simultaneously with and against the system which constrains meaning.

Each chapter of this book takes up a different computational process for working with text, investigates how that processes handles language data, and identifies a constraint—a mechanism that transforms and reduces an expressive quality of language into data. Then, with the help of Queer Studies and related fields, it re-works the constraint into a new practice that resists this reduction of language, and applies this practice to reading a sample of Queer literature. The earlier chapters focus on basic computational mechanisms, like counting and tagging language data, while the later chapters move toward more complex processes of abstraction and prediction. Chapter One considers text analysis methods, and focuses on the foundational computational mechanism of counting data. Chapter Two turns to text preservation methods, and focuses on "tagging" or categorizing text data. Then, moving from basic concepts to more complex processes, Chapters Three and Four

consider abstraction and prediction, respectively, which are responsible for text display and generation. Computational components from the first half of the book, like word vectors and markup languages, are expanded in the second half to describe more advanced concepts, like neural nets and animation processes.

Chapter One, "Counting Text," examines a foundational act of computation—counting. It explores counting in the context of quantitative text analysis to study gender in Virginia Woolf's novel, *Orlando: A Biography* (1928). It delves into the mechanics behind quantitative text analysis, identifying the core concept of the "loop," which repeats the same code execution to bits of data, one by one. This mechanism, which removes textual idiosyncrasies and details, flattens and reduces text data into a standardized, computable form. Then, the chapter connects the loop mechanism in code to the theory of Gender Performativity, first propounded by Judith Butler in 1990's *Gender Trouble: Feminism and the Subversion of Identity*, which is widely cited as an inaugural text of Queer Studies. From Butler's formulation, it applies the iterativeness of gender performativity and its potential for resignifying terms to a text analysis pratice that *iterates* through close and distant reading. It performs this method on a reading of gender in Woolf's novel, *Orlando* (1928), to surface the multiplicity inherent in language forms. Finally, it offers some more recent critiques of this reading and of Gender Performativity for the way it elides questions of embodiment and materiality.

Moving from counting text, Chapter Two, introduces "Tagging Text," a procedure for organizing and sorting data into machine-readable structures. This chapter applies the Text Encoding Initative (TEI), a widely-used standard for tagging or "encoding" text-based data, to mark the revisions of Oscar Wilde's manuscript of *The Picture of Dorian Gray* (1990), which was edited by the author to remove references to homosexuality. This chapter explores the TEI's rigid tagging structure, an organizational schematic made of the individual tags that contains text elements within units that are nested within one another. The hierarchical structure of the TEI imposes a top-down control in which lesser or "child" elements are fixed and disambiguated according to their "parent" element, a structure that delimits what can and cannot be said within its boundaries. The chapter then searches for methods for resisting this structure by turning to Queer of Color Critique, and its concept of dis-identification. This concept offers a method of re-appropriation, "reading onesself into" structures of dominance. Applying this analytic to the TEI allows one to delineate irreconcilable interpretations of language choices in Wilde's revision process, an experiment that surfaces not the content, but the contours, of what cannot be recovered. The chapter

ends with a meditation on Wilde's own position of privilege as an editor of his own text, the executor of his own censorship, and how TEI can be used as a way of surfacing power operations in text.

The second half of the book moves from foundational processes in computing like counting and tagging, to more complex processes of layers of software abtraction and algorithmic prediction. Chapter Three, "Text Display," examines how screen effects—displays and animations—engage with data in its material form stored within the computing "stack," consisting of layers of software. It takes an example of early internet art, called "NET art", *skinonskinonskin* (1999), a series of "digital love letters" written by Aureia Harvey and Michael Samyn (Rhizome, *Net Art Anthology*). The chapter pursues a close reading of the electronic work, examining how the form of computer code and coding logics within its software layer bear on the reading of the work's surface, the screen layer. To read the forms of code, it draws from two seemingly unrelated fields, Media Archaeology and Black Feminist Studies, both of which have much to say about how physicality and materiality interact with abstract and symbolic processes. Bringing these theorizations to a deep reading of programming code reveals how screen effects, which seem disconnected from inaccessible and obscure hardware processes, offer significatory possbilities for reading materiality and physicality. As the net artwork's layers of JavaScript and HTML code demonsrate, the paring down to surface forms enables readings of connectivity and intimacy.

Building on the analysis of "Counting Text," or word frequencies, in chapter one, the fourth and final chapter explores an advanced counting processes, which is machine learning, which it uses to study normativity. This chapter, "Text Generation," traces the steps behind algorithmic prediction to examine what it does to language data and how it represents word meaning in computational form. It posits the the training process for Large Language Models (LLMs) as a tools that *normalizes* language, transforming word meaning into an approximate or average forms. This process, which I examine in technical detail, transforms word meaning into numerical scores, which it compiles from averaging that word's various contexts from the training data. To demonstrate this process, I train miniature LLMs from the transcripts of a reality TV dating show, called *Love Is Blind* (2020 - present). In this show, the participants, who are all heterosexual and cisgendered, are required to date each other from behind a wall, without having access visual access to their partners until they have agreed to get married. I then prompt the language model, which has been trained to generate text in the same language and style of the show participants, to answer questions about the role of the body and embodied sensations in

their dating experience. I use the language model as a predictive instrument that can *approximate* the linguistic and affective patterns around the body and touch. Drawing on Trans Studies theorizations of the body and of normativity, I argue that participants in *Love Is Blind*——while firmly anchored in cisnormative frameworks——temporarily experience a form of bodily dissonance. This dissonance, I argue, offers grounds for theorizing connection and solidarity beyond identity politics and polarized points of view.

The chapters in the second half of the book offers responses to the problems spun from those in first half: from Chapter One, the problem of discursive forms, and how they elide embodied experiences of gender, and in Chapter Two, the problem of power structures, which are totalizing. Chapters Four and Three, respectively, answer these problems by grounding in what is shared and what is material. It shows how Queer Studies, as a field, is good at offering certain possibilities for resistance that *disrupts* existing structures, for performativity and dis-identification, but other fields, like Black Feminist and Trans Studies, offer ways of resisting that are *outside* of the current structure. Both have advantages and disadvantages: both are necessary for resistance work.

ADD:

- queer concept to each chapter: gender, desire, sex, body
- and this—not queer studies—is actually what gives me an organizing principle around "queerness". Queer can mean Queer Studies, but it also means things associated with gender, sexuality, and intercourse. I am expanding the umbrella of queer, mostly because we don't have another term that refers to all of these simultaneously.