AUTISTIC CHARACTERS: (DE)CODING EMBEDDED SENTIMENT

By

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ABSTRACT

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Through the convergence of disability studies and literary cognitive studies, *Autistic Characters: (de)coding embedded sentiment* explores depictions of autistic characters in literature with the use of close readings and scaled readings, a computational analytics method which uses sentiment analysis to decode the sentiment embedded in texts. I investigate these characters through close readings in which I explore my positionality within the major fields of study and the embedded medical and social histories coded into neuroatypical and neurodiverse literary representations of autism. Building upon the perspectives of my positionality and these histories, I explore how the substrate of literature is coded for a neurotypical and ableist focused reading. In my continued exploration of the embedded sentiment in literary constructions, I build upon the traditional close readings of autistic characters as I expand this analysis to conduct a (de)coding by scaled readings through which I produce visual representations from net sentiment (positive minus negative), total sentiment (positive plus absolute value of negative), negative sentiment, and positive sentiment measurements. These sets of visualizations are created both by chapters and in evenly spaced 500-word intervals throughout a full-length novel. To generate these scaled readings through the digital humanities method of sentiment analysis with the lexicon "bing," I use the programming language "R" to reveal the sentiment that lies latent within the texts. The visual patterns that emerge from the scaled readings provide graphical depictions from the positive and negative sentiment which allows me to re-read the text to analyze how it is coded with patterns, providing both a precise and different reading. I then

further explore the origins of the code in the sentiment lexicon "bing" that generates the "positive" and "negative" data points. In this exploration, I critically examine the accuracy of this method and problematic constructions that arise from human generated lists that are used by machine learning to gauge the sentiment of words. Yet despite inaccuracies that may arise with scaled readings in combination with the biases of the lexicons, the visual patterns provide for a method of re-reading with sentiment that has not yet been explored. A method of reading that can lead to a different understanding of how the positive and negative embedded substrate generates charged sentiments which contribute to priming narrative feelings and in turn influences receptions of autistic characters.

This dissertation is dedicated to my best guys.
You give me the strength and courage to keep going.

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humanities. Also, to the amazing project team and fellow cohort from the Building Legal Literacies for Text Data Mining (Building LLTDM) Institute who have empowered me as a digital humanities researcher to more confidently navigate law, policy, ethics, and risk within digital humanities text data mining projects.

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INTRODUCTION

Converging Disability Studies into Literary Cognitive Studies

      I distinctly remember that when my first son was born the remark most often made about him was "He's so alert!"—as if other babies were mostly resting and for some reason my son wasn't about to let any opportunity to see something pass him by. And indeed, my firstborn boy certainly had his eyes wide open most of the time as if he was drinking in the plethora of stimuli and inputs in his wide new world. I didn't think too much of his "alertness" at the time as I, much like many other newly minted mothers, found myself in a swirl of continuous information and advice—often at odds and completely opposite of each other. From breastfeeding to sleeping to play time, I pushed my way through the deluge of information to best care for my baby boy. But now, looking back with a reflective gaze, I wonder if his "alertness" was perhaps the first indicator that he processed, and continues to process, the world in ways that diverge from the typical. Along the way there were other signs that clearly point to his now labeled cognitive difference which I now can see with the clarity of hindsight. From introduction to group play with soccer lessons where he was not at all interested, either voluntarily or by various methods of coercion, to play with the other children or sit still. His need to have music playing in order to relax and fall asleep, to his fixation on certain vocalizations and phrases that he repeated continuously—thanks Team Umizoomi for "98 and 17 and all the numbers in between." While it's easy to look back and see things with a clarity elusive to the present, the experience of wading through the conflicting information and advice was frustrating on a good day. Adding to the mostly typical frustration of child rearing, my experiences of trying to best provide and care

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for a child who did not respond in the ways that I expected, based upon the myriad childhood textbooks that I pored through, nearly broke me. But as I found myself on the brink and nearly toppling over, I reached a turning point; I started to receive support and services that emerged from his formal "disability" diagnosis of Autism Spectrum Disorder at the age of three.

I realize my son cognitively processes the world differently and doesn't respond to inputs in typical ways. But I don't see him as disabled but rather as differently abled. I say this last sentence with caution, however, because of the very real supports and services that are necessary for people whose bodies and ways of being do not align with societal structures. And while I would like my son to be appreciated for his differences, I know he needs certain supports to function in a neurotypical and ableist focused society. Additionally, my son's neuroatypicality contributes beneficial difference to the neurodiverse spectrum. Yet I say this with caution as well because it can be so easy to get caught up in viewing difference and diversity as just another platitude that one must acknowledge and strive for without actually actioning on the words. So I want to push back against the uses of diversity as buzz word to reclaim this essential term for what it should always strive to become. Because rather than simply use the word diversity as just another word, we should ask and deeply contemplate what does diversity mean for people? How do we understand it ourselves? Also, what creates challenges and barriers in the everyday within a neurotypical and ableist focused society? And what unique perspectives and insights do we bring from our own positionality and situatedness that could benefit understandings of difference? I think through these questions constantly. For my son, he is always alert as if on a high-voltage live wire that needs to find release and engagement with the world through movement. And his high-energy movement fuels his learning and provides numerous valuable perspectives often missed by his neurotypical peers. However, he struggles to calm his body in a

way socially expected in a neurotypical classroom. Accordingly, he faces challenges in a society not structured for him, which is why his disability "label" enables him to get the necessary support services he needs in mainstream school to accommodate his need to move—and these services provide him with various tools to effectively function with his neurotypical peers.

Thus, disability as a "label" is a paradox; it often meets with resistance in identifying a person because of its negative connotations but at the same time is absolutely necessary within current societal structures to enable access to vital support. This support is absolutely necessary for my son who continues to see everything in the world but sees those things through his cognitively unique neuroatypical lens, a perspective which is often at odds in a world set up for neurotypical people to function and thrive. I love my son for who he is with all his neuroatypical mannerisms and don't have a desire to change him. But I do at the same time want to give him the tools to thrive and find his own way of being in a world not designed to accommodate his unique abilities and strengths. And I want that world to grow more aware of and question diversity in order to learn how to see things through his eyes, instead of him always needing to see the world through neurotypical eyes. So yet again, the duality of disability emerges. I want my son to be his best neuroatypical self and for the world to see his perspective, but I also want him to have the skills to navigate and find fulfillment within the neurotypical and ableist focused world.

My son has provided me with insights into a way of being distinct from anything that came in my life before. And through my interactions with him I began to notice patterns that surrounded the world's interactions with my son. In these interactions there was a spectrum spanning between extremes to include uplifting acceptance, reluctant engagement, and stereotypical discriminations. The vastly different range of experiences sparked my intellectual

curiosity to see how autism was represented in literary works—to see how people understood and gained knowledge about the label that in turn influenced their receptions of my son. As a result of these interactions, I was propelled towards my current research. In this dissertation, I argue that autistic characters are complexly written into literature with their representations vastly diverging based upon the style of the novel encoded by their creators and the sentiment embedded into their constructions which generates narrative feelings. The major distinction between the characters that I investigate revolves around the variations which emerge through neuroatypical and neurodiverse narrator/narration styles. With neuroatypical narrators, there is a tendency to get closer to representations of autistic traits and experiences as these narrators retain the agency and power over their narratives. But of vital importance to add to these representations is that the vast majority of fictional autistic characters are written by neurotypical authors that, while conscious and deliberate about making accurate representations, still have problematic biases that appear occasionally in their portrayals. The seemingly inescapable biases tend to emerge from the medical criteria of checklists and deficits that have permeated into societal views of impairments that are then translated as disability and difference. And with neurodiverse narrators, there is usually a more problematic construction as the neuroatypical narrators have to share narrative space with neurotypical narrators. The problems tend to become more prominent when the neurotypical narrators overspeak or speak for their neuroatypical counterparts. This reduces and, in some cases, removes the power and agency of the neuroatypical characters to be the authority and voice of their autistic ways of being.

There are many approaches that could be taken up to (de)code representations of autistic characters. In any approach, it is important to consider how narrative feelings generated through the embedded sentiment of novels strongly shape engagement and receptions of these characters.

Because by attending to the sentiment that comprises the autistic characters there are essential insights which are revealed. I find the best way to (de)code the embedded sentiment within these constructions is through a combination of close readings and scaled readings. In my traditional close readings, I attend to the theoretical aspects from the convergence of disability studies and literary cognitive studies. Through these close readings I look further into how the convergence of these fields of study creates essential insights into the infrastructure of the novels which feature autistic characters. Additionally, I investigate how the complex history of autism emerged through the 20th century and continues to have successes and failures due to the practices and gestures of placing an autistic label upon an individual. Following my close readings, I look towards a new direction for critical inquiry with my method of scaled readings, created by using the digital humanities method of sentiment analysis. Through my scaled readings with sentiment analysis, I revisit the novels initially investigated in the close readings to re-read the novels through visual and quantitative methods that bring a richness to the qualitative methods of close readings. After establishing my method of scaled reading, I look to where there are inherent limitations within this digital humanities method due to the biases already present in society. These are the biases which make their way into the instructions coded by humans into computer programs that in turn recycle these problematic codings of positive and negative sentiment distinctions into popular culture understandings, generating neurotypical and ableist focused narrative feelings.

Through the many pieces that come together in this argument, it is my hope that a better understanding about neurodiversity in society will emerge to provide insight about how difference is not dangerous but beneficial. There are many people, such as my son, who are all unique and yet represent widely divergent facets from the broad ranging spectrum of

neurodiversity. So before going further, it seems vital at this point to briefly spend some time exploring and unpacking the key terms surrounding autism to include "neurodiversity," "neurotypical," and "neuroatypical," as these three terms are used frequently throughout this dissertation. In *Neurotribes*, Steve Silberman states that the concept of "neurodiversity" is "the notion that conditions like autism, dyslexia, and attention-deficit/hyperactivity disorder (ADHD) should be regarded as naturally occurring cognitive variations with distinctive strengths that have contributed to the evolution of technology and culture rather than mere checklists of deficits and dysfunctions" (16). As Silberman notes with his reference to checklists, it is easy to list the things that people are incapable of doing. However, it is more beneficial to explore the uncomfortable complexities that difference of ability provides. Thus, I focus my use of "neurodiversity" to show diversity as a variety, a beneficial blend of unique variations. In *Imagining Autism*, Sonya Freeman Loftis provides an essential background for the concept behind the term "neurotypical"—"Perhaps the most powerful term invented and embraced by the autistic community is the term 'neurotypical' (NT). The term gives autistics a way to describe people who are not on the spectrum—a rhetorical position essential in the ongoing rewriting of the pathology paradigm" (8). When the majority of any group does not have a specific label, imbalances of power subsequently form as a naturally occurring phenomenon. Yet by naming the majority group, as Loftis indicates, the potentially damaging outcomes of the power imbalance can be addressed. Thus, I focus my use of "neurotypical" to indicate patterns of thinking common to a majority of the population, who in my research are not on the autism spectrum. By the reverse, "neuroatypical" indicates patterns of thinking common to a minority of the population, and in my research specifically applies to autism. While the investigation that I engage in throughout this dissertation focuses on autism, "neuroatypical" applies to a much

wider range of neurological variations within the "neurodiversity" spectrum, as the few examples from Silberman above illustrate. Yet by concentrating intentionally on only autistic characters from the larger spectrum of neurodiversity provides a way of establishing a manageable scope for this current project. Because by focusing on only autism, I can more complexly illustrate one aspect from the neurodiversity spectrum.

The continuing dilemma of cognitive differences and disability distinctions that I find myself working through personally steered me towards my current professional field of study, the convergence of disability studies and literary cognitive studies, and research topic, autism. I find "convergence" as the most accurate description of my work as I use elements and key works from each field in the process of critically analyzing the (de)coding of autistic characters that lies embedded within the sentiment of literary texts. Researching the convergence of the two fields, as leading autism and disability studies scholar Ralph James Savarese and leading literary cognitive studies scholar Lisa Zunshine both attest, is a necessary fusion to best understand the complexly layered dynamics surrounding autism: "Scholars in cognitive approaches to literature need the insights of disability studies to think about mind, narrative, and agency in neurodiverse ways; scholars in disability studies need the insights of cognitive approaches to literature to give the concept of neurodiversity, which is quickly becoming a kind of platitude, some actual neuroscientific content" (17-8). Throughout this dissertation, disability studies has a stronger presence as there is more scholarship on autism with which to engage. Yet the bulk of disability studies scholarship that intensely investigates autism has been published in the last ten years which indicates that the scholarship about autism within this field has not yet been fully explored. While I use more information from disability studies in my investigation, I still need and use literary cognitive studies. The amount of autism research in literary cognitive studies is

minimal, with nearly no mention of autism in foundational texts. But despite autism often being relegated to an afterthought and/or quick endnote mention, often with incorrect depictions which are deeply biased, literary cognitive studies still provides an essential element. This field generates further insight into understandings about how the mind engages with literary narratives to generate narrative feelings towards characters within neuroatypical and neurodiverse narration representations. Additionally, by engaging with literary cognitive studies I can further delve into the pressing questions that I have regarding constructions of neuroatypical characters from literature, through (de)coding how embedded sentiment lies within texts. By uncovering this sentiment, I can better understand how literary novels are constructed to prime responses and feelings within readers to generate narrative feelings towards the words of the text. And while each reader comes away from a literary reading with a different feeling, for each reader, based on the sentiment that lies within the text as it combines with their own life experiences, that feeling will be true and meaningful. Readers may seek this feeling either consciously or unconsciously, yet their intentional or unintentional responses stem from how their minds interpret the experiences of the characters which are charged with sentiment throughout the text.

Bringing disability studies into a study of literature provides essential insight, especially as the investigation in this dissertation explores multiple neuroatypical autistic characters. One way to describe the pressing need to incorporate disability studies within my research, along with the benefits of considering this field more broadly, can be seen through Alice Hall's *Literature and Disability*. Her book provides a necessary introduction to the study of both literature and disability, illustrating what disability implies within literature that echoes out into society. Also, she discusses topics from a diverse range of disability representations that can either be manifested through the visible (physical) and/or invisible (cognitive). While her work is an

introduction and overview of the field, this provides essential insight into why the study of disability in literature is so important and necessary to undertake, especially within the area of cognitive disability as she states, "in recent years, disability studies has been criticised for its lack of engagement with cognitive, intellectual or neurological disabilities" (106). As Hall mentions, disability studies still needs more work on and engagement with cognitive differences.

With my research, I work in the endeavor towards filling this gap, through my pairing of disability studies with literary cognitive studies to provide helpful insight in the (de)coding of sentiment. Importantly, I focus my investigation on making the often less visible or even sometimes invisible side of cognitive disability more seeable to engage in a larger discussion about narrative which aligns with Hall's observations about the importance and power of literature: "Literary writing has the potential to reach large and diverse populations, it serves a pedagogic function in the sense that it not only documents but also shapes attitudes towards disability" (4). Thus, as I work towards filling the gap, I use literature to explore cognitive disability through my investigations on autistic characters with a combination of traditional close readings and my new method of scaled readings; a method of reading that emerges from the digital humanities with the use of sentiment analysis. The combination of these diverse readings reveal more complex understandings about how the sentiment embedded within the writing of neuroatypical characters both positively and negatively shapes how narrative feeling is generated, influenced by the words which are the code within the codex. And I intend for my work to begin (de)coding how difference is seen through affectively charged sentiment.

While a lack of engagement with "cognitive, intellectual, or neurological disabilities" as Alice Hall mentions currently exists within the field of disability studies, it's also a gap that other scholars are starting to focus more attention on developing. Sonya Freeman Loftis intensely

investigates and engages with this gap in her book, *Imagining Autism: Fiction and Stereotypes of the Spectrum*. Throughout her text, she looks at a range of prominent literary characters with autistic-like characteristics from Sherlock Holmes, Lennie Small (*Of Mice and Men*), and Benjy Compson (*The Sound and the Fury*) to more recent characters such as Oskar Schell (*Extremely Loud and Incredibly Close*), Christopher Boone (*The Curious Incident of the Dog in the Night-Time*), and Lisbeth Salander (*The Girl with the Dragon Tattoo*). Importantly, Loftis, an autistic literary scholar, doesn't make the case to "diagnose" any of these characters. Rather, she illuminates the autistic-like characteristics and traits coded in their representations in order to build her discussion for the importance of exploring cognitive disability and difference within literature: "I hope that this book, as the first book on autism and literature, will contribute to increased attention to our society's many fictional depictions of mental disorders, encourage an increased understanding and acceptance of neurological difference, and help to bring mental disorders into the field of disability studies" (3). Loftis's work takes up autism and literature specifically and intentionally to explore neurological differences in an attempt to reveal more diverse understandings. While my work does not take up an approach like Loftis engages with (as I only focus on characters with a diagnosis or label of autism), I rely upon the insights from her foundational work, especially the recognition of cognitive difference as part of disability studies. Additionally, I further explore how understandings of autistic characters and cognitive disability perpetuate in popular culture within the cycle of mass consumption. This further investigation is necessary to better understand why more representations of autistic characters are now appearing in literature and what their positionality on the autistic spectrum signals about the affective desires of the audiences that consume these characters in their various forms.

Even though my investigation uses more recent scholarship on disability studies as the

work of Hall and Loftis both gesture towards, I also rely upon key foundational texts such as Longmore's *Why I Burned My Book and Other Essays on Disability* and Mitchell and Snyder's *Narrative Prosthesis: Disability and the Dependencies of Discourse*. These texts illuminate longer standing issues faced within disability studies that is important to carry forward into my research on the underexplored area of cognitive disability. While I am branching into new areas, I want to make sure that the groundwork already accomplished within disability studies is not overlooked when exploring a different facet. In Longmore's book, he explores disability as lived experience with physical disability through a collection of essays that he describes as "both works of scholarship and instances of political advocacy" (1). Importantly, he calls attention to the issues surrounding disability in academia and their origin in the inherent built-in structure of research and teaching: "The medical model remains the typical perspective not only in medicine, rehabilitation, special education, and other applied fields, but in the social sciences and humanities as well" (3). While the Humanities does tend to be more progressive and take up issues such as race and social justice, the infrastructure of the university sometimes works counter to these efforts.

Consequently, we yet again revisit the inherent enigma of disability identity and labels that are concurrently resisted and fundamentally essential. Perhaps this points to the broken structure of the neoliberal capitalist system of categorizing and coding everything from a privileged vantage point. Yet even if people are devoted to unraveling the complexities of disability, they have to see it. While this may seem paradoxical to not see differences, especially considering physical disability, it is a larger problem that Mitchell and Snyder's book confronts with their own experience of researching disability during graduate school: "So we began by contemplating disability as an issue of representation and cultural stigma; every essay we read

started to teem with disability references, metaphors, and implications. Disability proved ubiquitous and yet solicited little commentary" (Location 243). When disability is everywhere but not discussed, it becomes invisible despite the often-visible characteristics because it is ignored (not to mention that the more "invisible" type of disabilities that cognitive differences fall into are even less discussed than visible disabilities making them doubly silenced). Both Longmore's and Mitchell and Snyder's work call attention to one of the primary issues facing disability studies—that the population at large often doesn't want to discuss the issues at stake because they struggle to see outside of their vantage point. Thus, my investigation in this dissertation which focuses on (de)coding the sentiment within neuroatypical and neurodiverse narrations hopefully provides an outlet. A place and space through which explorations of cognitive disability can open up representations of autistic characters to discuss the important issues they invoke in order to see what was previously considered invisible and/or taboo.

The field of literary cognitive studies provides an essential element to my research, but a looming gap still exists within the field in its discussion of cognitive differences especially in recognizing neuroatypical minds. While most of the prominent work fails to fully discuss the cognitive variations of the mind, there are two primary exceptions to this trend with Stanislas Dehaene's *Reading in the Brain: The Science and Evolution of a Human Invention* and Maryanne Wolf's *Proust and the Squid: The Story and Science of the Reading Brain*. Both texts are primarily aimed towards a general readership which makes them an easier point of entry into investigating how the mind reads and responds to various representations. Dehaene's text focuses on the processes of how the brain reads and what takes place in the brain by exploring the areas that function and work together when people read. His focus is exemplified in the opening words of the book: "At this very moment, your brain is accomplishing an amazing

feat—reading. Your eyes scan the page in short spasmodic movements. Four or five times per second, your gaze stops just long enough to recognize one or two words. You are, of course, unaware of this jerky intake of information. Only the sounds and meanings of the words reach your conscious mind" (1). There are many important insights provided through this work, but it consists of an overwhelming focus on the neurotypical processes of how the brain reads.

Yet Dehaene does provide a chapter on how (neuroatypical) dyslexic brains read differently. His emphasis on dyslexia probably exists because it is the most recognized cognitive difference regarding reading. Thus, it is logical for a discussion of dyslexia and reading to go together. But there is no discussion or even mention on how other neuroatypical minds from the spectrum of neurodiversity read differently or that there are different types of reading minds that diverge from the (unacknowledged) neurotypical majority. The lack of recognition regarding the many diverse modes of thinking and the absence of signaling towards the neurotypical majority both lead into the current gaps within literary cognitive studies. While I recognize that no work would be able to capture all elements of the neurodiversity spectrum, the silences that emerge because there is a lack of articulation about cognitive variations contribute to the inability to engage with these differences. Because to engage we need to recognize cognitive differences and have meaningful discussions about disability in order to truly embrace a meaningful dialogue. Hopefully, the future will allow for a much better awareness that literary cognitive studies focuses on the neurotypical mind, yet there are many variations which must not be overlooked and should be explored for more robust understandings of the diverse spectrum of minds.

While Dehaene does discuss dyslexia, Wolf's text primarily focuses on this type of neuroatypical thinking. Her work studies the history of written languages and their adoption by humans to include the transition from an oral culture with Socrates to a written culture with

Aristotle. Additionally, she uses this transition to discuss the current societal changes with print culture shifting towards digital culture. Her exploration of how written language adoption varied based on the organization of different types of brains provides key insights into understand how the mind can have vastly different and diverse interpretations of sensory inputs. Also, while her research focuses on an in-depth exploration of dyslexia that is centered around her family history of this cognitive disability, she further illuminates that dyslexia manifests in various ways through uniquely different patterns of thinking. And each of these patterns provides various strengths and weaknesses with how the brain is wired to engage with inputs differently. Yet most importantly, she argues for an understanding that reading is not a built-in capacity but an adaptation to the human mind: "In order to read, each brain must learn to make new circuits by connecting older regions originally designed and genetically programmed for other things, such as recognizing objects and retrieving their names. Dyslexia cannot be anything so simple as a flaw in the brain's 'reading center,' for no such thing exists" (168). I would like to take this one step further to argue that there is no universal construction of the brain but rather patterns that appear within the population which promote different types of thinking. And, furthermore, to highlight that while neurotypical minds make up the majority of the population, there is no one "right" or "normal" brain as even within the majority they are all unique.

Taking a moment to pause and think about different modes of thinking, Temple Grandin's memoir *Thinking in Pictures, Expanded Edition: My Life with Autism* provides essential insight. In the book, she discusses her neuroatypical life experiences; how she recognized her own pattern of thinking which centers around visual memory of pictures and moving images that she uses as a database of sorts to pull from in order to interact with and interpret her experiences of the world. Her memoir provides a wealth of information including

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her recognition of the different types of thinking in autistic minds: Visual thinkers, Music and math thinkers, and Verbal logic thinkers (28). Over time, she noticed these various modes of thinking in autistic people, and which, I argue, extends beyond autistic minds into the general population at large. Grandin notes that Visual thinkers "think in photographically specific images" and that "there are degrees of specificity of visual thinking" from highly specific visual static and moving images to more generalized images (28). Regarding Music and math thinkers, she notes that they "think in patterns" and that "they see patterns and relationships between patterns and numbers instead of photographic images" (28). Lastly, she describes Verbal logic thinkers who "think in word details" and that "they are not visual thinkers" but they can memorize lots of statistics and large sets of information (28). Her goal in providing these three types of thinking is to help people understand that autistic minds have great variation and there is no one set of characteristics or thinking that is common to all autistic people. While her observations are centered around neuroatypical autistic minds, they also provide insight into the spectrum of neurodiverse minds—specifically that there is no one universal mind. Because rather than there being a singular definition of the mind there are variations in the types of thinking as well as strengths and weaknesses each person experiences because of their own unique patterns. Perhaps through the recognition of the many types of patterns we can move forward from the privileged neurotypical mindset that often permeates unchecked into society towards better understandings of the mind consisting of infinite combinations of differing abilities.

In thinking through the spectrum of neurodiversity, the next conversation which must be acknowledged and explored regards the discourse over autism terms. And the most poignant in current discussions regards the phrasing of "with autism" and "autistic" in reference to labeling individuals and, in turn, how that influences their rhetorical authority. The people first language

of "with autism" tends to generate disgust and revulsion in the autistic community as many find this wording offensive. While it might seem innocuous to some, there are extensive rhetorical moves that take place in these seemingly two simple words. Autistic self-advocate Jim Sinclair details this undercurrent in his article "Don't Mourn for Us." The article is intended as a declaration to parents which clearly lays out that autism cannot be seen as an additional appendage that is removable or curable as suggested in the coding of the "with" wording phrase. Rather he states that "autism is a way of being. It is pervasive; it colors every experience, every sensation, perception, thought, emotion, and encounter, every aspect of existence" ("Don't Mourn for Us"). In addition to Sinclair's perspective, referencing autistic disabilities studies scholar Melanie Yergeau's work *Authoring Autism: On Rhetoric and Neurological Queerness* provides insight regarding how rhetoric is often used to remove authority from autistic individuals. And, in fact, she articulates her own relationship to rhetoric and autism in her reflection on authorial positionality: "With no small irony, I write this book in equal parts as a rhetorician and autistic activist, roles that have inevitably shaped the ways in which I apprehend this thing we call autism. My dual positionality is no small irony because I have, at many junctures, been told that autism precludes me from being rhetorical, much less a rhetorician" (5). Society in its current structures of power and authority would frame Yergeau as lacking the potential to be a rhetorician because she is autistic. Yet despite this continual attempt to diminish her presence, she fights back to display that autism is imbued with strong rhetoric that adds diversity in its divergence from the typical. In taking the cues from both of these prominent activists, I have purposely framed my terminology throughout this dissertation towards using "autistic person" rather than "person with autism" in order to assert the inherent rhetorical power and presence of the autistic community. If the discourse on terminology shifts away from these

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phrases in the future, it is my hope that by articulating the reasons for my continued use of autistic throughout this dissertation helps to provide a perspective of the discourse at the time when this work was written.

Furthermore, it seems crucial at this juncture to point out another key aspect of my own positionality. I have never been diagnosed as autistic (or sought out a diagnosis). Yet there are certain aspects of my personality that would seem to align with neuroatypical tendencies, thoughts, and traits. I think for me this might be a combination of certain differences that I was born with and the multiple traumas I've experienced during my career in the military. In my youth, I could never quite connect with my peers and frequently sought out the company of adults, often being referred to as an "old soul." And as a young adult, I experienced repeated abusive traumas, witnessed official admissions of the wrongs done to me, and saw those individuals walk away without any consequences. Even if I may have been born slightly different which contributes to my unique neurological construction, I experienced first-hand how the brain does at times rewire itself for safety and survival to protect against continual reliving of traumatic events. I have spent the rest of my adult life thus far learning to adjust my adapted mind to operate within a socially focused neurotypical society along with actively working to not let past experiences control my present. And while I do consider myself to be on the spectrum of neurodiversity, I do not consider myself to be either neurotypical or neuroatypical. I make this declaration not as a rejection of these labels, though they both have their own unique problematic structures that should be acknowledged and discussed. Rather I make this declaration to say that I identify neurologically as non-binary, as I don't conform to either of the categories. In addition to clarifying my own positionality, in the writing of this dissertation I have taken the time to purposely not speak for the autistic community but rather call upon my own experiences with

autistic family to provide insights from my perspective. And if I made an error in over speaking, then that fault lies upon me. I do hope that the positionality I provide opens up further conversations and awareness towards neurological diversity of thoughts and minds—and that what we may have taken for granted and/or never questioned should be the thing that we seek the answers for and engage with through dialogue. Because only through conversations might we somehow figure out how the diverse threads within humanity can beneficially come together.

In order to do this work of understanding the mind as comprising myriad combinations and capabilities, research that delves further into the field of literary cognitive studies is needed. Gathering information from literary cognition about how the neurotypical mind works can be used as a catalyst towards inverting current conceptions of the mind and pushing towards a greater understanding of neurodiversity. While there have been attempts to take up literary study alongside cognitive studies, such as Lisa Zunshine's *Why We Read Fiction: Theory of the Mind and the Novel* and Blakey Vermeule's *Why Do We Care about Literary Characters?*, there are many problematic biases and gaps that need to be identified and addressed. Both Zunshine's and Vermeule's texts attempt to explore why the mind is fascinated with reading about fictional literary characters. Yet both authors fail to provide an adequate exploration, as they use out of date and biased work of cognitive studies scholars. Zunshine argues that her book "makes a case for admitting the recent findings of cognitive psychologists into literary studies by showing how their research into the ability to explain behavior in terms of the underlying states of mind—or *mind-reading* ability—can furnish us with a series of surprising insights into our interaction with literary texts" (4). Yet it is hard to believe she is looking at recent findings with her book which was published in 2006 when she leans heavily (and almost exclusively) on Simon Baron-Cohen's book *Mindblindness: An Essay on Autism and Theory of Mind*—published in 1995 with

research focused in the medical model of understanding autism and primarily conducted prior to the release of the Diagnostic and Statistical Manual for Mental Disorders, 4th Edition (DSM-IV) in 1994. The additional sources she uses from cognitive studies also work along these medical model lines and she does not address social models of understanding autism. Thus, Zunshine's failure to incorporate disability studies while attempting to study the receptions of literature in the human mind falls short and is incomplete. She later recognized this gap with delivering a paper at a Modern Language Association conference detailing her errors and further redaction of any mention of autism in later electronic editions of her book, which Michael Bérubé discusses in *The Secret Life of Stories: From Don Quixote to Harry Potter, How Understanding Intellectual Disability Transforms the Way We Read*. The glaring hole and subsequent acknowledgement of it by Zunshine is one of the many reasons that my work occurs as a convergence of disability studies and literary cognitive studies. To provide an attempt towards rectifying past shortcomings and not to repeat damaging and inaccurate scholarship.

Furthermore, Vermeule's book published in 2013 falls in line similar to Zunshine's in the overreliance on Baron-Cohen's scholarship. Vermeule bases her study of literary cognition around the same 1995 Baron-Cohen book that Zunshine used—this seems to cement a troubling trend within literary cognition that needs to be remedied by actively using disability studies to gain a more accurate perspective on the different types of neuroatypical minds. While Vermeule doesn not directly invoke autism until a later chapter, towards the beginning of her book she discusses theory of mind which is a hallmark of Baron-Cohen's theories: "We learn to mind read by tracking the motions of others and correlating those motions to purposes. At the higher end of social complexity, we navigate charged political fields, detect cheaters and hypocrites, fashion ourselves to the times, and test how far we can go. By mind reading, we attribute second- and

third-order intentions to people" (Vermeule 34). Even though Vermeule doesn't specifically use the word autism in her discussion of theory of mind, she takes this theory directly from Baron-Cohen's text about autism, which argues that neuroatypical autistic minds do not possess theory of mind (read: the ability to understand how other people might be feeling). Whether or not autistic minds possess this capability is hotly debated in various disciplines of academic scholarship. A couple of notable examples that take a position against this simplistic understanding of theory of mind as a either or binary emerges through the personal observations and lived experiences within Ralph Savarese's memoir *Reasonable People* and Melanie Yergeau's *Authoring Autism: On Rhetoric and Neurological Queerness*. Savarese, as an English scholar and father of DJ, his adopted autistic son, questions the argument that autistic people lack theory of mind as he witnesses DJ grow and develop. He notes that while his son communicates and experiences the world differently that does not mean he lacks a theory of mind but rather uniquely senses the world and can affectively feel much more than a typical person would. Yergeau from her perspective as an autistic scholar illustrates the problematic rhetoric of assuming all autistic people lack a theory of mind and quite colorfully points to the (hopefully) obvious observation that theory of mind is a capability that exists in varying degrees of intensity. She notes that some people have stronger capabilities than others, but it certainly does not mean a difference in affective sensing indicates a lack.

In combination with the work of literary cognitive studies and disability studies, I infuse my analysis with the method of scaled reading. I named this method using the word "scaled" in order to differentiate it from other machine learning reading methods such as distant reading. Whereas distant reading attends to large amounts of novels in direct comparison to find patterns, scaled readings looks to the patterns within a single novel which adds more direct context to

traditional close readings. Also, the word "scaled" alludes to being able to see a full novel on a visual graph, in other words to see the shape of the narrative arc. Thus, scaled readings diverge from previously established methods, engaging with sentiment analysis to critically analyze literary texts. Within the vast field wrangled under the marque of digital humanities, sentiment analysis has very little scholarship and only a couple of critical inquiries that are tangential to the methods I employ with my scaled readings. The one notable area of sentiment work that has been accomplished is through Matt Jockers' R package "Syuzhet" through which sentiment is modeled and smoothed in various ways over a narrative arc ("Introduction to the Syuzhet Package"). The package was the first in R written to focus specifically on full length novels in literature to open up many differing ways to measure and visualize sentiment and emotion. And the package includes multiple categories that capture emotional valiance and scaled sentiment over narrative time as well as measuring percentages of emotions in a novel through use of the "nrc" sentiment lexicon. While Syuzhet is quite robust, it is not without potential problems. And there is an interesting debate about this package between the two blogs of Matt Jockers and Annie Swafford. During 2015, both scholars engaged in a public debate through their respective blog posts about how Syuzhet was set up to measure sentiment and the potential flaws that emerged when quantifying the qualitative aspects of novels. As a result of this back and forth, Jockers amended the code in the package two years later to better represent sentiment measurements that would be produced by using Syuzhet.

While Syuzhet provides a notable sentiment analysis intervention in digital humanities, I intentionally diverge away from this package. The movement away is because it focuses more on plotting a smoothed representation of sentiment throughout a text and does not allow me to engage in the multifaceted analysis that I conduct through the detailed quantitative approach in

my visual and numerical re-readings. Through my method of scaled readings, I employ sentiment analysis by taking the fictional literary texts from my corpus and transferring them into an R programming language readable form. In order to make my corpus of literary texts readable in R, I unpack and tokenize (a method for creating a table out of a text for analysis with coding) the texts in order to match the text word tables against sentiment word tables (lists of words identified within computer programming code lists as charged with sentiment). Once the texts are in a plain text format, I create my scaled readings by using multiple coding packages within R to produce visualizations of sentiment across the full length of a novel by partitioning the text in various ways, such as chapters and 500-word intervals. With a variety of visualizations which include net, total, negative only, and positive only sentiment, I analyze the text through graphs of these sentiment representations which reveal the patterns and trends of embedded sentiments over the narrative arc. Thus, my scaled readings diverge from close readings to provide a different kind of textual pattern interpretation. These investigations contribute to a critical analysis of literary texts and in turn of sentiment analysis by providing scholarship which engages in pattern identification and subsequent critique, methods uniquely available through machine enhanced analysis. By using machine learning methods to create scaled readings in my research, I investigate further into autistic character constructions, specifically how they are coded to prime narrative feelings through the sentiment embedded within the substrate of the text.

While machine learning methods do pick up on patterns, the patterns that emerge from the (de)coding are the result of instructions provided by a human. Accordingly, the biases and problematic constructions that currently exist in society have a tendency to find their way into the instructions provided to the machine. Yet a more robust interpretation of the neurodiverse

spectrum could possibly be captured by better training algorithms to understand the many

problematic biases that exist in current constructions of society and in turn of machine learning.

Because by adapting these codes to identify the patterns there could be openings to address the

shortcomings through thinking further about how narratives can appeal to alternate sensory

modalities. And perhaps looking towards how they might be enhanced by technology offers a

logical next step in adapting the algorithm to benefit not only the majority but a diverse

composition of the population. This step is crucial as the narratives we read impact and affect our

lives in ways that we consciously recognize and in many ways that subconsciously permeate.

In the acceleration of technology with computational devices that are connected to the

worldwide network of the internet, text surrounds us constantly. There is text that we actively

seek and that which seeks us. But whichever the form, text is currently a centerpiece of life that

is constantly writing and rewriting narratives. As Katherine Hayles articulates in *How We Think*,

in order to make sense of what this information barrage does to our senses, digital methods of re-

reading narratives through databases can provide beneficial insight into their connections:

> Rather than being natural enemies, narrative and database are more appropriately seen as natural symbionts. Symbionts are organisms of different species that have a mutually beneficial relation. […] Because database can construct relational juxtapositions but is helpless to interpret or explain them, it needs narrative to make its results meaningful. Narrative, for its part, needs database in the computationally intensive culture of the new millennium to enhance its cultural authority and test the generality of its insights. (176)

In other words, narrative interpretations can benefit from the digital and digital interpretations

can benefit from narratives; the two combined offer a much stronger method through which to

read both the traditional print narratives and the contemporary digital narratives that frame our

lives both offline and online. The reason methods of narrative and databases provide mutual

benefit is because they are much more entwined than they have ever been. And, I would argue, at

this point inseparable in our current societal structures as there is no neatly defined line between

the modalities of online and offline life. Because in society today the infrastructure of life does not have clear cut boundaries between the modalities of discourse, despite many desires to view them as separate. Further, the two modes (which were never actually separate) are now becoming further intwined, extending outwards and inwards towards each other. While this may cause some disadvantages as well as create advantages, to not acknowledge this change would be the most crucial error. Technology has already always altered the relationship between humans and the world from the early days of stone tools and fire to the current innovations of silicon and fiber. Thus, rather than bemoan a past which predates our existence on this earth, we should look for ways to strengthen advantages and weaken disadvantages. And as Hayles articulates, the structures of databases provide ways of rewriting narratives through their flexibility and shifting forms: "The great strength of database, of course, is the ability to order vast arrays of data and make them available for different kinds of queries" (177). The database provides for reforming of narratives through endless cycles of critical analysis and interpretation. And as it applies to my research, by being able to tokenize a full-length novel into a table opens up this form of narrative to database which can rewrite meaning and provide new perspectives on how literature works in us and on us. Through the sentiment analysis lexicon databases as they intersect with novels, new visual meaning and interpretations emerge that create a more robust interpretation than either form in isolation.

Yet while databases are powerful in their ability to reimage text, it is also vital to acknowledge that sentiment analysis includes lexicons that consist of words which have been classified to determine what the majority would recognize as charged with sentiment. Subsequently, these lexicons many times fail to acknowledge how the majority differs from minority and vulnerable populations who tend to have much different relationships with words

and their meanings. Thus, these lexicons include many neurotypical and ableist focused biases along with other problematic biases. And, at the time of writing this dissertation, there have been no sentiment lists developed with neuroatypicality in mind making neurotypical sentiment both privileged and unidentified as such. Thus, part of my (de)coding of the sentiment sets is an analysis and critique of these sentiment lists in order to investigate how they are skewed for generalized neurotypical interpretation that may not always provide beneficial or accurate results. The identification of these problematic structures is crucial for a critical analysis specifically focused in the humanities with autistic characters.

In order to see the diverse aspects of words charged with biased affect, I look towards affect theory with Sara Ahmed's work from *The Cultural Politics of Emotion*. In her work, she takes up many different claims surrounding emotionally charged words. But in thinking through the affective charge of words that extends beyond the page and into the sensory, there is a critical conversation that takes place in her exploration of disgust as making contact: "Disgust is clearly dependent upon contact: it involves a relationship of touch and proximity between the surfaces of bodies and objects. That contact is felt as an unpleasant intensity: it is not that the object, apart from the body, has the quality of 'being offensive', but the proximity of the object to the body is felt as offensive. The object must have got close enough to make us feel disgusted" (85). The connecting that can occur with highly charged sentiment indicates that words act far beyond their physical or digital ink signature. Rather than remaining affixed to the page they project outward, making affective contact. Consequently, when there is a handshake or eye contact the majority audience would understand these gestures as socially desirable and beneficial. Yet a neuroatypical minority audience might very well feel disgust in these moves which are often revulsive to their uniquely tuned sensory channels. While some may argue that these are simply

words on a page, neuroscience has revealed that reading often creates bodily actions with mirror neuron responses. Thus, a neurotypical reading would not have an adverse sensory reaction to coming across either a handshake or eye contact within a narrative. However, a neuroatypical reading may find these words so repulsive that it would cause them to feel disgust towards a narrative and stop reading. Again, the affective charge of words depends on the audience—and we should be aware that some words may evoke different narrative receptions to the embedded sentiment.

The combination of both disability studies and literary cognitive studies lead to new interpretations of the underlying infrastructure that is coded into literature which in turn can be used towards understanding behaviors and providing a better way to interpret both autistic and non-autistic characters. Additionally, by interpreting actions through a (de)coding of the embedded sentiment that lies within the words of a novel, we can better understand how the affective construction of words evokes narrative feelings to and from the text. In looking at the current state of existing research, there are essential areas to be covered which can only be achieved by investigating through the convergence of both fields of study. Within literary cognitive studies there needs to be further engagement that only disability studies can bring to expand upon the current conceptions of the human experience and the spectrum of minds. Within disability studies there needs to be further understandings of how the atypical mind in its many variations interprets the world in ways that bring important and beneficial diversity. Also, there needs to be a further expansion and recognition of cognitive difference as disability to provide more context to the robust work done by scholars on physical disability. By researching these fields as a convergence, I intentionally break the asymptotic-like behavior to show how they should meet at certain points. Furthermore, by adding to this investigation the uniquely

alternative ways of engaging, visualizing, and feeling texts that digital humanities provides, further awareness about autistic characters is revealed. Both in how readers are primed to respond to the embedded sentiment coded into novels to generate narrative feelings and how societal biases influence these receptions in myriad ways. Throughout my work, I use many diverse resources in order to build towards a more robust picture and accurate rendition of the human experience so that the full spectrum of neurodiversity can emerge.

I begin my exploration in the first chapter of this dissertation by researching both *The Rosie Project* and *The Eagle Tree*. Each of these novels uses a first-person narration style. And each novel has a neuroatypical autistic narrator. There are many complexities that arise from this choice of narration that purposely engages an alternative perspective that diverges from the neurotypical majority viewpoint, which is not often labeled or acknowledged as such. Yet in this rhetorical move that returns autistic authority to the voice of the narrator there are also many problematic biases as each novel is authored by a neurotypical writer attempting to articulate this differing viewpoint through their vast experiences with neurodiverse individuals. Accordingly, there are some elements captured that remain closely aligned to lived autistic experiences. But there is also at times a focus that feeds into stereotypical interpretations of the characters that reinscribe problematic biases into popular culture understandings of autism. In order to unravel these complexly wound threads, I simultaneously explore my own positionality and situatedness within the fields of disability studies and literary cognitive studies in order to branch further throughout this dissertation into richer conversations.

More specifically in my investigation of *The Rosie Project*, I argue that the novel uses an autistic adult narrator, originally unaware of his diagnosis or label, to challenge the constructs of social norms and classifications of neurological distinctions as disease; this creates dis-ease with

Don's adaptions to neurotypical norms through the embedded sentiment which gives rise for the reader to approach and question their own dis-ease (read: discomfort) with the narrative feelings that emerge. And through my exploration of *The Eagle Tree*, I argue that the novel uses an autistic teenage narrator to capture what the social conventions of labeling attempts to diminish, specifically the idea of "low" functioning autism; because March's sensory experiences of bodily movement and breathing from the embedded sentiment embody a more full and rich engagement with the world which pushes the reader to question and step beyond their comforting confines into a deeper and alternative sensory engagement with the non-typical narrative feelings that emerge.

I next turn my exploration in the second chapter of this dissertation to researching both *House Rules* and *The Boy on the Bridge*. Both of these novels differ from the previous two explored in their narration styles. *House Rules* employs an alternating first-person narrator that cycles through five different characters from the novel. *The Boy on the Bridge*, on the other hand, employs a third-person omniscient narration style that looks into the viewpoints of multiple characters from the twelve-person team. Each of these novels has one neuroatypical autistic character that is surrounded by a cast of neurotypical characters, coding the narration as neurodiverse because of the multiple divergent points of view that don't adhere to an either or binary. Accordingly, rather than having an autistic narrator hold the authority for the novel, the power is dispersed and often in ways that perpetuate damaging biases for the autistic characters. In order to address the many power imbalances that arise from these narration constructions, I explore autism histories alongside the novels to provide more robust and complex understandings about the spectrum of neurodiversity as it manifests through autistic characters. As I continue progressing through this dissertation, I use the work I accomplish with exploring

the autism histories towards an intensive unpacking of the embedded sentiment and affective gestures which result from these types of constructions.

More specifically in my investigation of *House Rules*, I argue that the novel uses a cast of neurodiverse characters to emphasize Jacob's neuroatypicality through his exceptionalism—and that he is structured to portray repeated attempts and failures to adhere to societal expectations of connection, contact, and empathy; yet from the neurotypical and ableist focused desires of the narrative to set Jacob apart as different, representations emerge from the embedded sentiment that defy this categorization as he continuously asserts his power to connect, despite his sensory sensitivities, to manifest his own strong and unique empathy that leads the reader to question their expected narrative feelings. And throughout my investigation of *The Boy on the Bridge*, I argue that the complex cast of neurodiverse characters in the novel intensively heightens the mistrust between Greaves and the neurotypical members of the Rosie team in their pursuit to find a cure for the *Cordyceps* fungus; yet it is Greaves's neuroatypicality, in ways clearly seen and unseen, which pulls from the embedded sentiment to call upon the reader's inlaid passions and pleasure to generate complex narrative feelings about whether or not they would be willing to think as differently as Greaves and go as far to unselfishly make the ultimate sacrifice to maintain the spirit of humanity.

I continue my exploration in the third chapter of this dissertation through research on my method of scaled readings. I return to both *The Rosie Project* and *The Eagle Tree* to further expand upon the argument I began with my close readings to show how interpretations of these novels can be enhanced through deciphering the patterns generated by scaled readings. Whereas the first two chapters of this dissertation followed along more traditionally styled close readings, the last two chapters explore my newly established method of scaled readings. I created this

method by using sentiment analysis to uncover the embedded sentiment that lies throughout the words within the novel. By surfacing the highly charged affective words through positive and negative identifications, I can discover how the words are coded for intended interpretations. Thus, through revealing the embedded sentiment from the substrate of the work, I can visually detect patterns and quantitatively analyze the numbers that emerge from these classifications. Each of these very divergently different readings provides a unique critical interpretation. Yet the combination of both brings an even stronger analysis as each method is enhanced by the insights of the other. In other words, the qualitative is made better by the quantitative and the quantitative is made better by the qualitative. Each alone provides interesting patterns to pick up on and explore. But when used together, the resulting insight is exponentially stronger.

When using machine learning methods to re-read narratives in order to illuminate the ableist focused pleasures that lie within neuroatypical and neurodiversely narrated literary texts there is a necessary investigation which must be conducted into the many acts of labeling. In my choice of texts to investigate in this dissertation, I imposed a few boundaries to better define my research. One boundary is that I only chose literary texts where characters are "labeled" as having autism. The purpose for this boundary is that I do not make the case for an autism diagnosis or hypothesize about fictional characters having autism or autistic characteristics. While a speculative approach certainly has a place and opens up important discussions, an investigation of characters without the autism label is not compatible with my current research because it could create unreliable results when I use sentiment analysis for my scaled readings to further investigate embedded sentiment. Thus, having fictional works with characters that are not identified as having autism could potentially create inaccurate interpretations and diminish the further analysis I conduct with scaled readings. Another imposed boundary is that I only used

texts originally written in the English language. My research with sentiment analysis requires me to match words from novels against words identified in English language-based computer code lists as charged with sentiment. Because these lists from sentiment analysis packages were originally created with English words, they are based upon English language sentiments. This is a crucial distinction because word sentiments vary by language and while there may be similarities, each language is imbued with unique word representations and uses. Consequently, I only look at texts originally written in English and do not consider any translated texts in order to avoid inaccuracies that could arise from mixing works of different language origins. Also, by focusing only on English native texts, I can avoid misunderstandings which may be lost in translation when I am not fluent in the original written language. Additionally, this helps to ensure that my sentiment analysis work more precisely interprets the sentiment words through the original language of the novels.

I finish my exploration in the fourth chapter of this dissertation through my research which further looks towards scaled readings while simultaneously critically analyzing the sentiment lexicons and positive/negative classification binaries. I return to both *House Rules* and *The Boy on the Bridge* to further expand upon the argument I began with my close readings to show how interpretations of these novels can be enhanced through deciphering the patterns generated by scaled readings. In the critical analysis of the lexicons, I look further at the affectively charged embedded sentiments to uncover how there are problematic biases in the coding of words. Furthermore, I critique what is revealed from scaled readings as positive and negative from the "bing" lexicon. Yet, simultaneously, I reflexively turn this critique back towards the human and away from the machine. Because the machine unerringly follows the directions as provided through human encoding of what is positive and negative. Consequently,

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the errors that are identified by humans from the output of the machine reflects an error on the coding given to the machine by a human. And the biases and stereotypes that emerge from this miscoding are revealed to highlight how the cycle of mass consumption is constructed to prime specific narrative feelings for a neurotypical majority audience.

Furthermore, the ableist focused pleasures that emerge from the affectively charged gestures of labeling in these literary texts indicate the influences of popular culture on novels intended for mass consumption. Interestingly, the cycle of consumption reflects upon society that generates the narratives which is best articulated by literary and disabilities studies specialist Sonya Freeman Loftis, an autistic scholar writing about autism literature in her book *Imagining Autism: Fiction and Stereotypes on the Spectrum*. She notes that there remains an irremovable element of the social, cycling and continually folding into representations of autism and autistic characteristics presented in literature like a mobius strip: "Literature both reflects the society that creates it, bearing the indelible mark of its historical place and time, and reinforces and re-creates the social understandings and ways of being that created that literature. In other words, our literature reflects our collective beliefs and attitudes at the same time that it continues to shape them" (151). As Loftis notes, literature is a cycle, a hermeneutic circle spiraling in the continually refining definitions and expectations of society. Consequently, I argue throughout this dissertation that the increase of autism within popular culture narratives lies in the continuing need to redefine autism within society. And, I would hope, towards getting closer to accurate representations and understandings. Thus, this is one of the main reasons to focus my examination in the time period of post-1994 literature—to better see more recent societal representations of autism. Because all the works of fiction that emerge after this date would have been created following the redefinition of autism as a wider spectrum in the DSM-IV, originally

with Asperger's and Pervasive Developmental Disorder-Not Otherwise Specified medical label distinctions, that eventually gave way to today's understanding of autism as the Autism Spectrum Disorder from the DSM-V. Consequently, all of the novels discussed in this dissertation emerge after these major medical label updates occurred which expanded what could be classified as autism. Further, all of these works were distributed and marketed for mass appeal in a time period of increasing autistic representation. Investigating the reasons for marketing (neuroatypical) autistic characters for mass consumption brings up many interesting aspects to explore. And throughout this investigation, I work towards bringing awareness to how neurological disability is portrayed to appeal to neurotypical and ableist focused majority audiences.

I conclude my dissertation by affectively gesturing towards the future, both for my own unique journey surrounding autism as well as for what the combination of qualitative and quantitative methods ushered in through digital humanities might yet yield. By being able to read the autistic characters through showing ableist focused constructions of literary texts, I create a new understanding and awareness of the current neurotypical and neuroatypical divide. Through the combination of affect theory, digital humanities, and popular culture theory that I use throughout my dissertation, I culminate my work with a movement towards better understandings about the complex cycles of autistic character consumption and how they might be (de)constructed for analysis. In my research which bridges multiple (and often disconnected fields), a complex theoretical and philosophical understanding emerges of how narrative feelings are primed through embedded sentiment which in turn influences ableist focused receptions towards neuroatypical autistic characters in literature. By using the many diverse fields of research from my dissertation, I generate a robust multifaceted analysis. In turn, the analysis

builds towards a distinctive inquiry in both literary cognitive studies and disability studies that

allows me to contribute new ideas about autism into both fields and highlight the importance of

understanding and embracing neurodiversity.

CHAPTER 1

Ableist Pleasures of Literary Texts – Neuroatypical Narrators

As a parent navigating a world in which there are so many conflicting ideas and information surrounding autism, I often feel a panic of overwhelming overload. While I will probably never quite understand my son's experiences of neuroatypical autistic sensory overstimulation, my feelings of trying to provide the best future for him while wading through the syrupy sea of conflicting information to discern the "right" way might be (fleetingly) somewhat close. For me, the journey from newly-minted parent to my current point of autistic knowledge began with a conversation during a well-child checkup that went something like this—"Your son isn't meeting the expected speech milestones for the amount of words he should be using for his age so let's keep an eye on that for the next six months." As many (neurotypically oriented) parents who receive such news, I found myself delving further into books and sources that provided best practices and tips—and also worked my way through the seemingly inevitable parental guilt that I must be doing something wrong if my son is not progressing as he should. Then six months later the conversation with our pediatrician continued: "Your son still isn't on track to progress with speech as expected and he's not meeting all his milestones—let's look into speech therapy and have you visit with a psychologist to monitor his progress." At this point, after six months of trying various (and mostly unsuccessful) methods gleaned from my research to evoke more words of language from my son, I was frazzled and confused. I felt sure that I had tried all the recommendations but had come up short and, outwardly, could not demonstrate all the work we had done together and the small victories that

we had made. And it was then that I realized my son might need something more than the research knowledge could supply—that I would need to bend my thinking to reframe my views in order to better understand his experiences of the world and to provide him with ways to learn that do not follow neurotypical norms.

With my renewed perspective, I delved into the therapy journey with my son. We started off with speech therapy and regular visits with a psychologist as I further focused my time and energy on how to interpret the signals my son would display to tell me what he needed. But when autism was first used in conversations, many months prior to an official diagnosis as a representative label of his differences, it was life altering. I felt like I was knocked off balance. The news of that one word took me from frazzled and confused to removing the equilibrium I had previously taken for granted in my own life. My only real knowledge of the neuroatypical way of being at that point was as an outlier in conversation combined with a bunch of disparate ideas surrounding it in a constellation—of vaccines, behavioral modifications, food intolerances, and more. Yet I had never really needed to understand why there were so many ideas, and conflicting ones at that. And trying to process through the societal complexities of autism rendered me more lost than I was even at the beginning of my motherhood journey. However, I started to discover that no matter what label might eventually be affixed to my son by neurotypical society, he was still my beautiful boy and I would get to enjoy him. I would be blessed to see a complex and full form of beauty emerge from him into a world that did not seem quite in sync with his rhythms. But he did not desire conformity to the neurotypical rhythms—he created his own from the myriad cues surrounding him, as he was already always watching and observing. Thus, by the time he was given an "official" Autism Spectrum Disorder diagnosis five months later, it was less frightening and more exciting that there was an opening up of additional

resources to provide for his growth and development. Eventually the diagnosis led to adding occupational therapy and ABA (applied behavioral analysis) therapy to the already busy schedule of my then three-year-old boy.

Looking back, along every step of the way towards a "definitive" label, I felt that I was getting closer but not sure what exactly I was getting closer to—that the journey was a venture into the unknown, an enigma, an infinite Rubik's cube. Somehow each side of the cube was coded into colors for the different aspects I was working through with my son: medical experts, multiple therapies, diagnosis, social development, education, and life experiences. Yet it was not a neatly solvable cube for which the solution could be written. This was beyond even an expert's ability with its ceaseless additions and iterations constantly shifting with each day. Because in the end it was not a solution that I was looking for but rather a way to interpret the expressive neuroatypical language of my son which was inherently different from the social neurotypical language I had been trained to understand. Thinking back to those initial feelings (and some that I still continue to work through to this day), I feel the panic and confusion start to viscously bubble and splatter. But I also know that my son and I have both made it this far—we are stronger together and better because we are with each other. We continue to face our undefined and blank page ahead united, as we craft our own narrative and create our own equilibrium that is stronger and better than anything I could have ever imagined. Along the way, I have probably made some really bad decisions and some really good decisions. And even from my past experiences of making these decisions, going forward into the continually changing storyscapes that surround autism, I cannot say that all my future decisions will be the "right" decisions. Yet I know that I will always focus on my son. He may process the world through a cognitively different mindset, but he brings an unparalleled beauty and joy into my life—one that surpasses

and exceeds the typical in strength and intensity. And as I move further along, the more I am able to slowly set adrift the parental guilt that I had unnecessarily held onto and let accumulate.

As my personal journey is but one of many, I find that when laid alongside literary narratives it provides a deeper understanding of autism in literature. And in turn the literary accounts of autistic characters reveal understandings and insight into the social narratives of autistic experiences. In this chapter, I argue that neuroatypical perspectives challenge traditional methods of determining reliability and value. By investigating the neuroatypical narrators, I also highlight how their subsequent messages to the predominately focused neurotypical audience indicate what is translated from the autistic lens and what resists translation. Throughout the chapter, I interweave a discussion on my positionality within the major fields of study that guide my research, disability studies and literary cognitive studies. In this discussion, I show how my research builds on previous scholarship and looks towards new and unexplored directions to add to literary research on autism. I weave the continuing discussion of positionality into my close readings of two novels: *The Rosie Project* (2014) by Graeme Simsion and *The Eagle Tree* (2016) by Ned Hayes. I chose these two novels to start my investigation as both have autistic neuroatypical narrators. These two texts also call into question the overwhelming view of autism representation as American, white, and boy: Don Tillman from *The Rosie Project* may be white but he is an adult and Australian; March Wong from *The Eagle Tree* may be an American boy but he is not white (the authors note indicates he is of Chinese heritage). Thus, instead of contributing to the autism stereotype portrayal, these two texts shake up the unofficial norm as neither of these characters fully fits into the mold. Don challenges the perception of diagnosis as only being a childhood benefit and March pushes against the socioeconomic and white privilege often intertwined into autism portrayals.

There is an important context to further consider in that both novels were published and written for popular culture consumption. Thus, both of their fictional accounts are often the entry point for more complex understandings of neuroatypicality to an audience well beyond the reach of those directly surrounding autism. As these two novels represent the types of literary texts that provide audiences with their first glimpses of autism outside of the news media, it is necessary to undertake a critical inquiry to understand their ableist constructions and messages to popular culture conveyed through their compositions. Consequently, I look into these constructions as I explore the intricacies of how the neuroatypical perspectives given to the narrator's authoritative voice frames the interactions of both neuroatypical and neurotypical characters. I also attend to how each main character is uniquely positioned to represent a different position from the wide-ranging autism spectrum. Through my investigation of *The Rosie Project*, I argue that the novel uses an autistic adult narrator, originally unaware of his diagnosis or label, to challenge the constructs of social norms and classifications of neurological distinctions as disease; this creates dis-ease with Don's adaptions to neurotypical norms through the embedded sentiment which gives rise for the reader to approach and question their own dis-ease (read: discomfort) with the narrative feelings that emerge. And through my exploration of *The Eagle Tree*, I argue that the novel uses an autistic teenage narrator to capture what the social conventions of labeling attempts to diminish, specifically the idea of "low" functioning autism; because March's sensory experiences of bodily movement and breathing from the embedded sentiment embody a more full and rich engagement with the world which pushes the reader to question and step beyond their comforting confines into a deeper and alternative sensory engagement with the non-typical narrative feelings that emerge.

In my research, I deliberately focused my positionality within the convergence of

disability studies into literary cognitive studies. I find that purposely looking at where these two fields (should) meet provides the best framework to gain a more accurate rendering of the spectrum of neurological diversity. Yet despite an inherent intertwining of the two fields, they have often been seen as disparate and distinctly separate pieces. Through my exploration of literary texts, I show how these two fields are indeed not separate. Because in my investigation on neuroatypical narrators in this chapter, and neurodiverse narrators in the next chapter, the connections between these two fields rise to the surface. The connections are illuminated to reveal that in fact the two fields are needed in a symbiotic pairing to understand the many depictions across the diverse spectrum of human minds. With this in mind, I selected the four texts to investigate throughout this dissertation around a crucial distinction: neuroatypical and neurodiverse narrators (respectively, *The Rosie Project*/*The Eagle Tree* and *House Rules*/*The Boy on the Bridge*). By looking at how the two styles of narration emerge in narratives, I unearth a foundation which shows perspectives for understanding the privileges and power built into character depictions. And these characters from various areas within the neurodiversity spectrum need further explanation to better understand how they play into popular culture understandings of literature that generate narrative feelings.

In order to see the convergence of disability studies into literary cognitive studies, a look into the histories of each field provides necessary context. While disability studies is now a broad-ranging field, it historically emerged from scholars who investigated "visible" (physical) disabilities. In the past couple of decades, the field of disability studies has widened to include more discussions about "non-visible" (neurological) disabilities. Alongside this shift, the research on autism in disability studies has slowly been growing and steadily gaining momentum. Yet the reasons for the initial lack of study surrounding cognitive disabilities stems

from historical injustices and genocides of people with neurological differences. Accordingly, there is fear about marking cognitive disability in certain populations as it could be used as a weapon against neuroatypical people. However, despite the historical injustices, the increase of disability scholars taking up research on cognitive differences indicates a positive trend; one in which all the facets of neurodiversity will hopefully be explored and understood as an essential and beneficial blend within humanity.

The field of literary cognitive studies has been gaining momentum and visibility in recent years, but the history of this field is shorter and not as developed because it emerged as an extension from neuroscience developments in the past few decades. Furthermore, there has been very little research on autism. And, often, the scholars that do bring autism into their research only do so as a minor side note or a coda at the end to briefly acknowledge that there are differences in human minds. As the field emerged from the more medically focused neuroscience, many of the prominent researchers adopted flawed understandings of autism from outdated scholarship. Further, the outdated information promotes (and perpetuates) research that does not accurately portray the capabilities of neuroatypical autistic minds. And it fails to investigate that autism is manifested through a vast spectrum of experiences which are wide ranging and diverse. However, more recently there have been scholars who are shifting away from wholesale adoption of medically focused neuroscience studies and instead are beginning to look towards social complexities and deeper understandings about the many connections in the vast diversity of minds.

To get an indication of the current state of autism representation within disability studies and literary cognitive studies, I look at a sample cross-section of research texts to see how many times autistic terms are used. The quantity, while not a precise measurement, provides a general

indicator of the amount of discussion about autism. Accordingly, the quantity of terms related to autism provides a way to gauge the patterns from within both areas of study. In looking at Michael Bérubé's *The Secret Life of Stories: From Don Quixote to Harry Potter, How Understanding Intellectual Disability Transforms the Way We Read*, published in 2016, there is a strong autism connection with 89 uses of the word autism, 18 of the word autistic, and 4 of the word Asperger's throughout the text. Going slightly further back to Dan Goodley's *Dis/Ability Studies: Theorising Disablism and Ableism*, published in 2014, there is less of an autism connection with 33 uses of the word autism, 10 of the word autistic, and 1 of Asperger's throughout the text. However, looking into Fiona Campbell's *Contours of Ableism: The Production of Disability and Abledness*, published in 2009, reveals there is no mention of autism. This trend of not directly discussing autism is also seen in foundational disability studies works from further back such as Paul Longmore's *Why I Burned My Book and Other Essays on Disability*, published in 2003, and David Mitchell and Sharon Snyder's *Narrative Prosthesis: Disability and the Dependencies of Discourse*, published in 2000. I bring up these numbers to look at how autism is explicitly named and investigated in a sample of disability studies scholarship.

While not a perfect measure of discussions on autism, the quantitative use of autistic terminology shows a trend and pattern worth investigating. Working backwards by looking at Longmore's and Mitchell and Snyder's work, the absence of autism is logical as these scholars were researching through their own physical disabilities and articulating the challenges that they faced. Additionally, as Mitchell and Snyder discuss, "individuals with physical disabilities have historically disassociated themselves from those who have intellectual disabilities" (3). They go on to further detail that the historical causes of this desired separation was survival, especially as

this reason for distancing emerged out of a response to the eugenic genocide policies and "purification" enacted within certain societies in the early 20th century. Perhaps it is a fear of history repeating itself that inhibits some scholars from bringing in discussions of neurological difference into disability studies. Yet it should be acknowledged and understood that the historical focus on the complexities of physical disability has opened up a pathway for more research around cognitive disability. And even with historical disparities in focus, there is now, more than ever, a need for additional scholars in disability studies to take up research on cognitive disabilities in order for the field to continue growing and represent the vast spectrum of the human race.

Disability studies has long grappled with the uncomfortable complexities of difference, but literary cognitive studies has, for the most part, adopted a universal approach to conceptualizing the mind. Looking at a sample cross-section of research texts to see how many times autistic terms are used indicates that within literary cognitive studies there is nearly no presence or mention of autism. Starting with Paul Armstrong's *How Literature Plays with the Brain: The Neuroscience of Reading and Art*, published in 2014, there is one mention of autism in the last chapter of the book which is oversimplified and pulls information about autism from Simon Baron-Cohen's *Mindblindness: An Essay on Autism and Theory of Mind* from 1995—a well outdated and inaccurate representation of autism from nearly 20 years previously. Slightly further back is the collection of essays *Stories and Minds: Cognitive Approaches to Literary Narrative*, published in 2013, and across the 10 essays in the volume there is no mention of autism despite it being a more recent work that investigates different approaches to literary cognitive studies. However, a few of the essays do take up Baron-Cohen's 1995 work to talk about theory of mind; while these discussions do not specifically invoke autism, they perpetuate

faulty information about autistic difference that is inexorably linked to cognition models behind theory of mind.

Furthermore, in Stanilas Dehaene's well-known work *Reading in the Brain: The Science and Evolution of a Human Invention*, published in 2009, and in Maryann Wolf's *Proust and the Squid: The Story and Science of the Reading Brain*, published in 2008, there is no mention of autism as a category to distinguish it as a different type of reading mind. However, Dehaene's book includes a chapter length discussion of dyslexia and Wolf's book includes a detailed exploration of dyslexia as representative of a distinct method of reading; in other words, there is at least a beginning step to engage with a different facet of the neurodiversity spectrum. Going further back to foundational literary cognitive studies texts, Mark Turner's *The Literary Mind: The Origins of Thought and Language*, published in 1998, contains no mention or discussion of autism. Interestingly, in Walter Freeman's *How Brains Make up Their Minds*, published in 1999, one year after Turner's work, there is one mention of autism and one of autistic. Yet what is discussed unfortunately perpetuates damaging and inaccurate representations of autism that oddly appear for the first and only time in the concluding paragraphs of the text: "Autism is a syndrome in which individuals develop no comprehension of the feelings, needs, or emotions of their families and acquire no friends" (154). Ending the text on this seemingly afterthought note, and to frame autistic experience as somehow invalid and incomprehensible, feeds into the notion that autistic presence is somehow less than human. As there is nearly no presence or detailed discussion of cognitive differences that diverge from the neurotypical mind model, research is desperately needed to fill current gaps within the field of literary cognitive studies. And literary cognitive studies needs disability studies to look towards the atypical to fill the gaps—to represent the full spectrum of humanity rather than just an idealized neurotypical representation

of a mind.

In order to begin addressing some of the gaps that remain within disability studies and literary cognitive studies, I specifically look into the representations that emerge from neuroatypical narrators through two fictional works, *The Rosie Project* and *The Eagle Tree*. Through the lenses of disability and literary cognition, I explore both of these novels which have autistic neuroatypical narrators, Don Tillman and "March" Wong. Investigating narrators based upon neurological distinctions reveals complex themes about privilege and power with who gets to speak and what is focused upon in their renditions of the (fictional) world. Thus, a methodology that purposely looks to see how neurological constructions shape narratives points towards better understandings of how characters both reinforce as well as inscribe new meaning about autism into popular culture. Both Don and March have distinctly separate minds—and both have autism. This purposely calls attention to how there can never be one definitive narrative (or experience for that matter) to describe autism. While there may at times be similarities or connections between autistic traits, there is no specific marker that defines an autistic way of being. Yet even without a definitive marker, a refocused close reading can reveal the fictional characterization with neuroatypical narrators which highlights deeper and more meaningful insights into the spectrum of neurodiversity. And perhaps through revisiting narratives to investigate narration styles, new knowledge about autism can in turn be recirculated within popular culture to create more diverse understandings and acceptance of aspects labeled as different.

While an author is certainly not a narrator, in looking at the privilege and power built into autistic characters, there is some background information that is vital to understand before beginning an unpacking of these characters. Graeme Simsion wrote the character of Don Tillman

based upon his experiences of working in the corporate world as an IT specialist prior to turning to a career of writing. His experiences of working with a widely diverse group led him to conclude that there is a vast portion of humanity on the autism spectrum. That these individuals grew up in a time where they were not diagnosed as autistic because the understandings of autism that exist today did not exist during their youth. Consequently, part of the inspiration for the character of Don, is to represent an amalgam of various people that Simsion worked with during his time in the corporate world. The background information provides context, but it also reveals potential pitfalls in what could possibly be constructed with a neuroatypical narrator. Simsion identifies as neurotypical; and thus his writing of a neuroatypical narrator is in essence a (fictional story) translation. Accordingly, Don as the narrator does not emerge from an embodied autistic experience. While the portrayal is certainly not meant to provoke inaccurate biases, the power for the writing of Don still remains within the realm of the neurotypical majority.

There are no neat answers to the dilemmas posed by biases and power imbalances. However, despite inherent shortcomings in the origin of the characters, I argue that what the neuroatypical narration brings forward and questions is the reliable narrator construction. One of the constants that has permeated through literary criticism is the debate on whether or not the narrator is reliable to provide accurate and impartial information. Thus, neuroatypical narration questions this process to ask who determines what is accurate and impartial. Because narratives typically are framed through an undiscussed and privileged neurotypical majority, anything that deviates from this artificially constructed norm is looked at as suspect and questionable. However, the neuroatypical narrator model pushes back against this construct to show that reliability is within the eye of the beholder. And that many narrators who have historically stood accused of unreliability are more likely than not from various types of neuroatypical ways of

being, as they diverge from the typical model. Consequently, these neuroatypical, or perhaps even neurodivergent, narrators may act in ways and provide information that depending on neurological lens could appear inaccurate and/or dishonest. Yet these narrators are accurately and honestly reshaping meaning through their stories to provide a different perspective. To further add to the complex knot that emerges specifically from Simsion through Don, one might further argue that in order for the neurotypical majority to undertake and invest their time digesting a narrative of difference, they need to come from a common understanding which a neurotypical author might possibly imbue in a neuroatypical character. But there are no clean or easy answers to these tangled dilemmas. And I continue to pick away at the knots as I progress through my investigations of the texts.

At the core of *The Rosie Project* is a story about Don Tillman, an associate professor of Genetics and academic researcher at a university in Melbourne, Australia who is in search of a wife. He works towards finding a suitable match with the help of his friends Gene, a professor and head of the psychology department, and Claudia, a clinical psychologist. Gene and Claudia are a married couple and his only two friends who, based on their differing specialties and personalities, often give Don conflicting advice while he searches for a wife. During Don's journey to find companionship, more about his unique mannerisms and responses to social situations emerge to mark him as noticeably different from the surrounding characters. When he meets Rosie for the first time, he immediately excludes her from being a potential prospect for his wife as she fails to meet the exacting and detailed criteria that he has created in a lengthy questionnaire for his Wife Project. The questionnaire is highly detailed to include things such as BMI (Body Mass Index), vegetarianism beliefs, smoking status, and ice cream flavor preference to name a small sample of Don's ideal and logical criteria of what would make a partner

desirable or not desirable.

Throughout his search to find a wife, he builds a friendship with Rosie who needs his genetic expertise to determine the identity of her biological father (her mother died in a car crash when Rosie was a young girl before revealing the information). As a side project, Don starts the Father Project for Rosie. While working with Rosie he finds himself questioning his logical processes and exacting questionnaire when he begins to become attracted to Rosie despite her failing multiple criteria on his list of what he thinks would make his ideal partner. In the end, Don realizes that attraction is not always scientifically logical and that leads him to both the Reform Don Project and the Rosie Project. And all of these projects enable Don to pursue his feelings for Rosie which culminates in their marriage. Throughout my investigation of *The Rosie Project*, I argue that the novel uses an autistic adult narrator, originally unaware of his diagnosis or label, to challenge the constructs of social norms and classifications of neurological distinctions as disease; this creates dis-ease with Don's adaptions to neurotypical norms through the embedded sentiment which gives rise for the reader to approach and question their own dis-ease (read: discomfort) with the narrative feelings that emerge.

At the beginning of the story, Don researches information about the autism spectrum disorder in preparation for a community lecture he gives in Gene's place. Gene is unavailable to give his planned lecture because he is off pursuing a sexual attraction project in which he seeks women of different nationalities as sexual partners to research if attraction is genetically determined by nation of origin. Interestingly, the highly questionable ethical nature and moral dilemmas that arise from Gene's project is initially not questioned by Don. While Don does see the issues and damages that Gene's project and open marriage policy is causing to Gene's wife Claudia and their children, Don understands the logic behind conducting projects and seeking a

"scientific" answer to a question. Don's initial inability to voice his concerns stems from two related elements. The first is that Gene and Claudia are his only friends. And he does not want to lose these friends over a disagreement and in turn does not feel comfortable providing his opinion. The second is that Don, while clearly manifesting multiple autistic traits, was not formally diagnosed as autistic and does not consciously identify and recognize that his logical thinking patterns differ from neurotypical norms (until much later in the novel). Consequently, Don does not identify that his logical processing is based upon neuroatypical thinking patterns which are often manipulated and taken advantage of by Gene.

The lack of a formal diagnosis for Don falls in line with Simsion's comments about basing Don on an amalgam of people he worked with in IT (prior to becoming a writer). Simsion suspected these colleagues as being autistic due to their behaviors and mannerisms, but they happened to grow up in a time before autism was recognized and diagnosed as a wide-ranging spectrum of neurological constructions. Despite Don not having a formal diagnosis, at the end of the novel he reflects on his experiences that arose from his Wife Project and realizes that his mind processes differently in ways that align with the autism spectrum leading to an informal self-diagnosis. Don's ending reflection also allows him to finally recognize the ethical errors in Gene's logic and subsequent manipulations. That the overgeneralizations Gene made through his attraction project created irreparable destruction to relationships in both his academic and personal life. Through this realization, Don finally sees the potential errors in not being able to step back and reassess projects. Furthermore, that the damage can have unintended consequences as it was Gene's lecture on genetics that made Rosie's mom Bernadette think that her partner Phil was not Rosie's biological father when in fact Phil, who raised Rosie in the status of a stepdad, was also her father biologically.

The narrative structure of *The Rosie Project* is somewhat standardly constructed with all the chapters and the viewpoint being solely from Don's (neuroatypical) perspective. However, the narrative is different in that all of Don's autism-like mannerisms emerge as events happen to him which diverge from neurotypical narration. Because his self-diagnosis does not come until the end of the novel, it can be a somewhat jarring experience for the predominantly neurotypical reader accustomed to ableist focused constructions that generally translate neuroatypicality to travel through the narrative. In this way, the novel provides for a unique reading as Don becomes an enigma to (de)code through his actions which differ from the neurotypical expectations. And as the story takes on a decidedly neuroatypical construction and dialogue, the embedded sentiment arises in unique patterns. There are negative sentiments within the plot that Don works his way through, but he certainly sees his world through much more positively focused comments even when he is frustrated or upset. And perhaps the last word of the novel best encapsulates and summarizes Don's feelings about the world—"incredible." For Don, even though he has experienced significant challenges navigating through a world that he eventually recognizes is not set up for his unique neuroatypical abilities, he finds joy and pleasure. Perhaps because he is not tied to debilitating social norms and constructions which demand neurotypical individuals respond in certain ways.

While the romantic element of a man searching for a wife weaves through the novel, understanding the mystery of Don's differences is also constructed as a strong element. As Don does not identify his own thinking as neuroatypical until the end of the narrative, both the reader and Don are trying to discover why he struggles in social situations and has not been able to maintain a steady romantic relationship. Yet there is a critical piece of the mystery that emerges in the beginning of the story when Don reflects on his preparatory research for the autism

spectrum disorder community lecture: "Naturally, the books and research papers described the symptoms of Asperger's syndrome, and I formed a provisional conclusion that most of these were simply variations in human brain function that had been inappropriately medicalized because they did not fit social norms—*constructed* social norms—that reflected the most common human configurations rather than the full range" (Simsion 6, emphasis in original). Don attempts to logically process the research he conducted on Asperger's and subsequently sees multiple flaws emerge. He realizes that societal norms, which label what is different rather than question the foundations of the social structures, lead to a type of categorizing that often creates damaging effects. These social foundations create codes of conduct that are not explicitly stated but rather understood and passed down through observation of behaviors—and these constructions are supposedly understood despite the lack of overt instruction. For the most part, this system seems to work as the neurotypical majority does learn in this way. But when there are those, such as Don, who do not learn social norms in neurotypical ways, they are labeled as defective rather than understood as providing a complementary and much needed alternate perspective. In addition, the embedded sentiment of words which arises through the narrative primes readers to feel the weight of negativity that Don highlights as seen through the words "symptoms," "syndrome," and "inappropriately." Yet instead of perpetuating the negativity inherently laced into medicalized language, the narrative feeling that emerges is to see the flaws in social norms which have been constructed by the majority in order to question the unstated assumptions being made.

Throughout the novel, readers are primed to see that the words of labeling, a usually unquestioned human practice, has the potential to wield excessive harm and destruction. Because the seemingly simple action of placing a label, with words that have charged meanings, can in

turn create a vortex of unnecessary pain and isolation. While at this point in the novel Don has not yet embarked on his journey of self-discovery and self-diagnosis, he has importantly discovered that disability is socially constructed in response to expectations of how the human race should be structured. Also, for the portion of the autism spectrum which was previously classified as Asperger's, he has recognized that cognitive difference is often marked with medicalized terminology through diagnoses, yet these differences are simply deviations from expected behaviors and social contracts rather than deficits or defects. Don's perspective on social norms is helpful in a journey towards gaining a greater understanding of autism. However, it could inadvertently perpetuate an ableist focused construction of reality which wants to make difference invisible and thus not grappled with or discussed. While Don brings up an important point about how society understands and classifies autism (often inappropriately), his observations should not be overgeneralized. Further, it is critical to recognize that Don focuses on the representations of autism that are classified by society as "high functioning" which is yet another problematic label that creates unnecessary and often inaccurate descriptions of individuals who are all different with various strengths and weaknesses. And, further, this area of "functioning" represents only one part from the much larger autism spectrum.

Accordingly, it is imperative not to let distinctions of "functioning" become harmful by creating an environment where disability becomes invisible in lived social experiences. Because if it becomes invisible, necessary supports provided to the autism community could be removed, hindering them from navigating in the neurotypically constructed world. Stuart Murray explores such representations and differences of perception around functioning surrounding autism and autism culture in his book *Representing Autism: Culture, Narrative, Fascination*. In his discussions of savants (which Don's behaviors tend to follow), he highlights the real dangers in

misreading the autism community through the "high-functioning" autistic examples: "Allowing for autism to be 'incredible' in this way, of course, pushes the condition into the world of fantasy. It makes it easier to ignore the social dimensions, the apparently mundane questions of schooling or respite care or employment options for adults with autism. It keeps things at arm's length" (99). It is important to recognize that disability is a socially constructed understanding of impairment as Don highlights. But it is equally important that for people with impairments to survive in our (socially constructed) neurotypical society, they need to be provided with the appropriate accommodations to navigate the society which is set up for neurotypical people without impairments. These accommodations are vital for people with impairments to survive in a society that often does not take these impairments into consideration in physical and psychological constructions.

Many readers who take up *The Rosie Project* for a quick read of a romantic genre book would be unaware of these socially created differences, and, subsequently, often do not recognize their roles in perpetuating these types of constructions in society. Consequently, there is a need to go beyond Don's realization that social norms are constructed, in order to enable the reader to break the cycle of ableist focused fiction consumption and allow them to imagine more diverse horizons. And many would agree that Don's positive perspective on disability is uplifting. Because it would be great if the negative aspects of disability did not have to exist. But it is crucial to understand why disability is framed through negative medicalized wording in order to engage in discussions that need to take place to create more inclusive societal structures that embrace the multi-faceted aspects of neurodiversity. As the discussion surrounding Don's views regarding the social constructions of autism highlight, it is important to acknowledge how both the medical models and social models influence understandings of disability as well as how

this knowledge is transmitted to the population at large.

To better recognize how experiences, like the adventures of Don, are accumulated through the cyclical uptake of mass consumption in popular culture, I now refer to the foundational work by Peter Berger and Thomas Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. While this is an older text, it is a foundational level work that provides a metalevel analysis of how knowledge is consumed and constructed in culture which still provides valuable insight today. As sociologists, Berger and Luckmann approach the question of knowledge from the perspective of their field: "It is our contention, then, that the sociology of knowledge must concern itself with whatever passes for 'knowledge' in a society, regardless of the ultimate validity or invalidity (by whatever criteria) of such 'knowledge.' And insofar as all human 'knowledge' is developed, transmitted and maintained in social situations, the sociology of knowledge must seek to understand the processes by which this is done" (3). Thus, they explore throughout their work how knowledge is created (through mass consumption) in social situations (by popular culture). Importantly, they show that knowledge can either be true or false, and that information is taken as fact which is then "developed, transmitted and maintained" by society. The process of knowledge being transmitted socially takes place through many outlets to include literary representations, whether or not these representations are accurate.

Consequently, the knowledge created and circulated from literature can be helpful or damaging depending on how character representations are crafted and developed. As a result, the importance of studying those representations, to get at how they create knowledge and potentially the work that must be done to counter them, is crucially important in order to circulate knowledge that provides benefit rather than harm. Currently circulating social

knowledge about autism contains many damaging falsehoods ranging from inaccurate depictions of the spectrum to the belief that it is a curable disease rather than a neurological difference of structure. Despite these various inaccuracies, because it's the information that people most often hear, they continue to repeat it—and they do not critically question the validity of the knowledge. Thus, in my work as a scholar investigating autistic characters, I continually question and critically analyze the "knowledge" depicted about autism. I aim to show both the validity and invalidity of the depictions through my research in the hope that the more valid depictions can in turn become the information which is "developed, transmitted and maintained" by society leading to more accurate and beneficial autistic character representation.

While knowledge about autism is anchored as a strong undercurrent of Don's journey to find a wife, and along the way explore his own neurological constructions, self-reflections and identifications are how his knowledge manifests. Thus, it's important to investigate how knowledge, both valid and invalid, informs and influences identity. Berger and Luckmann, in addition to their investigation on knowledge, discuss how identity is constructed from that knowledge through similar patterns of social processes: "Identity is, of course, a key element of subjective reality, and like all subjective reality, stands in a dialectical relationship with society. Identity is formed by social processes. Once crystallized, it is maintained, modified, or even reshaped by social relations. The social processes involved in both the formation and the maintenance of identity are determined by the social structure." (173). The discussion of identity being formed through social processes speaks to the experiences of autistic people who, because of the social constructions of knowledge, are expected to perform in certain ways in order to be seen (or not seen) as autistic. It's critical to note that autism should not be solely defined through medicalized language or checklists. And that there not be an attempt to define it with one

singular meaning. This is important to recognize as to not make autistic people feel that they must perform in a certain way to be seen as autistic or create feelings of unauthenticity if they express themselves differently. While Don Tillman doesn't explicitly state that his behaviors are unique to his experience of neurological difference, he conveys the sentiment that constructed social norms are often inappropriately applied and are too limiting to describe the entire range of human experiences. Because each individual carries a uniqueness which when combined together merge to become part of the larger construction of the human race.

When Don continues through his journey of self-discovery and identity in his attempts to find a suitable wife, he reflects on the emotions that he feels and how they differ from social expectations. Prior to his dedicated journey to find a wife, Don lived a very scheduled and regimented life that did not allow for variations from his detailed calendar. As an example, he would eat lobster every Tuesday night so he could follow the same recipe, which, because he used the same one every week, allowed him to quickly prepare food without leftovers. He never fully questioned how his detailed schedule was different from his friends who operate on much looser and fluid conceptions of times and plans. Yet, when he finally finds a potential partner who meets all the exacting criteria that he detailed through his questionnaire, he starts to question his previous constructions and personal identity which causes his emotions to kick into overdrive as he reflects on his life experiences:

> Throughout my life I have been criticized for a perceived lack of emotion, as if this were some absolute fault. Interactions with psychiatrists and psychologists—even including Claudia—start from the premise that I should be more 'in touch' with my emotions. What they really mean is that I should give in to them. I am perfectly happy to detect, recognize, and analyze emotions. This is a useful skill and I would like to be better at it. Occasionally an emotion can be enjoyed—the gratitude I felt for my sister, who visited me even during the bad times, the primitive feeling of well-being after a glass of wine—but we need to be vigilant that emotions do not cripple us. (Simsion 137)

Prior to Don's reflection on emotion, the text illuminates that he lived by a schedule with rigidly

consistent predictability. He ate the same meals each day of the week and timed his days down to the minute. Thus, he did not usually experience situations in which he needed to widely engage his emotions (most likely by subconscious design) because he was always able to prepare his schedule in advance to anticipate for unique situations. Further, while Don may struggle with displaying emotions in a neurotypical manner, the social conventions compel him to work on these emotions in an effort to become neurotypical—rather than neurotypical society expanding the range of the conventions to include neuroatypical ways of being and engaging. Because instead of appreciating the power his perspective provides as one that can more clearly identify logical paths, Don is pressured by these social conventions to pass as neurotypical and transition his thinking. But he rejects this premise as he finds power in his position which doesn't let emotion overwhelm his system.

The Wife Project, however, has required Don to exercise his emotions with much more frequency and at a higher intensity causing him to reflect on how his experiences of emotions differ from societal expectations. He consciously recognizes that he processes emotions differently from social norms and is happy with his abilities. He is grateful to have a perspective that allows him to engage more logically without being overwhelmed with inputs from his environment. While society views Don's emotional processing through negatively charged words—a world where he is "criticized" for his perceived "lack" of emotion, which is cast as an absolute "fault"—he sees his emotional perspective "perfectly" through positively charged words as he finds his rhetorical position "useful" as something to be "enjoyed" and cherished. The charged sentiment in the context of this passage brings up questions about how society views emotion and what gets classified as good or bad. The narrative primes the readers to feel emotions from the neurotypical perspective of pointing out the perceived negativity in Don's

atypical processing then transitions to the neuroatypical perspective of Don to further highlight that emotions often cannot be classified quite so simply as good or bad, positive or negative.

The novel also calls attention to the complexity of emotions through Don's thoughts to show that emotions can "cripple" in how deeply they are neurotypically felt. The play on words with Don reversing the disability discourse calls attention to the neurotypical structures that privilege emotional power and authority. Because if the emotions control (or are given into) rather than the logic in decision making it can be debilitating. Additionally, this passage points to a situation of neuroatypical power in that autistic people are often better suited to process emotion logically, pushing back against societal structures that rhetorically attempt to diminish their strengths. The importance of calling this passage out is because it is an unacknowledged truth about neurotypical emotions that they often overwhelm people when felt too deeply causing debilitating effects. Don recognizes this important facet of emotional processing and consequently notices that his emotions, while different, provide a different set of important strengths. He is able to avoid, in most situations, going into an overload as a result of his emotions which allows him to see situations differently. Yet what Don (rightly) sees as his strength is often construed by neurotypical society as a deficit and/or defect.

The neurotypical desire to see Don's emotional capabilities as flawed brings up an interesting intersection to Fiona Kumari Campbell's work, *Contours of Ableism: The Production of Disability and Abledness*. In her book, Campbell investigates disability and abledness through intense questioning of these terms and how they create meaning when attached to bodies in society. Furthermore, she addresses how these terms permeate throughout society and into various representations such as literature. She argues in her work that the disability narrative in stories is focused around promoting ableism which emerges through social expectations:

"Undeniably a significant amount of storytelling that masquerades as disability is not really about impairment or disablement. The 'real' story being told is about ableism – the ways our bodies should be or at least strive to become. The ableist story unfolds as a comportment of living from our early years as a child and into adulthood, creating a code that helps each of us to make sense of the contingencies and exigencies of living" (197). As Campbell highlights, most disability stories are attempting to tell people how bodies should be and act in society. Thus, Don's reflections on his different emotional capabilities presents a potentially problematic construction. Because in this gesture lies the desire of neurotypical society that he learn how to be "normal" and assimilate into societal expectations of experiencing emotion. However, *The Rosie Project* narrative turns the neurotypical expectation around by priming the ableist focused consumer to question their unrecognized assumptions about emotions. And encourages the view that Don should be appreciated for his unique emotional capacities. That he should not be compelled to conform to neurotypical society's expectation of emotion. Consequently, Don's experiences cultivate the view that society should not create structures that "disable" people with different capacities for being or thinking. Rather, people should question the expectations of society and work through the complex lived experiences of those with impairments that face disablement by societal structures.

Don is completely sure of himself and comfortable with his life of predictable patterns but at the same time has doubts about his social abilities which he recognizes are markedly different from his peers. In many ways, he fights against the social structures that work to bind and categorize him as disabled. But he also struggles at times with making sense of the labels (or lack thereof) that he has gained throughout his life. Yet despite the many setbacks he experiences, as manifested through the success and failures of his Wife Project, he is able to

connect with other people in his own neuroatypical ways. As part of these unique connections,

he finds himself compelled to develop his relationship with Rosie in unpredictable ways and help

her further the Father Project. In the continuing quest with Rosie, he takes her from Australia to

New York City to collect DNA samples from a few doctors who may have been her biological

father. During the extended time they spend together in a plane while traveling, he begins to

open up to Rosie and shares details from his life. One of the things that comes up when he shares

information from his past experiences is the struggle to understand the classification of his

behaviors and the lack of a definitive label to describe his experiences of the world:

> Somewhere in a medical archive is a twenty-year-old file with my name and the words 'depression, bipolar disorder? OCD?' and 'schizophrenia?' The question marks are important: beyond the obvious observation that I was depressed, no definitive diagnosis was ever made, despite attempts by the psychiatric profession to fit me into a simplistic category. I now believe that virtually all my problems could be attributed to my brain's being configured differently from those of the majority of humans. All the psychiatric symptoms were a result of this difference, not of any underlying disease. (Simsion 187)

Don is grappling with how in the past, when he was a teenager and young adult, he struggled to

find his self-identification. The typical social processes that would have taken place to form his

identity as a member of social groups had not occurred and, as a result, he did not have a regular

group of friends. Rather, he was marked by his peers as strange and became an outcast which

eventually led to his lack of connections and depression. While earlier in his life he sought

answers, he was not given a "scientific" answer (i.e. label) to help him understand why his

thinking was different. However, through this section he retakes the authority and undercuts the

medical establishment quite literally through the question marks which question diagnostic labels

and push back against the meaning (or restrictions) they place upon individuals. For Don, at this

point in his life, he realizes that the absence of a label resulted from a lack of social

understanding about the diversity of the brain, which can be wired in myriad pathways. And it is

from the reflection on his "brain's being configured differently" from the "majority" which allows him to eventually come to a self-diagnosis of autism providing him with answers.

While Don's brain pathways are different in such a way that gestures towards a medicalized label of disability (autism), in reality it is a societal structure (mis)interpretation. Because his later identified autistic characteristics are not a disease but rather an inherent part of his body that have shaped his experience of the world. And despite the social complexities that did not give him validation for his unique perspective, he persevered to find ways to maximize his strengths and minimize his weaknesses. Yet in order to reach the eventual point of self-realization and self-diagnosis, Don had to wade through multiple words of negativity which emerges from the embedded sentiment highlighted by this section with words such as "disorder," "problems," and "symptoms." These words create a negative direction for narrative feeling, priming the reader to feel with Don in his confusion and frustration over labels. But more importantly, the words point to how these labels are perceived as negative to bring to the surface the issues surrounding the act of labeling and why difference does not need this negativity. As Don rightfully notes, he does not have problems, he just has neurological differences—differences that can be a great benefit and do not always need to lead to disability. That is if society recognizes and appreciates difference instead of trying to cut it off and unnecessarily cause damage through negatively focused medicalization of atypical minds.

Experiencing the story from Don's perspective, and his uniquely wired brain pathways, points to certain facets of neurological constructions that are often overlooked or not discussed. Facets such as how there is a combination of varying abilities and strengths which emerge from the many diverse minds within the human race. Yet the overwhelming social desire is conformity to one typically oriented mind rather than embracing and understanding the many constructions

of minds. Even with some of the shortcomings inherent in *The Rosie Project*, which cater the text as a translation from neuroatypical thought into neurotypical thought (i.e. to an ableist focused audience), this novel pushes against many barriers of the typical construct. Because in many ways Don provides a useful template for the ableist consumption of a neurotypical audience, as they can grapple with their dis-ease of his differences which provide an opening towards further acceptance for diverse possibilities.

Don's self-diagnosis of autism is helpful for the reader to understand his character, but it does not completely address the complex experiences of people who discover their diagnosis and identify as autistic. In *Imagining Autism: Fiction and Stereotypes on the Spectrum*, Sonya Freeman Loftis focuses on the crucially important experience of autistic identity in narratives, both in text and visual forms, throughout historical representation in literature and film. She argues that texts have nearly always contained characters with autistic characteristics, both long before as well as after the label of autism came about to understand neurological differences in brain compositions. Furthermore, the importance of autistic self-identification is one of the many key aspects that Loftis highlights: "For those who self-identify as autistic, being on the spectrum is not just a list of traits but an entire person, an entire life experience. That experience is always much more than (and sometimes simply other than) the diagnostic criteria. The diagnosis of a literary character may be misleading in that even the best-drawn character can never have the full roundness of a real person" (25). As Loftis appropriately notes, no character can ever have the "full roundness of a real person." But that does not mean authors should not attempt to capture the myriad complexities intertwined into neuroatypical ways of being. When taking up neuroatypical characters, authors must have the knowledge to create as precise a picture as possible to accurately portray the differences manifested by their chosen character. In some

ways, Don's character misses the mark in conveying a full understanding of how having the label of autism could have been beneficial for his character's development. Yet his character takes up a journey to self-diagnosis rather than the author placing that label upon him at the beginning of the story based on checklists of traits. In this, Don's character succeeds in breaking the ableist focused cycle by appealing to narrative feelings that have been purposely made complex and which must be grappled with to unravel how they view their dis-ease of his difference.

Earlier in the chapter I began a discussion about the current state of autism and took a look back at the publication history across a cross section of disability studies and literary cognitive studies scholarship. While there are many silences and damaging biases perpetuated in some texts which present research on autism, not all of the texts rely on outdated scholarship to make destructive assumptions. Within disability studies, a movement towards diverse and articulate understandings of autism is growing with a strong presence of more recent scholarship exploring autism to include Melanie Yergeau's *Authoring Autism: On Rhetoric and Neurological Queerness* (2018), Anne McGuire's *War on Autism* (2018), Ralph James Savarese's *See It Feelingly: Classic Novels, Autistic Readers, and the Schooling of a No-Good English Professor* (2018), Alice Hall's *Literature and Disability* (2015), and Sonya Freeman Loftis's *Imagining Autism: Fiction and Stereotypes on the Spectrum* (2015). Each of these texts focuses on different aspects of autism to provide a variety of perspectives. And importantly, the authors of these texts are positioned from various points of the spectrum to include autistic scholars and autistic allies. Yergeau and Loftis both advance the movement towards "nothing about us without us" to purposely self-advocate and push against barriers society has erected to diminish the power and credibility of autistic thought. Furthermore, McGuire and Savarese both strongly champion and critically question societal assumptions about autism and rally as strong allies for change. Lastly,

Hall takes a broader scope to investigate how disability and literature intersect but nonetheless devotes a significant portion of her work to understanding autism as an important type of disability to explore and better understand. All of these scholars together are pushing against many boundaries, primarily from a position within disability studies. Yet many of these works also cross disciplinary boundaries to create movements beyond this field of study. The diversity of the authors and texts points to a (hopeful) future in which diversity becomes more discussed; that their arguments enter into the knowledge of society to rewrite the negative and problematic depictions of autism as beneficial variations.

Despite the critically important and revolutionary work taking place on autism in disability studies, this information has yet to expand into broader society as much as it should. Consequently, there are many silences in communities that attempt to downplay or misrepresent cognitive differences which urgently needs to be rectified. Part of this work can be accomplished by reading and re-reading atypical fictional characters. From these reading engagements, further insights about characters that manifest autistic characteristics can emerge and in turn be better understood. Furthermore, by investigating how literary constructions generate narrative feelings which in turn evoke responses to the characters that manifest cognitive difference, better and more diverse understandings come to the surface. Through infusing the field of disability studies with more elements of literary cognitive studies, a stepping board to a broader understanding of how the mind works can emerge. From taking this step, investigations of the mind, that include the neurodiverse spectrum of neurotypical to neuroatypical, can more fully represent the many complexities of human minds.

Don as a fictional character pushes audiences to question their beliefs about the neuroatypical mind, as he highlights many beneficial aspects of having a diversely different

perspective. Because his perspective provides a critical examination of the cultural knowledge

about autism that often reduces or even removes power and agency through medicalized

language and checklists. And the labeling that causes the power differential is inherently

problematic as it is the medical criteria that "qualifies" individuals to receive needed resources.

Yet just as it qualifies it also removes capacity as it marks autistic being as somehow damaged

and less than fully human. It is no surprise then that there is strong negativity surrounding the

medicalized view of autism, from its focus on deficits rather than strengths to its neoliberal

fixation on the price to "normalize" neuroatypical individuals for the benefit of the neurotypical

majority. There have been many scholars such as Yergeau and McGuire who take up this

problematic construction in much more depth through their work and I would urge those

interested in delving deeper into these issues in their direction.

For my investigation, it is notable to observe that the medicalized language creeps into

literary character representations too often and perpetuates harms rather than questioning the

basis of certain viewpoints and assumptions. As the following interaction from the community

lecture in *The Rosie Project* illustrates, Julie, as the "expert" or advocate/counselor who is not

autistic, has taken the position of authority over autism from her privileged neurotypical

perspective:

> Julie interrupted again. 'So, for us nongeniuses, I think Professor Tillman is reminding us that Asperger's is something you're born with. It's nobody's fault.'
> I was horrified by the use of the word fault, with its negative connotations, especially as it was being employed by someone in authority. I abandoned my decision not to deviate from the genetic issues. The matter had doubtless been brewing in my unconscious, and the volume of my voice may have increased as a result.
> 'Fault! Asperger's isn't a fault. It's a variant. It's potentially a major advantage. Asperger's syndrome is associated with organization, focus, innovative thinking, and rational detachment.' (Simsion 10)

Julie, in this moment, tries to explain Don's scientifically focused talk which investigates the

intersection of autism and genetics. In essence, as a play on words, she is able-splaining autism: as someone who is abled (non-autistic), she is trying to tell the disabled (autistic members of the audience) what it is like to be disabled (autistic). As problematic as this construction sounds, it is the harsh reality that many autistics face as the knowledge circulating in society supports an ableist viewpoint that downplays autistic being and often removes their agency and power. In this case, Julie, as an Asperger's counselor, has the societal position of authority from her expertise and identity as working with the autism community but not actually having autism to limit her power. And rather than stopping with the understanding that Asperger's consists of underlying physical differences in biological brain structure, she feels the need to emphasize that there is not "fault" attached. Julie is unconsciously asserting her non-autistic power in order to take control over Don's technically focused presentation. She intends to make it more understandable to a mixed audience (both autistic and non-autistic), but instead uses language that perpetuates harm in the process and provides unnecessary information.

Further, the word "fault" resounds with negativity and if unchecked, even though it was not maliciously intended, would generate steadily growing negative narrative feelings. Accordingly, the use of fault creates more harm than good because no matter the intention it always comes with the baggage of causality. Yet Don swiftly identifies the issues surrounding the negativity in the word "fault" (even though he is not quite sure exactly why in the moment) and responds passionately with his own feelings expressed through the rising "volume of [his] voice." Thus, he rejects the word "fault" and tries to reshape the conversation by overwriting the negativity through reinserting the positive qualities that emerge from Asperger's—such as "organization, focus, innovative thinking, and rational detachment"—to recast autistic being as a major advantage and take back control following Julie's remarks. As Don quickly and loudly

identifies, Julie's negative language creates further marginalization in identifying Asperger's through medicalized language. But instead of giving into the language, Don fights back by identifying Asperger's as an advantage because it provides a perspective distinct from neurotypical thought.

The unacknowledged desire to engage in able-splaining, which further boxes in and medicalizes autistics, is one of the many things that neurotypical society does constantly (often without realizing it). As a self-advocate and autistic academic, Melanie Yergeau constantly fights against ableist negativity and reasserts autistic power through rhetoric. In her work, *Authoring Autism: On Rhetoric and Neurological Queerness*, she centers her discourse around rhetorical positionality and neurodivergence as identity. Furthermore, by highlighting how medical professionals and language attempt to remove rhetorical power from autistics, she pushes back against these classifications:

> The autistic subject, queer in motion and action and being, has been clinically crafted as a subject in need of disciplining and normalization. What autism provides is a backdoor pathologization of queerness, one in which clinicians and lay publics alike seek out deviant behaviors and affectations and attempt to straighten them, to recover whatever neurotypical residuals might lie within the brain, to surface the logics and rhetorics of normalcy by means of early intensive behavioral intervention (EIBI). (26)

As Yergeau emphasizes, the innate neurotypical desire is not to appreciate the differences that neuroatypicality provides but rather to identify and remove the deviant elements through various methods of identification and interventions. As seen through the previous example with the word "fault," Don tries to fight against the neurotypically focused negativity that emerges from medicalized language even though he does not identify the language in this manner. Yet this language points to a larger systemic problem, one that persists towards autism being portrayed through medical language to make the condition appear as dangerous and debilitating to society. Even though Don tries to fight against the ableist focused construction to rewrite this

medicalized narrative and identify autism more accurately as a beneficial (and needed) perspective, he struggles at every turn because of the overwhelming power of the neurotypical majority position. Through a blend of intentions, both known and unknown, this majority removes power from autistics in order to render them as less than human through their supposedly substandard biological constructions that does not adhere to neurotypicality. Just as Yergeau tirelessly fights against this construct to show the absurdity and very real dangers that result from this unjust and inappropriate classification, Don also attempts to reposition the narrative to open up the dialogue about necessary human diversity.

As many people learn about autism through mass consumption in popular culture, there is a certain amount of social justice work that must be considered when choosing to create an autistic character. In other words, an autistic character should not be used as a narrative prothesis (as Mitchell and Snyder detail in their work) in order to prop up and develop neurotypical characters. Both neuroatypical and neurotypical characters should be developed through a complex intertwining in which one does not become subservient to the other. Rather, both should collectively work together to illustrate the strength that emerges from a spectrum of perspectives. In considering how Don fits into this construct, he does not become a prop to develop Rosie or any of the other characters. Instead he is complexly developed, and the strength of that development emerges because he is the narrator with the ultimate power and authority over his own narrative. Don is just one representation of autism with his own unique eccentricities and qualities. And even though he more accurately conveys autistic traits and experiences, it should be noted that he is still missing the full roundedness of a real person as Loftis gestures towards. Thus, as a character he can never be a real person, but he does imprint upon real people from their readings of his character what it means to be autistic. Consequently, despite the inherent

shortcomings that do exist with fictional characters, attention to their details is crucial in order to rewrite the knowledge about autism that circulates through society in popular culture. There is not one universal way to represent a fictional autistic character just as there is not one autistic person identical to another autistic person. And by harnessing the understanding of how knowledge is circulated throughout society, and in turn affects identity, important insight can be used towards an unpacking of both the medical and social models of disability in order to influence meaningful change.

In the most simplistic form, the medical model of disability reduces and objectifies those with impairments to a checklist of deficits and traits. As was briefly discussed earlier, the problem with the medical model is that the infrastructure of neoliberal society leans upon it to determine what people need and how much they need based upon how high they score on the checklists of deficits and traits which gauge their impairments. The inherent and problematic complexities that emerge from this model are significant and I only draw attention to a few of the issues in this chapter. More detailed discussions about the dangerous outcomes for autistic people that stem from the medical model are investigated by scholars such as Yergeau and McGuire and I would refer you to them for a more in-depth explanation. While it would be great for the medical model and associated problems to go away, there is a complex intertwining into the fabric of society that does not allow for such a move. It is out of just such a moment that the social model of disability emerged to, as Tobin Siebers writes, "save disabled people from medicalization with its almost exclusive emphasis on the environment. Here disabled people are identified by their inability to fit into the environment" (40). While the social model highlights the issues of society which create disability from not addressing the structures that add to impairments, it is not perfect or a solution that would allow for a removal of the medical model.

As Siebers also details in his essay "Returning the Social to the Social Model," the social model often ignores the body, continues to objectify disabled people, and does not allow agency—all because the environment becomes overemphasized. Even though the social model is not an answer or replacement for the medical model, it does provide more perspective that is needed and unable to be captured within the medical model. Consequently, both models should be understood for their strengths and weaknesses—and both should play into a better and inherently more complex understanding of how a person interacts with the infrastructure of the environment in a society set up to meet the needs of the majority rather than the needs of all.

In thinking through the medical and social models of disability as they intersect with my research, both are present but in varying forms based upon the fields of study. Within literary cognitive studies, the majority of work embraces a medical model of understanding disability. As was discussed earlier in the chapter, the literary cognitive studies work that takes up autism primarily uses Simon Baron-Cohen's research, some of which explicitly state their use and others which use his theory of mind construct to analyze how the mind responds to literature. His work embraces the medical model without any reservation as can be seen in the words he uses: "At present, autism is unfortunately a lifelong disorder. Thankfully, it sometimes appears to alleviate a little with age, as the child receives the benefits of a range of educational and therapeutic interventions and learns various strategies for adapting to the social world" (60). The unfortunate reality that spirals out of using this work, and the danger of not using and considering the social model, is that it creates damaging and inaccurate biases about autism which in turn recirculates into the knowledge of society. With words like "unfortunately" and "interventions" to describe autism, cold and negative language emerges when medical terminology takes the forefront without any deeper human connection and understanding. In

other words, it seems that Baron-Cohen closes off autistic individuals and seals them away in their "broken" boxes to be "partially" mended through medical means.

In addition to Baron-Cohen's problematic language, his research is out of date as can be seen in his statistics of autism prevalence: "Autism is considered the most severe of all the childhood psychiatric conditions. Fortunately, it occurs only rarely, affecting between approximately 4 and 15 children per 10,000" (60). The out of date statistic and understanding of autism aligns to the time when he wrote the book for publication in 1995. At that time, he most likely would have used the DSM-III-R published in 1987 which had a much narrower definition of autism and did not see the categories of Asperger's or pervasive developmental disorder not otherwise specified as part of autism (both are now a part of the autism spectrum disorder as it currently exists in the DSM-V, published in 2013 and continually updated as an electronic edition). However, the reference to autism as a "psychiatric condition" is curious because in the DSM-III-R, there is a move away from using psychiatry alongside autism with a discussion about how it is "unrelated to the adult psychoses" and that "the term *psychosis* has not been used here to label this group of disorders" (34, emphasis in original). While neurological as a descriptive term would not yet have been in use, the continued repetition and evocation of psychiatry is out of date even for Baron-Cohen in 1995. Yet with recent scholars still using his research as the framework for their understanding of theory of mind, literary cognitive studies scholars are continuing to repeat flawed and outdated research. Additionally, Baron-Cohen's 25-year-old statistic is in sharp contrast to the currently recognized rate of autism as "1 in 59 children" ("CDC Website") which at 1.69% of the population is a sharp contrast to .15%. Thus, autism does not occur rarely but rather frequently and makes up a significant portion of the population that deserves dignity through detailed discussion to understand how their cognitive

differences can be understood and appreciated.

Fortunately, work from disability studies like Steve Silberman's *Neurotribes: The Legacy of Autism and the Future of Neurodiversity*, takes up portraying the deeply complex relationships of social models and medical models in an attempt to explore and understand cognitive differences. Silberman's research on autism illuminates the contrast between the medical models and social models through examples of historical figures and present-day families. The encounters with the wide-ranging entities provide details into an exploration of both models and the path towards learning how to best provide for autistic people. Silberman shows how the uptake of the medical model perpetuates socially in society when parents attempt to choose how to provide the best services for their children. His examples show that many parents wade through the medical model in trying to find cures or ways to alleviate their children's autistic tendencies. However, after many years and methods of interventions, he describes how many of these parents come to accept the social model of understanding autism and use the medical model only as needed to get resources. He highlights this shift of understanding towards the end of his book when he advocates for neurodiversity as a path towards inclusion and appreciation of autism:

> Neurodiversity advocates propose that instead of viewing this gift as an error of nature—a puzzle to be solved and eliminated with techniques like prenatal testing and selective abortion—society should regard it as a valuable part of humanity's genetic legacy while ameliorating the aspects of autism that can be profoundly disabling without adequate forms of support. They suggest that, instead of investing millions of dollars a year to uncover the causes of autism in the future, we should be helping autistic people and their families live happier, healthier, more productive, and more secure lives in the present. (470)

Silberman sees the inherent limitations that can be experienced through autistic ways of being but does not want to accept autism as purely disabling. Rather he advocates for the understanding of cognitive difference as providing beneficial variations which can be used to improve and

create a more inclusive society. For autism to provide value, however, society needs to accept and value diversity rather than get fixated (or to use an autistic term that better applies to the neurotypical tendency in this scenario, perseverate) on the costs and cure. Most of the expense of autism comes from therapies that attempt to help neuroatypical minds navigate neurotypical social customs and ways of being. Thus, perhaps it is also time for neurotypical society to get training on how to navigate neuroatypical minds in a reciprocal relationship which enables embracing the diversity of cognitive differences—neurodiversity—as a part of the human spectrum of experiences. I argue that one of the ways action can be taken to embrace this diversity in literary criticism is through recognizing neurological differences which provide fully valid human experiences and authority. That there is greater benefit to be gained by looking towards figuring out what is valuable through the truths that are revealed by looking at events from a different perspective. With neuroatypical narration, biases can be challenged and re-read productively to better understand the human condition.

Understanding diversity of thought is desperately needed in society. Yet there is so much scholarship, especially in literary cognitive studies that continues to perpetuate problematic ableist focused constructions that prevents further work towards acceptance of wide-ranging diversity. As discussed earlier in this chapter, autistic representation within this field of study is nearly non-existent and/or includes inaccurate/damaging depictions of autism. Two well-known and more recent works from this field of study, Lisa Zunshine's *Why We Read Fiction: Theory of the Mind and the Novel* and Blakey Vermule's *Why Do We Care about Literary Characters?*, both fall short in accurately depicting autism and perpetuate damaging assumptions through theory of mind scholarship. Many of the issues that arise from these works emerge from their taking up a wholesale adoption of the medical model of autism without considering the

complexities and shortcomings of this model. Vermule does not specifically mention autism very much throughout her book but invokes it frequently through her use of theory of mind. However, she does briefly discuss autism in her chapter "Mind Blindness," an unfortunate (yet unsurprising) title that can most likely be traced to her overreliance on Baron-Cohen's research: "Mind blindness is undoubtedly a tragedy for autistics and their families, although some autistics seem to be gifted with heightened visual capacities" (196). For the most part, Vermule parrots Baron-Cohen and relies on his research to build her understanding of autism via his views on theory of mind. Consequently, her work, which does not incorporate disability studies to foster understandings of cognitive differences, creates problematic and damaging depictions.

In nearly the same manner, Zunshine also parrots Baron-Cohen. However, it is important to point out here that while *Why We Read Fiction* perpetuates damaging constructions, Zunshine in later work changed course and started to incorporate disability studies scholarship into her work with literary cognitive studies. Yet in this text, Zunshine's work centers around using autism directly, and also indirectly with heavy use of theory of mind. She later attempted to change the course of this work by redacting mentions of autism, even going so far as to remove sections from the eBook versions of her work as noted by Michael Bérubé. Additionally, she wrote a formal apology for her misuse of research which she presented at MLA. But despite these quite meaningful movements, the damaging biases still perpetuate and ripple throughout her book. The damage cannot be removed because the foundation of the work was built upon Baron-Cohen's research about theory of mind assumptions that are inextricably tied to autism:

> Our Theory of Mind allows us to make sense of fictional characters by investing them with an inexhaustible repertoire of states of mind, but the price that this arrangement may extract from us is that we begin to feel that fictional people do indeed have an inexhaustible repertoire of states of mind. Our pleasant illusion that there are at least *some* minds in our messy social world that we know well is thus tarnished by our suspicion that even those ostensibly transparent minds harbor some secrets. (20, emphasis

in original)

The problems that undergird the foundation of Zunshine's work cannot be fully removed by redacting certain sections of text. As this excerpt illustrates, within theory of mind research it is assumed there is a universal template that everyone uses to experience fictional characters and in turn the social world (excluding autistic minds of course as Zunshine makes clear within the book). Yet as many disability scholars such as Savarese, Yergeau, and Silberman argue, autistic minds may not process literature in the same way as neurotypical minds but that does not mean they lack or do not use a theory of mind. Rather, it is different. Various scholars pick up and focus on different facets of a literary text in close readings which fuel unique interpretations. Just as each individual mind, whether neurotypical or neuroatypical, processes a narrative differently. Thus, differences in relating to characters or processing literature does not necessarily signal a lack of ability based upon neurological constructions. Because there can be no universal mind as each mind is uniquely tuned to capture and notice certain elements of the text—and each mind inevitably sees something different that others do not initially see.

As there are many shortcomings that still exist within the field of literary cognitive studies, I intend to set myself apart by purposefully and meaningfully incorporating disability studies scholarship into my research. I build my foundation through recognizing complex representations which emerge through both the medical model and social model of disability as well as purposely investigating problematic biases. Part of my work is to bring attention to the limitations of depicting autism, as its multifaceted identity resists concise explanations and no one experience is the same as any other. Therefore, while I use examples, I also purposefully note how each example does not speak for the whole of autism but rather shows one representation which can at times provide insight into the spectrum of autistic ways of being. I

also intend to resist scholars who provide partial and/or inaccurate representations of autism through work that overrelies on theory of mind scholarship without an intentional discussion about the problematic history and exclusions it evokes. And I would hope that by infusing literary cognitive studies with disability studies, more useful and beneficial scholarship results.

In order to fuse cognitive studies with important work from disability studies, I use approaches similar to Loftis, Murray, McGuire, and Yergeau. I most identify with Murray's perspective as a parent to autistic children and want to make sure that I take the steps he undertakes, as I intend to purposely situate myself as a scholar directly influenced by autism but not from personal lived experience. Consequently, I have taken steps to advocate for autistic perspectives through investigative and up-to-date research but not speak for autistic individuals. And while I do not identify as an autistic scholar, I still want to incorporate the beneficial insight and perspectives of Yergeau and Loftis into my work. Similar to Yergeau, I want to present the troubled history of the research around autism as it intertwines with literary characters that are constructed to generate narrative feelings. Although my work centers on fictional autistic characters, I also want to graft Yergeau's perspective as an autistic voice onto my research to make sure my own work does not overstep into speaking for autistic individuals. Like Loftis, I want my research to center around literary characters. But I specifically intend to focus only on characters who are identified or self-identify as autistic, in order to explore how the autism label influences their identity through the dual lenses of disability studies and literary cognitive studies. Furthermore, in later chapters of this dissertation I intend to extend my investigation of these autistic characters in my exploration of how the embedded sentiment is used to interpret the characters through the digital humanities method of sentiment analysis. Overall, the scholarship I put forward hopefully provides more accurate and meaningful representations

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through creating a multi-faceted depiction of autism. One that does not overstep my own positionality, but rather provides scholarship that benefits both disability studies and literary cognitive studies.

To travel into more complexities and explore the abundant richness of autistic experience, I turn now to *The Eagle Tree*, a coming-of-age journey from the young adult genre. In this story, the character of Peter "March" Wong, an autistic teenager living in Olympia, Washington, emerges to challenge societal understandings of autism to include the desires to label autistic ways of being through labels such as "low" functioning and "high" functioning. The story is narrated from March's neuroatypical perspective which invites unique representations of how he interprets the world around him and his actions. Very early in the story March's passion for trees emerges; he learns as many facts as he can about all types of trees and immensely enjoys climbing them. He categorizes landmarks and relationships to people by color association, for example, of front doors and mailboxes in order to differentiate between spaces and places. He identifies his mother's loving caresses and physical comfort as "petting." And he navigates his life by always planning out and thinking about the next tree he will climb. March admits that he is not an exceptional athlete, or someone imbued with great coordination, as he has fallen while climbing and sustained some serious injuries. Yet despite a lack of natural talent, he continues to climb trees. He finds joy and fulfillment in being able to make it to the top in slowly planned patterned steps.

By societal standards, March would be labeled as "low" functioning—in order to be in neurotypical spaces with people he requires coaching and assistance, and he relies heavily on his family to navigate the complexities of social ways of being. Additionally, he attends a school with peers from a variety of neuroatypical backgrounds to include autism and intellectual

disabilities. In other words, he does not attend mainstream school. For these and other reasons that emerge from the narrative, March would be labeled by society as "low" functioning as he does encounter challenges with neurotypical societal infrastructure resulting in his need for resources to navigate these spaces. However, he brings immense insight and strength that defies this problematic label as he functions quite highly compared to his neurotypical peers. Because he more often than not is required to work twice as hard to navigate neurotypical spaces as he needs to filter his sensory experiences of the world in ways that are acceptable to neurotypical customs. Moreover, March holds the power in this narrative as it is told from his neuroatypical perspective which points out the highly destructive social constructs and challenges societal knowledge about autism. Through my exploration of *The Eagle Tree*, I argue that the novel uses an autistic teenage narrator to capture what the social conventions of labeling attempts to diminish, specifically the idea of "low" functioning autism; because March's sensory experiences of bodily movement and breathing from the embedded sentiment embody a more full and rich engagement with the world which pushes the reader to question and step beyond their comforting confines into a deeper and alternative sensory engagement with the non-typical narrative feelings that emerge.

As I discussed with *The Rosie Project*, an author is certainly not a narrator. But in looking at the privilege and power built into characters, there is some background information that is vital to understand before beginning an unpacking of an autistic character. Thus, with *The Eagle Tree*, delving into Ned Hayes's prior experiences provides necessary context. Intriguingly, Hayes, like Simsion, also worked in IT for many years before transitioning to a writing career. More specifically, Hayes worked at Intel as the lead product strategist for predictive intelligence and recommendation engine services, where he was deeply enmeshed into technology services

and working with teams of people possessing vast skillsets. The similarity between these two authors highlights an interesting perspective of how neurotypical individuals, when working in close proximity to a variety of diverse neuroatypical individuals, can come to a better understanding about the beneficial neurodiversity that surrounds humanity. Furthermore, their prior experiences provided a catalyst to take up the important task of articulating in narrative words the beautiful blend of difference that varying neurodiverse personalities provide. Hayes and Simsion both embrace the perspective of the neuroatypical narrator to flip the point of view on the usually typical mindset of narration. And I argue that while no author can ever fully represent a human life through character creation, and there are still biases to consider with a neurotypical author articulating neuroatypical narrators, these novels get much closer to an autistic perspective. One that more closely resembles lived experiences than most fiction that tends to focus more often on stereotypical and savant representations of autistic characters.

The distinction between "high" and "low" functioning points towards more labels that come with problematic constructions. When thinking about Don, there are certain aspects in his life where he functions quite highly but there are other parts of his life where he functions in a much lower capacity. And more importantly with Don the emphasis is not on his representation but rather on a journey of self-discovery and understanding of why he is different from his like-aged peers. Consequently, the reader experiences Don not through a medicalized label or stereotypes but rather through his engagement with the world that emphasizes his unique character. In a similar but different way, with March's narration the reader is presented not with the label of "low" functioning to describe his actions or try to remove his rhetorical authority and/or reliability as a narrator. Rather the reader is thrust into March's mindset and sensory experiences of the world which he translates into his own words. He shows that while the world

might see him through a classification of "low" functioning he resists this by achieving higher goals than his like-aged peers with advocating on behalf of the community and constantly climbing higher than the world would see him as capable of based on a medicalized diagnosis and distinction. Also crucial to the importance of Don and March is that they are depictions of neuroatypical characters which are not set into a direct contrast with neurotypical characters. Thus, the narrative prothesis rhetorical move often employed by authors to in essence diminish autistic authority and voice does not get used. Rather the voice of each character emerges filled with its uniquely autistic and powerful presence. And more of this autistic presence emerges as I further discuss March and *The Eagle Tree*.

March's neuroatypical perspective interprets the actions of the novel instead of automatically privileging an outside neurotypical character to speak as the figure of authority. But despite his prominence in the narrative, his perspective is not always the leading voice as there are events with heavy dialogue that are not necessarily told through his viewpoint. These dialogue sections appear more as a transcript of a recording, as they do not have very much narrator input or interpretation. Yet even though these sections are not retold through a neuroatypical perspective, there is still an attention to certain events which indicate March's preference rather than a neurotypical guide focusing him on certain details. The details provided to March's point of view most likely are the result of Hayes's experiences with a variety of autistic individuals. From his experiences within the corporate world of IT, it seems quite likely that he came across many individuals who were on the autism spectrum, either diagnosed or undiagnosed. In addition to Hayes's corporate experiences, he also worked with autistic children and spent time with family and friends who manifest autistic traits. Both his professional and personal exposure to neurodiverse minds most likely had a strong impact on his creation of

March's neuroatypical construct. Thus, Hayes's choice of a neuroatypical narrator indicates a move towards his advocation for an autistic perspective that closely mirrors lived experiences by drawing on multiple examples.

Throughout *The Eagle Tree*, seeing the story take place through March provides a new way of experiencing the environment with his uniquely tuned neuroatypical perspective. While his tree climbing fuels his passion to engage with the world, it also creates conflict between him and his family as they are concerned for his safety after various accidents. But there are additional conflicts that arise in the story when neurotypical others misinterpret his neuroatypical mannerisms. One such conflict occurs because a concerned neighbor, Miss Samantha Stevens, who at the time was unaware of March's unique neuroatypical responses, calls the police when March loudly and repeatedly vocalizes his discomfort. Yet unbeknownst to her, March was experiencing a sensory overload as he and his mom had just moved into a new house and he was trying to grapple with the immense change brought about by this shift. Most people would agree that change, and especially moving, is very challenging. But for March, the shift of places and spaces creates a complete overload as his extremely sensitive sensory system has to intake an entirely new environment. And he no longer has the comfort of having a place and space that he has already mapped out for predictable and familiar responses.

Stemming from this event which ended up with intervention from public officials, in addition to an earlier tree climbing accident that required a hospitalization, March's mother Janet is questioned about her ability to provide appropriate care for him. Thus, he is required to see a social worker Rhonda, to help child services determine whether he should remain in the custody of his mother. Intertwining with these narrative threads is March's all-consuming desire to climb the Eagle Tree, which is an old growth and very large tree in an undeveloped area of land nearby

his new house. Yet soon after learning about the Eagle Tree, he discovers that private developers intend to cut it down and develop the land around it into residential and commercial space. Through March's connection to and passion about trees, he gathers community support for protecting the area from development. He even works through the challenges of his dislike for neurotypical social customs in order to speak in front of the city council to successfully advocate for protection of the undeveloped area of land where the Eagle Tree resides. In the process of this community engagement, March gains the confidence to articulately speak for himself in neurotypical spaces. In addition, his coming of age transformation enables him to successfully advocate for himself and convey his desire to stay with his mother at the later hearing which determines his custody status. This advocacy further highlights how March functions competently which indicates his neuroatypical way of being extends far beyond the simplistic "low" functioning label that society attempts to brand him with based on checklists and medical criteria.

March's actions throughout the story continuously illuminate that he engages with the world in unique ways from using color associations to his continued passion for trees and climbing. Yet as his self-advocacy and growth indicate, his actions do not point to problems or medicalized deficits, just differences in experience and interpretation. One of the characteristics that highlights March's autistic presence is the use of his body and voice to engage with the environment. And he continues to push for what he desires to accomplish. This is seen early in the narrative as days after discussing with his mom that he can climb the Eagle Tree when he is eighteen, he continues to think about the joy it would bring him to climb the tree. Furthermore, he expresses his excitement about the near future in which he is going to visit the Eagle Tree again (his Uncle Mike promised to take him after school) and potentially getting to climb the tree

in a few years, not just within his mind but also through the movements of his body:

> All day on Monday at school, I could not stop my hands from flapping. And little high shrieks came out of me, like birds buried deep in a dark forest of possibility, finding their way by echolocation. Mr. Gatek told me it was very disruptive to the class, and I had to sit by myself.
> But I could not help what my body was doing. After all, I had never seen a confirmed Ponderosa Pine. I had no idea a Ponderosa could even grow here in Olympia. I let out another shriek. This sound grew to a high whine—a spaceship taking off in my mouth, the sound whistling out beyond hearing. (Hayes Location 869)

For March, the engagement of his excitement is a full body experience which cannot be contained within his mind—this excitement extends beyond the mind through the body to create movements that project outward from multiple sensory systems. And the "shriek" that grows into a "whine" that takes off like a "spaceship" to transcend through the treetops and beyond the earthly confines is rich with elements to unpack. Yet there is a danger in trying to interpret every autistic action like March's into an equivalent non-autistic or neurotypical action. Partly because the reader should resist trying to metaphorize and read meaning into every autistic thought and movement. Just as not every neurotypical action should be expressed through a metaphor, neither does every neuroatypical action need this expression, especially as this can often reduce or remove agency and authority. And there is another part of resistance which should emerge because there are many autistic experiences that do not translate.

Even with all these considerations, there is still something in March's actions that encourages metaphor as the words emerge from the perspective of a neurotypical author translating autistic actions through March's narration. Thus, the sensory "shriek" and "whistling" that overwhelms the auditory senses comes forth through the neurotypical lens that uses these words to represent an embodied autistic way of being. While there are some sounds that penetrate through this translation, it also resists being fully experienced as it is written from an outside view rather than a lived experience. And even though the neurotypical reader can benefit

from gaining a greater appreciation of March's embodied experience, there is still a shortcoming in that it always falls short in truly representing autistic ways of being as they can never be fully translated.

Despite the complexities in the merits and shortcomings represented through this passage, there is a positive joy that emanates. Because when March finally gets to experience physically being in the same space as the Eagle Tree, it brings him such immense happiness that he continues expressing his excitement through his body and voice days after his visit. And this excitement continues to extend as his Uncle Mike promised to take March after school to see the tree again. However, his teacher, Mr. Gatek, is unable to tie these events together because he was not with March at the Eagle Tree or aware of his near future visit. And March does not offer this information to Mr. Gatek because he was not asked a question about what he is thinking or why he is expressing himself through physical movements and aural sounds. Consequently, instead of asking questions that would enable an understanding between March and Mr. Gatek, there is simply no room for difference in the classroom as the negatively focused "disruptive" implies. Rather than try to see and feel what March experiences, his teacher quickly dismisses March and deems the behavior unacceptable.

The troubling truth about this brief exchange between March and Mr. Gatek highlights how even in predominantly neuroatypical spaces, the power held by the neurotypical figures of authority dismiss the embodiment of neuroatypicality. That there is always the continuing push to shape behavior as neurotypical instead of navigating to a space where cohabitation of neurotypical and neuroatypical ways of being are accepted. Thus, what emerges from this section, alongside March's excitement, is the ableist focused expectations for adhering to neurotypicality and not be "disruptive." Furthermore, the disconnect between March and his

teacher, creates a vexed narrative scene with the negative connotations brought about through the use of the word "disruptive" along with the positive connotations of March's description of excitement. As a result, the reader is primed with narrative feelings which emerge in a confusing pattern that does not illuminate clearly how to interpret the positive and negative intertwining. And the misidentification and misunderstanding of autistic movements are not limited to the fictional setting of *The Eagle Tree*—they project much further outward. There are many situations in which autism is judged against neurotypical expectations and found to be incompatible. Yet if the neurotypical majority could take the time to understand autistic experiences of the environment as complementary to neurotypical experiences, perhaps a more inclusive space that does not require neuroatypical individuals to always conform to neurotypical expectations would emerge.

As autistic scholar Melanie Yergeau takes up in her research, there are many inconsistent societal expectations for autistic ways of being. These inconsistencies bring up important considerations about autistic bodily movements, similar to the ones that March describes about his own body. In one part of the book, *Authoring Autism*, Yergeau brings in a perspective that helps better understand how movements extend beyond the mind and into the body: "An autistic may not fully intend to wave her arms or repeat license plate numbers, and yet an embodied intentionality inheres in those moments, creating meaning and harnessing energy out of a not-entirely-meant performance. Autistic moves remake moments; autistic moves transport the meaning of meaning to involuntary realms; autistic moves remain out of sync with the timeliness that has often come to characterize rhetorical effectiveness" (65). Yergeau goes on to further discuss the importance of how these bodily movements are tied to rhetoric and seen as actions to be (mis)interpreted. And it is vital to understand how physical and aural expressions indicate a

full-bodied extension—the mind and body of autistics are often more connected to express feelings through multiple sensory systems simultaneously.

In this way, the autistic body is better developed than the neurotypical body which cannot connect the body and mind through multiple sensory systems at the same time. Yet all too often autistic movements are seen through neurotypical perspectives that try to interpret the movements to find corollary actions to neurotypical ways of being. And these types of (mis)interpretations do not appreciate or engage with autistic sensory processing. The autistic body extends an experience of the environment in unique ways that currently are not interpretable with neurotypical ways of being. Thus, March's use of his hands and voice create a deeper engagement with the environment that his teacher Mr. Gatek cannot comprehend. And, disturbingly, the teacher who is supposedly trained in working with neuroatypical individuals, does not try to understand March's actions. Rather, the teacher matches March's behaviors to neurotypical expectations, rendering him "disruptive" and unsuitable for the classroom space.

Despite some of the problematic character portrayals which emerge in the text, March's autistic voice gets a much more prominent place than in many other narratives because he carries the weight and authority as the neuroatypical narrator. In several texts with autistic characters, either the autistic character only gets to voice a smaller section of the text or a neurotypical character gets total narrative control of the voice and authority. The danger of not letting a autistic character portray their own experiences is that inaccurate interpretations and problematic biases can perpetuate. With March, however, many of these problematic issues are avoided as his neuroatypical voice is given the agency to narrate his experiences rather than having them translated through a filter of a neurotypical narrator. An example of March's narrative agency and power emerges when his Uncle Mike finally agrees to take him to see the Eagle Tree up

close: "I was now breathing many deep breaths, filling my lungs and pushing the air back out. I was no longer moaning. My hands were still moving in little circles, but I could not prevent that. My legs were already moving toward the door, toward his truck, so that we could go find the tree so I could climb it. Right away" (Hayes Location 166). As previously discussed, there is a danger with interpreting and reading metaphors into autistic actions. Yet these desires emerge forth with this section as the neurotypical author gives words to the neuroatypical narrator. Thus, March's regulated breathing points towards his self-soothing while simultaneously his hands and legs move seemingly without direct input. His whole body and mind become inseparably focused towards going to the Eagle Tree in order to fulfill his desire to climb.

Just prior to March's description of his bodily excitement about getting permission to go see the Eagle Tree, however, his mother expressly forbids him from climbing it. Even though March's mother has firmly declared that he cannot climb the tree, he still wants to get as close as possible to it so he can begin to carefully map out his patterned climb. And he does not want to follow her instructions and voices his desire to begin the climb "right away." March, like many teenage boys, does not want to listen to his mother. He wants to follow his desires and climb the Eagle Tree even if his mother says no. This points to an interesting phenomenon about how discussions of autism often disproportionally center around autistic difference instead of seeing autistic similarities. Rather than see March's desire to climb as determination to reach a goal, neurotypical society would often medicalize him to see March's desire as unhealthy perseveration which in turn would diminish his authority. While there are important conversations that need to take place to discuss and understand differences, there should not be an overfocus on these elements. With March, an understanding of his unique sensory processing should emerge but there should also be a focus on more closely seeing his commitment to

reaching goals. In other words, there should be room for the appropriate space to understand similarities in behavior and manifestations of neurotypical and neuroatypical desires.

March provides a unique neuroatypical voice to grapple with throughout the novel, one that challenges the power structures that have been set into place by neurotypical society. Yet he is not the only fictional coming of age character who gets the opportunity to cast a story from his unique neuroatypical perspective. He has two close contemporary peers with strong neuroatypical narrative voices: Christopher Haddon from *The Curious Incident of the Dog in the Night-Time* and Oskar Schell from *Extremely Loud and Incredibly Close*. Christopher has control of his narrative (but is heavily guided by Siobhan's neurotypical inputs that channel his focus) and Oskar has a majority control of the narrative but shares it with other family members (who also are arguably neuroatypical in their own ways). Interestingly, neither Christopher or Oskar is identified as autistic through formal diagnosis, yet each is heavily suspected of having autism because of their characteristics and mannerisms. In her book, *Imagining Autism*, Loftis spends an entire chapter discussing both Christopher and Oskar. She emphasizes that "ultimately, both characters become symbols that reflect outward—these autistic children stand in for larger cultural anxieties regarding the instability of the postmodern family and the struggle to establish emotional connections in a postmodern world" (108). As she articulates, neuroatypical child narrators similar to March bring up problematic issues with communication and connection— that the autistic narration and construction signals towards a larger problem of fragmentation within postmodern society. And certainly March's impairments and unique sensory processing in *The Eagle Tree* can be seen to highlight not only his own disability but the inherent disorder present within postmodern society that further fragments previous constructions of family and community.

While Loftis discusses societal fragmentation in detail, I intend to focus on another byproduct of this changing representation signaled by neuroatypical narrators. That the presence and power of neuroatypical narration points to a continuing shift that challenges the supremacy of the neurotypical majority—from Christopher in 2004 with strong neurotypical inputs to Oskar in 2006 with undefined neurotypical inputs then to March in 2016 without neurotypical inputs. As these three novels indicate, over the course of time neuroatypicality has begun to emerge as the voice of power and control which needs less neurotypical guidance as time progresses. Consequently, neurotypical inputs are deemed less necessary to guide the narration as a neuroatypical narrator can now claim full authority and rhetoric to control the narrative. And March indeed gets to have his own voice—one that is even stronger than his peers—even though he concedes some of his authority by filtering his experiences in order to translate them for neurotypical expectations to create understanding within a majority audience. Yet most importantly, the narrative structure moves away from the neurotypical and ableist focused expectations as it privileges March's voice (which does not need neurotypical guidance or multiple narrators), and further breaks the cycle of publications which encourage (false) cohesion to create an enjoyable best-selling narrative.

Considering the changes over time in the strength and power of neuroatypical narration, one way to gauge such changes is through the presence of autism terms. As explored earlier in the chapter, the frequency and use of terms indicates certain rhetorical moves in research texts within disability studies and literary cognitive studies, just as they display similar moves in fictional texts. Thus, the presence of terms within the narrative cross section of Christopher, Oskar, and March indicates movements between the neurotypical and neuroatypical modes. In looking at Christopher, there is no mention of autism, autistic, or Asperger's within the narrative

of the text. But interestingly, the one time it does appear in the novel is within the front matter in the Library of Congress catalog detail which describes Christopher as many things to include an "autistic fifteen-year-old boy" (Haddon Location 68). There is a history of Haddon's relationship to autism which I will not go into detail with here but suffice to say that while he once embraced the connection to autism, he later tried to distance himself and the novel from it. Yet the Library of Congress catalog detail provides a shadow of the impact that autism had on the creation and sustaining influence of Christopher.

Looking next to Oskar, there is no mention of autism, autistic, or Asperger's at any point in the text. The lack of any mention aligns with the complexities of Oskar who while not only different, also experiences the immense trauma (and post-traumatic effects) of his father dying in the World Trade Center on September 11th, 2001. And while Oskar certainly manifests traits that gesture towards autistic behaviors, his narrative is not about grappling with this type of difference but rather focuses much more strongly on the lasting impact of grief. Turning now to March, the use of terms is much more complex. The term autistic is used by the author (not narrator) five times in the end notes (scattered between Acknowledgements, Author Note, and About the Author). Furthermore, autism appears three times and Asperger's twice all within the Author Note. Aside from these references, in the narrative of *The Eagle Tree*, the term autistic is used twice—once by Uncle Mike during the city council meeting and once by Mr. Gatek at March's custody hearing. Never does March need or want to use the term to describe himself. Probably because to him the label provides little meaning. He experiences the world in his own way and does not need to justify his existence and experiences through a label, even though he does try to relate to others and describe things in ways that the neurotypical majority would understand.

Further investigation of the presence of autism terms in a cross section of research and fictional works provides a glimpse into the current and historical states of autistic representations (or lack thereof) in texts. These representations are made even more complex when passed through the next set of filters within the medical models and social models of understanding autism. These two models, as discussed earlier, both provide insight into the complex construction of autism within society. However, it is also important to investigate more broad representations of difference and disability. In order to gain this perspective, turning to Tobin Siebers's *Disability Aesthetics*, provides necessary foundational guidance. Within his work there is an exploration of the term "disability aesthetics" which is described in the context of modern art. While he does not directly take up autism in this work, he does mention the disabled mind and invisible disabilities, both of which can signal towards autism. And, importantly, he details how the social understanding of disability can be negative if given that connotation by the social construction of knowledge:

> Bodily differences become images—that is, acquire the power of representation—when they are construed as disabilities. This fact puts in mind two valuable observations about the appearance of disability: first, that social convention determines the perception of disability as negative; second, that the distinction often maintained between visible and invisible disabilities is as much a product of social convention as the perception of any given feature of a person as a disability. (133)

Interestingly, Sieber's observations about disability align with Berger and Luckmann's work on the social construction of knowledge. That is if the perception of disability becomes constructed as negative and ends up cycled through social knowledge processes, the general population tends to find their view of disability guided by the (false) "truth" that it is negative. Despite the inherent flaws in this process, it also signals to and implies that the social construction of disability could be perceived as positive and beautiful if social convention could take up a different interpretation. Turning these thoughts of rewriting interpretations towards Don and

March, they both embody the strength and power that emerges from their neuroatypical narration, which does not need a neurotypical voice to focus and/or guide them. The movement of these narrators indicates a shift towards re-seeing disability—one that shows perception is not always the truth and that there are many misguided social (false) "truths." Hopefully, a move towards actual truths can be established through the strength of neuroatypical perspectives such as Don and March's. And that those perspectives in turn reinvigorate meaning and reestablish knowledge by using the same social constructions to rewrite the positivity that in truth emerges from autism.

Perspectives have the power to change perceptions over time. Thus, considering autistic perspectives is vital and necessary to create a meaningful shift in perceptions of autistic ways of being. One of the strongest voices emerging to re-write and re-see autism is Melanie Yergeau— an autistic scholar investigating and critically analyzing autistic difference. In her work *Authoring Autism*, she takes up an investigation through her perspective of growing up with undiagnosed autism and then receiving her diagnosis later in life (similar to but not quite the same as Don). As she has remembered experiences of life before and after the autistic label, she explores what the label has provided for her and at the same time taken away from her. In addition, she directly investigates the troubling prevalence of understanding autism through an overreliance on medical models:

> Autism, I am claiming, is always residual and is always fluctuating, ticcing, trembling. Its ephemera are marked and marketed in ToM [Theory of Mind] scholarship, and if I were so inclined, I might pull out a copy of the Diagnostic and Statistical Manual of Mental Disorders (DSM) and locate autism's traces and motions, its histories and presences, across bullet points and checklists and clinical catalogs and modularistic models. I have so far, in this introduction, resisted this common DSM impulse—for isn't every statement on autism a statement about its diagnostic criteria? (20)

Yergeau's scholarship brings the core of autism to the forefront. Throughout her book, she

illuminates the tendency to gravitate toward the medical models in the societal architecture of understanding autism. Yet while there is a pull towards the medical model, she endeavors to rewrite the social knowledge of autism in order to reclaim the full humanity that was already always there. And she continues to fight against the medical model to highlight its wild inaccuracies that would cast autistic individuals as less than human.

Through these insights, the rhetoric around autism is laid bare such as when it emerges through words like perseveration, echolalia, and self-stimulation. While these words have come to symbolize autistic being, I argue they are not strictly limited to remain within the barriers of neuroatypicality. Because neurotypical people manifest the same traits, they are just seen in different words such as fixation, repetition, and self-soothing respectively. And these rewritings have eerie similarities to recasting of behavioral traits through gender in the workplace which often defines how words are used to describe people which in turn shapes perception. Interestingly, perhaps what perseverating on these terms indicates is that they have been created to represent autism in an attempt to set it apart from neurotypical thinking. However, both neuroatypicality and neurotypicality both manifest with strong tendencies and traits that are much more similar than different. In other words, there is a perceived desire to see neuroatypical difference and (de)code it as separate and distinct. But in reality, the differences, much like those that arise in descriptive words, are artificial constructions meant to both consciously and unconsciously reassure the neurotypical majority of their preferred and dominant societal status.

The neurotypical need to affix autism as different and thus in need of (medical) fixing is a troubling yet commonly accepted practice. The framing of autism rehabilitation, especially one set into a coming of age journey such as March undertakes, is centered around reshaping his character and being to neurotypical expected norms. The recentering of March and the push

towards these expectations culminates when the novel nears the climax. At this point in the narrative, March goes to Olympia City Hall to address the Mayor and City Council about the reasons they should be invested in saving the old growth Eagle Tree. For March, the journey to standing in front of a large audience indicates that his ability to conform to neurotypical expectations has increased significantly along with his maturation over the course of the story. In other words, he has been "fixed" enough to operate in neurotypical society. In order to "overcome" to reach this point in his journey, he had to learn how to regulate his uniquely charged sensory sensitivities to be in large public places, wearing uncomfortable (but neurotypically socially appropriate) clothing, and speaking to a large audience of exactly "209 grown-up people and 2 children" (Hayes Location 2546). This part of the novel provides a perspective of how much March has developed and learned to identify neurotypical expectations. And how he has learned to translate his neuroatypical processing in order to engage with the neurotypically focused social world that surrounds him.

While this constant translation to act in neurotypical society is often overwhelming for March, he has realized that his passion and love of trees provides the catalyst which makes the effort worth it as he can provide positive and beneficial change to his community. Yet this part of the novel also points to the infrastructure that contains problematic ableist focused constructions of March which is highlighted in the words of his Uncle Mike, who introduces him prior to his address of the Mayor and city council: "'March has a great deal of knowledge in this area, so please listen to him carefully,' says Uncle Mike. 'However, I would also ask for your *indulgence* and *patience*, as March is also on the autistic spectrum and sometimes has difficulty expressing himself clearly. He would like to share some of his observations regarding the environmental effects of developing the forest in that area'" (Hayes Location 2572, emphasis mine). As

mentioned earlier, this is one of two uses of the word autistic in the narrative—and it is used by a neurotypical character to purposely call out and separate difference. While this remains deeply problematic, the reality of current societal knowledge necessitates this rhetorical identification move. Because March must act within a neurotypically focused society that often misunderstands neuroatypicality, this calling out of his difference becomes a necessary step for the community to understand his unique atypical behaviors. Yet the construction of this passage which must point out March's medical classification as well as ask for "*indulgence*" and "*patience*" makes his behaviors emerge as elements yet to be fixed. Interestingly both indulgence and patience are (typically) positively coded words but, in this context, signal an extraordinary request of a neurotypical audience to suspend their usual processes of judgment and allow an alternative perspective to emerge.

Furthermore, the wording caters to an ableist focused construction of social expectations because readers have become accustomed to having neuroatypical experiences translated. However, it also signals towards larger trends that must be addressed so the embedded sentiment does not (mis)identify the coding of narrative feelings. Thus, while March can be rehabilitated by neurotypical society through indulgence and patience, he still hasn not been completely "fixed" as he has not learned to disguise all his neuroatypical mannerisms. But what do we ask from autistic ways of being if they must always conform to neurotypical expectations rather than neurotypical ways of being learning how to process and accept diverse neurological constructions? Because in addition to the complexities already mentioned, this exchange with Uncle Mike also highlights how March's impairments transform into a disability in the social construct of society. And March does struggle with unpredictable social situations as they overwhelm his sensory system and cause him distress. But he is also aware of his limitations and

what he can and cannot control. While Uncle Mike is trying to provide a positive experience for March, his actions further mark the differences of autism rather than create a better understanding between neurotypical and neuroatypical behaviors. As Uncle Mike primes the audience to receive March, he also further disables his nephew by reaffirming beliefs about autistic disability.

Fiona Kumari Campbell in her book *Contours of Ableism*, looks at disability and disablism in similar ways to those that March continues to fight against throughout his narrative. As she argues: "Disablism is a set of assumptions (conscious or unconscious) and practices that promote the differential or unequal treatment of people because of actual or presumed disabilities" (4). As this section highlights, perception (rather than the truth) guides how people are labeled and treated. For March, he must continually fight against the forces which try to label him as "low" functioning and society which in turn assumes he is not capable of achieving a full human experience or possessing a valid voice. Accordingly, the novel codes an understanding of how March's behavioral differences manifest through Uncle Mike's gesture to prepare the neurotypical audience. Yet what is troubling is that Uncle Mike does not also call attention to the importance of how these same behavioral differences have allowed March to see the things that society typically looks past and often takes for granted. Thus, while the community may be more inclined to listen when signaled about March's differences from neurotypical norms, they do not appreciate that March's unique neurological processing (read: differences) enables him to see the larger pictures that surround ecosystems of trees and the urgent environmental need to preserve the Eagle Tree old growth area from residential and commercial development. Consequently, instead of breaking from the ableist focused constructions to indicate how the diversity of thought can be highly beneficial, the text in this moment recodes March as disabled and

different—someone to be feared, someone not yet "fixed."

Part of the conflict between neurotypical and neuroatypical personalities in *The Eagle Tree* emerges from the fear of the unknown. That instead of embracing and attempting to understand difference there is an impulse to fear and reject what is not the same. March throughout the narrative attempts to dispel fear and create cohesion by showing that while he may project his body in distinct ways through his unique sensory experiences of the world, he also lives his life in ways more similar to neurotypical constructions than many would like to see or admit. In one intriguing section, which I quote below at length, March attempts to show through water droplets how the binary between separation and cohesion arises from a reflection on the unique qualities of natural and human constructions:

> I touched one of the accumulated droplets, and instantly it was gone, absorbed into the water on my fingers, or absorbed into the leaf. It disappeared immediately into the larger collection of droplets all around.
> I wondered what it would be like to be a droplet like this. What if I could disappear back into the mix of other droplets with just a touch? Wouldn't that be better for everyone? What would a world without March look like?
> The trees would be fine without me. I thought my mother would be better off without me. Then she would no longer would have to go to meetings in rooms where people we did not know discussed me. She would no longer have to put bandages on me, or wait at the bottom of a tree for me to come down from climbing it.
> I touched another droplet, and then another. Each one disappeared peacefully—no mess, no fuss—and the leaf looked so much better without the dots on its green surface. The light was going, but there was no real sunset; the sky turned from bright aluminum to dimmer tin and then to gunmetal gray before it all went dark.
> I went back in the house, and I looked out at the rain. From inside, there were many droplets that spotted the windows. But when I reached out to touch them, I could not make them disappear. From inside they looked like they would be there forever, like little glistening rhomboids, distorting the sight of the outside from coming through. They made it hard to see and understand the world. They erased the light. (Hayes Location 3024)

March's reflection on water droplets brings about myriad aspects to explore but I focus my investigation on three: natural/artificial constructions, autistic presence, and diversity of experiences.

The construction of the droplets in nature versus as seen through the artificial lens of a window greatly influence how they are allowed to interact. As March notices while outside in nature during a tree climb, the droplets, which initially appear to be separate and different, merge together to create a cohesive whole when provided with the motivation of a "touch." Prior to that touch, all of the droplets had various compositions as each found a separate place on the leaf. But through the simple yet meaningful action of a physical "touch," all of the droplets with their varying qualities came to be connected together without the need to maintain the differences that brought them initially to the same leaf. In other words, the droplets all have distinct differences, but they do not need to maintain separate but equal distinctions. Each of the droplets merges into an "absorbed" whole that becomes a composition of all the qualities—and one that does not have to privilege one type of majority expectation of being. Instead, when the droplets mix wholly together, all the facets of what might have been different merge to be one cohesive whole that is marked by similarity with the coming together that has already always been there. Thus, as the droplets merge, a new shape takes form that benefits from all the attributes which each of the individual droplets brings into the whole.

Even though March uses his observations on the droplets as an analogy to contemplate his own autistic presence, and what a world without him would be like, it also highlights that he recognizes the differences and struggles he experiences in the neurotypical world. But the merging of the droplets set into motion by a gentle "touch" shows that a coming together is possible; however, it does require a meaningful and intentional action to set the movement into motion. Further, touching includes its own fraught constructions as this often seemingly simple human action might not be so simple when sensory systems are wired to interpret touch differently. But despite these issues, the merging droplets signify a cohesiveness in being a part

of something larger than an individual. For March, there is a self-identification that his neuroatypical ways of being have created disruption to his family which operates in the neurotypical world. That he must constantly engage in hard work and transform his neuroatypical thoughts and actions into neurotypical expectations of behavior. Consequently, he questions what a world without him would look like—and wonders what it would be like to blend into the mass of neurotypical being that controls the world around him. March notices that in nature there is no distinction between neurotypical and neuroatypical, as the droplets do not merge into two separate collections but rather one singular collection. And, importantly, what March does not quite articulate in this observation, is that none of the droplets are exactly the same. While they are separated initially on the leaf, they easily merge together in a harmony that arises from appreciating differences instead of enforcing barriers. Thus, in thinking through autistic presence, the droplets provide a presence that a neurotypical majority perspective does not usually see. Because autistic perspectives add the ability to see details through their engagement with the world that can notice what is often missed from more typical perspectives.

But perhaps the most meaningful moment with the reflection on the droplets occurs when March realizes that inside his house he cannot manipulate his environment, signaling that human constructions separate humanity much more than any natural barrier. In nature without artificial constructions, as the droplets illuminate, when a gentle force urges them into motion all the unique droplets are "absorbed" and brought together. Whether set into motion by March or another forceful "touch" of nature such as wind or pressure, the droplets follow the same process to merge into a cohesive whole. While the natural world adheres to this harmony of coming together, the reality of the human race with artificial constructions paints a much different picture of a whole. As March observes from inside the house with droplets on the window, all

the unique parts must remain different. Untouched and separated the droplets in turn become obstructive: they work towards "distorting the sight" of nature and "erased the light" that attempts to emanate. Thus, the window acts not only as a barrier between March and the droplets but also to the cohesiveness of the droplets which cannot sway together like they can on a leaf when they become stuck on the window.

The stickiness points to the artificial constructions erected by society that has created everything from labels to the organization of structures that disables wholeness—that invalidates certain experiences while giving power to the often unnamed neurotypical majority. Perhaps readers will come away from this section with a positive feeling towards difference and for change. Maybe there is danger in having an overemphasis on difference as it creates more barriers than understandings. But at the same time, ignoring difference feeds more power into the majority. Thus, it is important to talk about difference to understand how society structures both power and division—to ask what labels are really necessary and what creates more negative harm than positive cohesion. Because a diversity of experience that can become part of a collective whole is much more powerful than any artificial division or label that might be used. For the most part, March's observations on nature with the water droplets allude to a peaceful harmony that does not percolate over into the human race. That when inside enclosed social structures, autism, like the droplets, is unable to be unified in the spectrum alongside neurotypicality and seen within a larger pool of the neurodiversity of human experience. With the socially constructed divisions that separate autism, a peaceful merging does not occur, and the "distortion" creates an unclear picture and misunderstanding through the lack of clarity.

The separation brought on by society creates a division that further distances neurotypical and neuroatypical. In his book *Representing Autism*, Murray argues that one of the barriers for

merging autism into the larger construct of neurodiversity in society comes from an overemphasis on the fear of joining together: "We might care less about causes if we knew exactly what it means to live with autism. We might be less sweeping in our assumptions about cures if we had a sense of what the condition entails. Conversely, we might *better* understand the links between autistic and non-autistic humanity if we approached the subject with less fear" (211, emphasis in original). As Murray notes, rather than sit inside the enclosed structures which separate us and create fear, there should be a move to emerge outside of the human made constructions to see and experience the links between all facets of "humanity." If society could see beyond the distortion they have created, they would be able to appreciate unique qualities while at the same time bringing differences together and truly respecting diversity. Like March observes, droplets can merge together peacefully if society would value all the qualities from the full spectrum of diversity. Thus, this should be a call that brings awareness to the unnecessary differences that have been created by society in order to move away from neurotypical privilege. A move to allow a clear and undistorted seeing of the commonalities that does not fixate (perseverate?) on differences to define human experience. Because just as March realizes that human created structures separate us and create problematic blockages to achieving cohesiveness, society should also question its definitions and understandings of the elements that seem disparate. Perhaps then an appreciation for the full spectrum of neurodiversity could emerge without the artificial barriers that have destructively been erected creating a wall of division.

My investigation into the neuroatypical narration of both Don and March throughout this chapter attempts to provide a solid first step towards better understandings of how dis-ease weaves into autistic interpretations of diverse minds to embody sensory engagements. And the

next chapter delves further into the complexities of narration with multiple narrators from neurodiverse (both neurotypical and neuroatypical) backgrounds. Additionally, through my discussions in this chapter about the increasing presence of disability studies and literary cognition scholarship paired alongside close readings of autistic characters, my hope is that a more meaningful critical interpretation emerges. Furthermore, I intend to build upon these close readings of autistic characters through the use of scaled reading—investigating through the digital humanities with sentiment analysis to (de)code the embedded patterns of sentiment within the texts in Chapters 3 and 4 of this dissertation. Because by uncovering the highly charged words within the text as a whole, there can be a more deliberate and purposeful engagement with the characters. In turn, this can infuse vital knowledge about neurotypical and neurodiverse narration and autistic characters into the social constructions of knowledge. And, accordingly, provide the opportunity to identify and remove the older and more inaccurate representations of autism. In turn, through the continuing cycle of mass consumption in popular culture, audiences of literary texts can better understand the unique facets of autism—including a recognition of the beautiful complexities found on the spectrum and subsequently the many benefits of cognitive diversity. While this rereading and discussion begins through Don Tillman and March Wong, it is with the hope that it expands far beyond *The Rosie Project* and *The Eagle Tree* into continuing dialogue about autistic power and representation.

CHAPTER 2

Ableist Pleasures of Literary Texts – Neurodiverse Narrators

When my oldest son was in the First Grade, he continued to develop and mature. Yet at the same time, through his neuroatypical developmental arc, which some might have framed as deficit, he shifted the expectations from typically held perspectives. At the age of seven he was still very alert, constantly seeing the world around him. Over time, he had found ways to better articulate (and I had learned to better understand) the things that he likes and dislikes. However, there were still things that we both continued to learn about communication, our sensory environment, and each other. Because despite our continued progress, there were occasions when his sensory system became overloaded with unpredictable loud sounds. In these situations, his physical response would often be to cover his ears and close his eyes to shut down the inputs when faced with this type of overwhelming stimuli. His oral response was often to hum or sing what sounded like the letter "e," seemingly to control the pitch and sounds around him by providing his own soundtrack—to bring the sounds back into a controllable output that evokes familiarity and comfort in an uncontrollable world that does not seem to understand or adjust to his desires. Sometimes, he would go beyond his usual oral response and state that it is "too loud" or that things are "too scary" when he felt himself being overloaded with sensory inputs. Yet despite his dislike of loud unpredictable sounds, when the noise was something he could control and focus on, he found great enjoyment in auditory inputs, often exclaimed through an excited and joyful "e" tone. He continued to watch cartoon movies and still loved seeing Team Umizoomi on TV (often while clutching possessively to his "stuffies" of the Milli and Geo

characters). Through the years I had discovered the things that could both help and hinder him, continually making adjustments to benefit his unique processing. I had learned how to adjust the sounds and routines to make it a welcoming environment for him at home. An environment set up to ensure that he felt comfortable in the sensory surroundings. I also had found ways to adjust the environment by limiting the volume of sounds or having headphones available to better give him control over the sounds that surround him.

In school, however, my son's classroom was a sensory rich space which could often make him feel lost within the plethora of inputs that he could not effectively turn off at will to focus on one specific input. But despite the challenges of navigating a neurotypical space, he learned exponentially. He created his own milestones and achievements that defied and reimagined development in such a way as to seriously question how neurotypical expectations control the cultural narrative of growth. His unique developmental arc began when he was a baby and toddler; rather than learn to speak through typical social interactions with other people, he mainly soaked in speech through the medium of video as it allowed him to process the information through visual and auditory stimuli. His constant awareness of the world could be employed beneficially as he learned through video, a medium that did not require stationary attention and which allowed for him to move. As he grew older, he embraced the alphabet with a zeal and fervor that is unmatched—and he used his passion for the letters which he was always creating and reorganizing to learn to read through associations and memorization that diverged wildly from phonetic and phonemic awareness taught in the typical curriculum. While he continues to need the assistance of a paraprofessional in the classroom as his way of being does not adhere to the typical customs and patterns, it is mostly to help him decipher and understand the social learning environment and rules that neurotypical kids take for granted. And even

though he does need a translator to help him understand neurotypical actions and expectations, I can only hope that as it helps him manage the social world he is navigating through, his classmates may also start to become aware of the neuroatypical richness that my son offers to incorporate some of those strengths into their lives. Additionally, because of the sensory rich classroom environment in school, he does require testing to be conducted one-on-one so he can focus on the questions being asked. Yet this testing shows just how much he does see and intake, as he consistently scores high on all of his tested subjects.

Despite my son never being able to sit through a story read to him when he was younger, he always loved following stories through animated television shows and movies—probably because there was no artificial requirement for him to sit still in order to "listen" or take in the story. And, in fact, that is probably what allowed him to understand his beloved Geo and Milli characters—through movement on the screen and movement of his body to interpret the narrative acts. While he resisted being read to, he enjoyed the control of reading on his own when he started reading and noticing the words of the world around him. Suddenly the letters transformed into combinations that made up things such as menus, advertisements, and stories, as the text that surrounded him was slowly taking on more meaning. And as he started to decipher the world in its myriad social connections and the texts that surround his school experiences, I had to wonder how he would interpret their often neurotypical and ableist focused intentions in the representations of autism, especially as many novels with autistic characters are written for a young adult audience. Would my son feel that the autistic characters speak to him in a way that neurotypical characters cannot achieve? Would my son feel that the autistic characters fail to represent him? Would my son feel that he must perform as the autistic characters do in order to feel he has a valid neuroatypical identity? These are all questions that I still have not

found the answers to quite yet. But I hope from better understanding the embedded sentiment that lies within a text to produce narrative feelings, I might get closer to grasping what these autistic characters mean to the spectrum spanning the neurodiverse composition of neurotypical and neuroatypical minds.

Literary narratives have been analyzed through multiple methods over the years. However, an investigation into the neurotypical and ableist focused constructions in literature concentrating on the complexities of neurodiverse narration has yet to be explored. When considering the accelerating increase of autistic characters in popular culture, this diverse form of narration should be investigated to better understand what these characters are doing and what meaning that holds to the spectrum of people who read these stories. Whereas in my first chapter I focused on neuroatypical narrators, this chapter centers on neurodiverse narrators—in other words, stories that offer a combination of neuroatypical and neurotypical narrators/narration. The two novels that I investigate in this chapter each employ a different style of neurodiverse narration to capture a blend neurotypical and neuroatypical perspectives. The first, *House Rules* (2010, by Jodi Picoult) has alternating narrators with the point of view changing between five of the characters, four neurotypical and one neuroatypical, throughout the ten chapters (and also includes an undefined narrator for eleven short "Cases" that are interspersed between the chapters). The second, *The Boy on the Bridge* (2018, by M.R. Carey) employs a third-person omniscient narrator that taps into the consciousness of the twelve crew members, eleven neurotypical and one neuroatypical, assigned to the Rosalind "Rosie" Franklin scientific and military reinforced mobile laboratory as they explore Great Britain to find a cure for the *Cordyceps* fungus pathogen that has plunged the entire world into a post-apocalyptic state.

Throughout this dissertation chapter, I argue that the blend of neurodiverse narration

complexly melds together the autistic and non-autistic characters to evoke narrative feelings

from their representations which arise from the embedded sentiment within the novels. And this

blend of narration diverges from the neuroatypical narration discussed in the last chapter of this

dissertation. Because rather than the autistic characters having the ultimate power and authority

over their narrative, these characters within a neurodiverse narration are caught in a web in

which their power is often spoken for or reduced by the neurotypical characters. The problems

with neurodiverse narration often emerge because the one neuroatypical character is singled out

as (dangerously) different when they are surrounded by a multitude of neurotypical characters.

This construction is used in order to control the neuroatypical agency with the act and impact of

labeling through isolation and distinctions of difference. Because the labels are typically

controlled by the neurotypical characters who use them to enact their power over neuroatypical

characters. The reduction and/or removal of neuroatypical power makes the need to explore

neurodiverse narration even more urgent in order to unpack and understand who has the

authoritative control over autism and why.

Another important need to explore neurodiverse narration arises from the increase of

autistic character representation in literary narratives. The increase aligns to the awakening in

society of the differences that were already always there throughout the history of the human

race, but recently (in the last approximately 80 years) decided to label as autistic. These are

labels that both provide benefits and simultaneously do harm to those whom it is affixed, as they

(too often) are used to unjustly determine capabilities based upon the label rather than

understandings of individual people. To begin addressing these injustices, this chapter

intentionally moves away from a debate about the autism label and not engage in an argument

about whether or not it is good or bad; because the label itself does not represent the problem.

The label itself is but a stickily charged word that evokes the actions which affectively place and enforce difference onto others. The problem with these labels, rather, lies within those who place and enforce its barriers to build/maintain problematic constructs which remove agency and in turn render individuals with autistic labels as less than human. And in this affective sticking on, through the events described by the embedded sentiment in the words of the novels, there is an acting out which emerges from the narrative feelings that provides knowledge to society through the different stories. It is through this acting out that the fertile ground arises to explore differences in understanding how the societal knowledge of autism is created and rewritten into popular culture in ways that both benefit and harm the many autistic characters that are written into consciousness.

In my exploration of neurodiverse narrators in the two fictional texts, *House Rules* and *The Boy on the Bridge*, I call attention to the diverse narration mixture which brings together the unique representations and reactions to autism that emerge in the cast of neurodiverse characterizations. Jacob Hunt from *House Rules* fits into all three of the stereotypes surrounding autism that I discussed in my last chapter: white, boy, and American. I generally tend to focus on representations that push back from the stereotype in some manner; however, I find it is also important to understand a casting from the stereotype as a way towards looking for something more and seeing what is there but often overlooked. Also, this stereotype casting is thrust against Stephen Greaves from *The Boy on the Bridge* as this chapter progresses. Greaves, as he is called in the book rather than Stephen, is both white and a boy, but he is British (which is not the exact stereotype but is not drastically different either). Yet what makes Greaves a challenge to the stereotype, and in turn labeling practices, is that his character is cast into post-apocalypse Great Britain which no longer actively practices most label usages. In the narrative, most of the societal

practices of medicalized labeling that were previously conducted are now mere artifacts as

survival in a post-apocalyptic world consumes all conscious energy and resources. Accordingly,

even though the text does at times allude to labeling Greaves as a marker to indicate difference,

there is no official diagnosis. Thus, the label does not define Greaves in the same way as it does

for many of his stereotypical counterparts and is markedly different from Jacob's relationship to

autistic labeling. For Greaves, his unique skillsets enable survival—they become his hallmark

characteristics precisely because he can think in terms beyond the typical which defies the

predictable patterned behavior that leads to the deaths, by zombies ("hungries") and accidents, of

so many of his neurotypical peers.

Both Jacob and Greaves are characters in works published and written for popular culture

consumption. Because their differing messages through fictional accounts are often the entry

point for understanding neuroatypicality to an audience well beyond the reach of those directly

surrounding autism, there are further elements to unpack about how their neuroatypical

characteristics contribute to and venture away from neurotypical expectations. And as both

novels discussed in this chapter are representative of the types of literary texts that provide

readers with their first glimpses of autism, it is necessary to undertake a critical inquiry to

understand their ableist focused constructions and messages to popular culture. In these

narratives, both Jacob and Greaves represent the one minority neuroatypical perspective

alongside a majority share of neurotypical counterparts. And there are inherent pitfalls that come

along with the sharing of narrative authority—especially as it can so easily diminish the power of

autistic voice. To best grapple with the inherent problematic structures in these diverse

representations, I explore how the neurodiverse narrative sharing across the spectrum provides

both insight into new ways of thinking, and unfortunately at times reinforces damaging

stereotypes. Through my investigation of *House Rules*, I argue that the novel uses a cast of neurodiverse characters to emphasize Jacob's neuroatypicality through his exceptionalism—and that he is structured to portray repeated attempts and failures to adhere to societal expectations of connection, contact, and empathy; yet from the neurotypical and ableist focused desires of the narrative to set Jacob apart as different, representations emerge from the embedded sentiment that defy this categorization as he continuously asserts his power to connect, despite his sensory sensitivities, to manifest his own strong and unique empathy that leads the reader to question their expected narrative feelings. And throughout my investigation of *The Boy on the Bridge*, I argue that the complex cast of neurodiverse characters in the novel intensively heightens the mistrust between Greaves and the neurotypical members of the Rosie team in their pursuit to find a cure for the *Cordyceps* fungus; yet it is Greaves's neuroatypicality, in ways clearly seen and unseen, which pulls from the embedded sentiment to call upon the reader's inlaid passions and pleasure to generate complex narrative feelings about whether or not they would be willing to think as differently as Greaves and go as far to unselfishly make the ultimate sacrifice to maintain the spirit of humanity.

In addition to an exploration of the complexities within neurodiverse narration, I investigate historical contexts surrounding the medical model and social model of understanding autism that have developed and intertwined across the expanse of time since Leo Kanner and Hans Asperger both began to focus their research in the 1930s on what would later be identified and labeled medically as Autism Spectrum Disorder. Better understandings of the contentious debates that these two historically prominent figures began with their research brings forward an awareness of how fictional depictions of autism emerge in literature. Additionally, the seemingly inevitable investigation on the medical criteria of the Diagnostic and Statistical Manual for

Mental Disorders (DSM) is invoked as a reference point to how the medical checklists make their way into popular culture consciousness, defining how autism is often seen by the general public. Through investigating these historical and medicalized insights there is a cultural awareness which emerges to better understand the character depictions of autism from literature as they manifest through embedded sentiment to generate narrative feelings for readers.

Currently, there are multitudes of accounts that investigate the history surrounding the two pioneers in the field of autism, Leo Kanner and Hans Asperger, to include quite a few which are full length books that detail the complex intricacies of their work and legacy. In my discussion of autism history, my desire is not to replicate these intensive and robust works. I would point you towards Steve Silberman's *NeuroTribes: The Legacy of Autism and the Future of Neurodiversity*, Adam Feinstein's *A History of Autism: Conversations with the Pioneers*, Chloe Silverman's *Understanding Autism: Parents, Doctors, and the History of a Disorder*, and/or Stuart Murray's *Autism* if you desire to read through a detailed history. Each of these mentioned texts respectively provides a different approach and perspective on the complexities surrounding autism; from a story based view, to the numerous details of the historical events and figures, exploration through an anthropological lens, and lastly an intertwining of the social, cultural, and political histories as they intersect with the many controversies surrounding autism. While I do not want to provide a deep dive into autism history in this dissertation, I do want to pull from my own intensive investigations of these texts. I want to highlight the history which in turn provides context about how narration style and the coding of a narrator with an autistic/Asperger's label feeds into cultural understandings of neurodiverse perspectives.

To contextualize an investigation into narration styles, and specifically address autistic narrators, I start by looking at a brief history of Hans Asperger and Leo Kanner, the two pioneers

of autism research. Hans Asperger was born "on a farm outside Vienna on February 18, 1906" (Feinstein 12). During his youth he had access to multiple levels of education and earned degrees which culminated in 1932 when he was appointed as "director of the play-pedagogic station at Vienna University children's clinic" and later became a lecturer at the university in 1944 (Feinstein 13). While working at the clinic he began researching what later became known as Asperger's syndrome (and some speculate that he may have in some way been impacted by the very syndrome that carries his name as he desired very little social contact). But global history has a way of intersecting Asperger's history and accordingly the cultural narrative of autism. As Asperger began to publish his research findings, he found himself amidst the complexities swirling in World War II as Austria was annexed as part of Germany in 1938 until the end of the war in 1945. There has been much speculation and investigation to determine whether or not Asperger was a member of the National Socialist (Nazi) party without a definitive yes or no ever being found. While at this point in time the distinction may seem irrelevant to autism history, it actually is of significant importance as Asperger was working with a population that the Nazi party deemed unworthy of life. Because people categorized as "disabled" did not conform to the typical Arian worldview, the Nazi party used the "T-4" or "euthanasia" program to murder both physically and mentally disabled patients (and which later in the war became the foundation for the model used for mass murder of Jewish and other "undesirable" populations). Consequently, Asperger's allegiance most likely determined how he wrote and cared for the autistic population he researched. Even though there are no definitive documents, from what can be observed through his writings and lack of known connections, it would seem that Asperger did not align to the Nazi party views. Perhaps this was because he did not have much need for social interactions and thus attempted to distance himself from the party. Or maybe it arose out of a desire to protect

his research and/or autistic individuals. Whichever it may have been, how he articulated his research would seem to indicate that he attempted to highlight the immense value of individuals that manifested what he viewed as Asperger's syndrome in order to protect and distance them from the "disabled" label, and in turn those that would call for their extermination for not being typical enough. Also, Asperger's assignment to serve as a doctor in Croatia towards the end of the war yet again points to how he was a part of a society in which the Nazi party existed but that he did not ascribe to because he was not rewarded with a comfortable assignment away from the fighting forces.

Given the complexities and war-torn state of the world that Asperger navigated, it's not surprising that he was unaware of other research being conducted. But before getting to the debate of who came first, I turn now to the next pioneer in autism research. Leo Kanner was born "to orthodox Jewish parents in a small Austrian village called Klekotow on June 13, 1894" (Feinstein 19). He served in the Royal Army of Austria and Hungary in the medical service during World War I. After the war, he worked as a physician in Berlin until he immigrated to America in 1924. When he arrived in America, he worked at a State Hospital in South Dakota conducting (problematic) studies on minority populations which eventually led him on a path to becoming a top researcher in child psychology at John Hopkins in Baltimore, Maryland. It was at John Hopkins where Kanner researched and published "Autistic disturbances of affective contact" in 1943 which declared there was a disorder that had not yet been identified and to which he eventually gave the label of "early infantile autism." Many believe that Asperger came after Kanner in investigating, and publishing studies about, what we now call Autism Spectrum Disorder. But there is a curious incident of the doctors in wartime. Because in fact, as Adam Feinstein and Steve Silberman detail, Asperger started work before Kanner. But Asperger's

insights ended up being muffled in the devastating reach of World War II which disproportionately affected certain labeled populations to include the population that Asperger researched. There is also the debate about whether or not Kanner and Asperger were investigating the same disorder. While this could be argued either way, perhaps what is best to call out for now is that each were looking to articulate what they noted as differences from the typical majority. While Asperger focused on a specific strand of the spectrum, Kanner focused on another specific strand of the spectrum. Thus, they were looking at both the same and different thing in their research that now falls under Autism Spectrum Disorder, but back then was yet to be labeled and articulated. There is also the discussion on whether or not Kanner knew about Asperger's research and/or the lack of acknowledgement of the research as it related to Kanner's work on infantile schizophrenia (i.e. autism). Again, this goes back into the spiral towards both men arguing that they were looking at different disorders and to which can now be seen that each had different types of focuses and external pressures.

Now that I have touched upon the major themes that seem to continually emerge about these historical figures, I will make my own claim. All of the history and debates provide a fascinating backstory; but other than a quick synopsis and baseline for understanding it would seem not to matter as much at this point in time. More often than not, they just detract from the larger issues that stem (stim?) from autism. History does have a rightful place that should not be removed from the present. And we should acknowledge and appreciate what has influenced our current knowledge. But a disproportionate fixation (perseveration?) on history can detract from the urgent needs of the present. Thus, we should acknowledge and appreciate what has come before but the majority of our energy should be used towards grappling with the needs of current autistic populations; towards better understandings about the acts of labeling which provide

resources while simultaneously and slowly removing the agency and power of autistic

individuals by bits and pieces.

      With the context surrounding the two pioneers in autism research, it is seemingly

inevitable that I also include a brief background on the evolution of autism and its relationship to

the medical definitions within the Diagnostic and Statistical Manual for Mental Disorders

(DSM). While I do not want to "perseverate" on this medical terminology, I would be remiss to

ignore something that continues to enforce the simultaneously beneficial and damaging practices

that come from following checklists (and in turn enabling the stickily affective labeling). The

first edition of the DSM was published in 1952 to bring awareness to and create standards of

diagnosis for mental disorders. Since the first edition, the American Psychiatric Association has

continued to regularly update the DSM to expand and better define neurological differences.

Significant changes occurred in the manual's definitions of autism from the original publication

in 1952 to the most recently published fifth edition from 2013. And of important note, the current

fifth edition is now updated even more frequently through a web based interactive version of the

manual. Yet with the appearance of Asperger Syndrome, or Asperger's, in the DSM-IV

published in 1994, the pathway towards a more diverse spectrum inclusive of wide-ranging

variations currently recognized as autism began. I also call out this distinction of the updated

medical publication editions as my research focuses after the shift that occurred with the

inclusion of Asperger's in the DSM-IV which was within the category of "Pervasive

Developmental Disorders." This inclusion further opened up the very narrowly defined category

of autism, championed by Leo Kanner, from the original manual to bring in Asperger's research

as part of the newly acknowledged (but already always existing) wide ranging autism spectrum.

Along the evolving pathway, the DSM diagnostic standards progressed which eventually resulted

in the updated classification of Autism Spectrum Disorder (ASD) from the current edition, DSM-V. Presently, autism is classified as a spectrum and is categorized under "Neurodevelopmental Disorders." Thus, the inclusion of Asperger's in 1994 was a significant shift in medically accepted recognition as it expanded the defined range of autism to more closely match the spectrum of lived experiences. Accordingly, the increased range to the definition of autism resulted in the expansion of the ASD spectrum to include what constitutes and is allowed to be classified as "autism." The shift resulted with important alterations in how neoliberal society provides services and care for those with the label of autism but also created complexly problematic structures with that same label.

One of the reasons for concentrating my research in this dissertation on post-1994 literature is to align it with the fictional works released after the inclusion of Asperger's in the DSM-IV. While I want to resist wholesale adoption of the medical definitions that clinically focus on limitations and deficits, I use this marker to acknowledge that the information about autism for most comes from medical sources that are carried over into the public consciousness. Aligning with discussions from the first chapter of this dissertation, I intend for my research to branch beyond the problematic medical definitions of autism into the complex social definitions of autism. However, by using the medical definition shift from the DSM-IV as my time period marker, I can better trace how the medical definition permeates and becomes part of, as well as repelled by, the social definition within depictions of autistic characters. And because there can be many severe cultural implications with updates to medically assigned labels, I investigate within the literary texts how autistic character depictions and classifications change over time through mass consumption in popular culture.

While the current expanded medical definition of autism as a spectrum emerged out of

the updates that began with the DSM-IV from 1994, the social recognition of this change in the general population lagged behind. Yet the DSM update signaled a shift within the social understanding of autism that marked an emerging ripple in society. In the past 25 years, the awareness of autism has expanded significantly within the public consciousness, especially through popular culture. Many notable additions into literature which meticulously attempt to convey autistic experiences have since emerged through novels. While my dissertation selectively focuses on analyzing these depictions through four literary novels, I intend to undertake a later project which will intensely investigate autistic characters in film. Another important note is that while more autistic representations now exist, many of these representations include problematic biases. For instance, there is a marked prevalence of "high-functioning" and "savant" autistic characters in fictional representations. This prevalence has two effects. First, it fails to represent the full spectrum of autism to the general public which can make those who are autistic and do not fall into these categories feel inadequate or unauthentic. Second, it conveys a sense to the general public that neurological differences are compensated through extraordinary capabilities which can create unrealistic expectations for autistic individuals. Both effects render inaccurate and potentially damaging perceptions of autism. Furthermore, as many experience autistic perspectives only through popular culture, this creates inaccurate expectations of autistic people which can in turn make them feel like they must perform to certain stereotypes of autism.

Perhaps one of the most stereotypical portrayals of autism in a novel from current mainstream understanding of neuroatypical difference is found within the character representations from Jodi Picoult's *House Rules*. The novel centers on the mysterious circumstances surrounding the death of a young college woman Jess Ogilvy. The complexity and

complications of the tale emerge because the primary suspect for her murder is a high school

boy, Jacob Hunt, a fictional character who has Asperger's syndrome (i.e. is on the autism

spectrum). Because of his character's autistic traits and needs, Jacob desires to create order for

predictability in routines which he does through unique personal constructions and life choices,

such as eating food and wearing clothes of a certain color for each day of the week (ROY G BIV

for the colors of the rainbow—Red, Orange, Yellow, Green, Blue, Indigo, and Violet). Jacob is

obsessed with, or in medicalized language perseverates on, forensics by regularly watching (and

rewatching) the TV show CrimeBusters. He continues with his fixation on forensics beyond the

TV show as he regularly sets up police cases at home (often antagonizing his brother Theo), and

analyzing evidence in his makeshift home laboratory. Despite his high intelligence and vast

knowledge of forensics, he struggles in social situations at home and school. In order to focus

Jacob while at home, his mother Emma came up with 5 house rules that both Jacob and Theo

have to follow: "1. Clean up your own messes, 2. Tell the truth, 3. Brush your teeth twice a day,

4. Don't be late for school, 5. Take care of your brother; he's the only one you've got" (21). To

help Jacob develop his social awareness at school, his mother hired Jess Ogilvy as his social

skills tutor who Jacob feels affection for and greatly admires. But when Jess mysteriously

disappears without a trace, the community is shaken. The town's police detective Rich initially

suspects Jess's boyfriend as the perpetrator. However, it later emerges that Jacob was connected

to the crime scene making him the primary suspect. When Jacob is arrested for the suspected

murder, his mother finds Oliver, a newly established local lawyer, to help defend Jacob and give

him the resources and accommodations he needs to function in the neurotypical courtroom. And

as the story and eventual trial progresses, more information emerges about Jacob's unique

strengths and weaknesses which highlight his (mis)interpretations of unspoken social customs.

Eventually, he is found to be not guilty of murdering Jess Ogilvy as the trial reveals her death to have been an accident that involved Theo and which Jacob attempted to fix as to adhere to house rule number 5.

With the novel, Picoult clearly set out to portray the complexities inherent in the autism spectrum; the template for Jacob was based on her autistic cousin, and was additionally enhanced with the insights from six Asperger's teens and their families which she consulted during her research for the story. Also, the structure of the book further lends itself to a discussion about accessibility. The narrative is uniquely partitioned with eleven police "cases" and 10 formally marked chapters that weave through five-character points of view, which totals 119 "chapters" between the cases and character sections within the formal chapters. Each point of view, Jacob Hunt, Emma Hunt (Jacob's mother), Theo Hunt (Jacob's brother), Rich Matson (the police detective working on Jacob's case), and Oliver Bond (Jacob's lawyer), is distinctly separated from the others with a different type of font used to mark each character's narration. While the shifting first person point of view structure is a narrative device commonly used in fiction, the marking of it with different fonts of text is unique. The marking could have been an editor's choice, the author's choice, or possibly even a collaboration. Whichever the reason, it would seem as if the text being marked with visual differences in some way more distinctly highlights the unique attributes and perspective of each character from the text. And because the narrative feelings towards each of the characters emerges through the spatial differences that mark the varying text fonts, more distinctive patterns are revealed. From these visualizations of fonts, additional insight is uncovered about how each narrator sees the other characters as well as how the narrator perceives themself. Furthermore, the textual marking adds to the accessibility of the narrative as readers can associate the visually different styles of text fonts with a unique

narrator's point of view making it harder to misplace from which viewpoint the text emerges.

While the mystery of Jess's death weaves through the narrative, understanding Jacob's behaviors and actions follows along distinct threads throughout the novel as well to generate more complex narrative feelings. This gives the reader who seeks mystery two distinct cases to solve, one for murder and another for Jacob's autism. There are certainly sticky biases to further discuss on how autism could ever possibly be "solvable" in characters and the inherent neurotypical and ableist focused desires to mark autistic difference as a puzzle to solve. In fact, Jacob's character highlights the tendency of autism fiction texts to be constructed for appeal to a neurotypical audience that gets to safely "stare" at neuroatypical characters in order to "solve" the mystery of their altered "humanity." As a result of this construction, the readers are primed through the embedded sentiment to respond towards autism as extraordinary and fixable. This priming is the result of the story being framed as an overcoming narrative instead of more complexly engaging in why autistic perspectives beneficially contribute to the total spectrum of neurodiversity that should not strive for sameness. Consequently, throughout my investigation of *House Rules*, I argue that the novel uses a cast of neurodiverse characters to emphasize Jacob's neuroatypicality through his exceptionalism—and that he is structured to portray repeated attempts and failures to adhere to societal expectations of connection, contact, and empathy; yet from the neurotypical and ableist focused desires of the narrative to set Jacob apart as different, representations emerge from the embedded sentiment that defy this categorization as he continuously asserts his power to connect, despite his sensory sensitivities, to manifest his own strong and unique empathy that leads the reader to question their expected narrative feelings.

In addition to the biases inherent in Jacob's construction, the representation of Jess Ogilvy as a type of autism therapist to help Jacob "overcome" his autistic ways of being to

perform "properly" in neurotypical society brings up another vital historical reference to note. There are multiple therapies reputed for helping neuroatypical individuals understand and perform according to neurotypical social customs, which include but are not limited to: Speech therapy, Occupational therapy, Physical therapy, and Applied Behavioral Analysis (ABA) therapy. While Jess is depicted in the text as a social skills tutor for Jacob, she most closely aligns with providing a type of ABA therapy to condition his behavioral responses in social situations. And while today's versions of ABA can be very beneficial if the program is shaped constructively, this therapy emerges out of a very troubled history. The idea of managing and redirecting behaviors began around the same time both autism pioneers were conducting their research to identify the neurological variation. While neither Asperger nor Kanner conducted treatment programs, their research paved the way for the creation and implementation of programs to help guide those identified as autistic to function and navigate in neurotypical society. In the decades since both conducted their initial research, there have been figures that have provided beneficial insights into helping autistic people translate the neurotypical world and there have been those who have wreaked havoc and destruction in autistic lives.

One of the first individuals that worked in beneficial autism treatment was Viktorine Zak (aka "Sister Viktorine") who served alongside Asperger as he conducted research. She worked with children in Asperger's clinic by using "music, drama, play, and speech therapy to teach the children social skills" (Feinstein 13). Sister Viktorine, as Silberman details in his book, provided the methods and practical instruction for the University clinic until her untimely death in 1944 during an allied bombing raid of the clinic. Yet even at the end she reached out to continue protecting the children she cared so deeply about, dying with a child in her arms as she attempted to shield the boy during the bombing (Silberman 139). The narrative of Sister Viktorine lies in

stark contrast to the destruction wrought by Bruno Bettelheim. And even though both individuals were deeply influenced and affected by events during World War II, they could not be further apart. Bettelheim, like the autism pioneers, was an Austrian, "born into an upper-middle-class, secularized Jewish family" in Vienna (Feinstein 55). Through a series of events, he found himself in the Nazi concentration camp system during the war but was unexpectedly released after spending nine months in various camps. He then immigrated to America where he became the "director of the Sonia Shankman Orthogenic School in Chicago in 1944" and it was there that "he came to believe that autistic children behaved like the inmates of the Nazi camps and their mothers were like the camp commandants" (54-55). From this belief, Bettelheim harnessed the movement of "refrigerator mothers"—that autistic children were psychologically damaged by their mothers who supposedly were not affectionate towards them causing their autism. While this belief about mother's causing damage to their children and phrase of "refrigerator mothers" was initiated by Kanner, it was embraced wholly by Bettelheim through his practices and is detailed in his book *The empty fortress: Infantile autism and the birth of self*. Bettelheim's parent blaming method created immense controversy, yet was embraced because it offered a cause, and therefore a fixable cure, to autistic being. Needless to say, this line of thought set back progress for autistic individuals and their allies by creating unnecessary and damaging guilt which continues to perpetuate to this day despite Bettelheim's theory having long ago been widely discredited. And as I can attest to from my own parental guilt, society as a whole has not yet widely embraced a diverse infrastructure of understanding that enables autistic individuals to exercise their neuroatypical ways of being. In turn, parents with young autistic children often do not have the community support and helpful knowledge that they need to understand the differing communication styles. Consequently, there still exists a struggle to embrace

neuroatypical ways of being as complimentary to the spectrum of neurodiversity—a way of being that does not need to be fixed but rather accepted and appreciated as different.

The behaviors associated with autistic ways of being have long been scrutinized and medicalized—categorized as something in need of fixing to align it to neurotypical methods of engaging with the world. To get down to the root of discussing these differences involves invoking Dr. Ivar Lovaas and Dr. Eric Schopler who first began to study autism education through behavioral methods in the 1950s and 1960s respectively. The two men are considered to be the first autism behavioral and teaching focused professionals (and they apparently disliked each other immensely). Instead of focusing their research on diagnosis, they worked with autistic individuals by finding ways to teach them to perform according to socially expected behaviors in order to help them better navigate neurotypically focused society. Schopler is not as well known as Lovaas but played an important role in the history and understanding of autism education origins. Furthermore, the methods championed by these two researchers should both be considered together as they became intertwined into what is today called and considered ABA therapy, the leading approach to "treating" autistic people by modifying their behaviors.

Schopler, like many of those who worked in the emerging field of autism research was Jewish and of European descent, "born in the small southern German town of Furth in 1927" (Feinstein 117). He immigrated to America with his family at the age of 11, managing to evade the many horrors that would later befall his peers. Interestingly, he worked with Bettelheim at the University of Chicago. But instead of embracing Bettelheim's methods and theories, Schopler found himself more and more disillusioned, becoming convinced that they represented misinterpretations rather than truths. He eventually found his way to North Carolina where he started up the TEACCH (Treatment and Education of Autistic and Related Communication

Handicapped Children) program after completing work on another project. TEACCH is well known for their goals, which, as Schopler articulates, are aimed towards enabling "the student with autism to fit as well as possible into our society as an adult. We achieve this goal by respecting the differences that autism creates within each student, and working within his or her culture to teach the skills needed to function within our society" (qtd. in Feinstein 126). Schopler viewed autistic individuals as needing assistance to translate the world around them but did not try to fundamentally change who they were as people and attempted to respect their cultural differences. Thankfully, there are elements of TEACCH that were later grafted onto what today is called and considered ABA, but the beginning foundation of ABA lies directly with Lovaas.

Like the two pioneers of autism Asperger and Kanner, and behavioral counterpart Schopler, Lovaas was of European descent, but he was not Jewish. Lovaas was "born in 1927 in Lier, Norway, a small agricultural village outside of Oslo" (Feinstein 128). And unlike Kanner or Schopler, Lovaas endured the many traumas of Nazi occupation during the war in Norway and was ordered to work long hours in the fields as a farm laborer. Only after the end of the war did Lovaas first arrive in America on a musical scholarship and later found his way into studying psychology. From his early professional experiences working in hospitals, he began to focus on behaviors as a way to guide individuals towards better outcomes. But there is also speculation that this behavioral focus is at least in part attributable to his traumatic experiences of living under occupation during the war. Whether or not this is true might provide insight into the research projects he conducted at UCLA where he started working as an assistant professor in the 1960s. Unlike Schopler who distrusted Bettelheim's theories, Lovaas embraced the parent blaming method, attributing the behaviors of children to some kind of mistreatment that they became conditioned to in their home environment. Lovaas felt that if he provided enough support

and love for autistic children, he would be able to reach them through behavioral conditioning by using rewards and aversives to shape their responses. As Feinstein notes, the use of aversives was heavily controversial as "there were the shouts, of course, but there was also corporal punishment for some of the most difficult patients. Staff members would sometimes slap a child; in extreme cases, electric shock treatment was administered" (130). Lovaas might have articulated a love for autistic children but his behavioral conditioning methods were extreme and do not quite align with his loving words. While he later went away from using extreme aversives, this fundamental foundation remains a part of the history and legacy of ABA that must not be forgotten so as not to repeat it again.

In addition to the problematic issues that arise from the historical use of aversives as part of autism behavioral treatment, there are other major biases to consider from Lovaas's methods which are inexorably linked to his other research projects. "Lovaas's crusade to 'normalize' deviance was not limited to autistic children. In the 1970s, he lent his expertise to a series of experiments called the Feminine Boy Project, the brainchild of UCLA psychologist Richard Green. […] He teamed up with Lovaas to see if operant conditioning could be employed as an early intervention in cases of gender confusion to prevent the need for reassignment surgery in the future" (Silberman 319). While Lovaas was not the creator of this later termed "sissy-boy" project, he was a heavy collaborator who felt that behavioral modification would "cure" gender "confusion" just as it could "cure" the "autism" in individuals. Even though ABA as it is practiced today does not ascribe to many of these early beliefs, it still cannot escape this foundation which views autistic individuals as in need of a "cure" rather than attempting to understand and appreciate their differences. And if there is any tellingly tragic story to illuminate the extensive damage that emerges from this behavioral "cure" mindset, it is of Kirk Andrew

Murphy, the "subject" of the "sissy-boy" project which both Green and Lovaas worked together on at UCLA. Kirk was heavily conditioned to display more masculine behaviors that were contradictory to his way of being and engaging with the world. And in order to avoid repetitive aversive trauma, he complied with the directions of the researchers. Thus, Kirk was considered a success story which launched a tragic trajectory championing this type of treatment to "cure" gender "confusion." Yet the closing arc of Kirk, when at the age of 38 he committed suicide by hanging after decades of depression, perhaps reveals that behavioral therapy can be as damaging as it has potential for being beneficial. While Lovaas tried to distance ABA, and himself, from the Feminine Boy Project, it is hard to ignore that "both projects were based on the same fundamental view: that it's easier to change a child's behavior than it is to designate that behavior in society—whether it's limp wrists or flapping hands" (Silberman 323). Consequently, the complex history of behavioral modification from TEACCH in North Carolina to ABA in California is hard to reconcile with what is classified as ABA today. But perhaps it is this deeply troubled history that reveals more about how autism is viewed and shaped by society as in need of a "cure" or "fixing." Because a neurotypically and ableist focused society often unconsciously embraces the mindset that it is easier to change someone to conform to neurotypical norms than it is to do the work of designating and appreciating neuroatypical value as a way of being.

Returning to *House Rules* with a renewed perspective about the histories of autism therapies allows for a more complex interpretation of autistic characters. And just as there are problematic biases that arise from the history of autism, there are elements of these biases that also permeate into the novel. Yet there is one vitally important element in the story that is dwelled upon through the narration—the dynamics of family when neurotypical and neuroatypical family members cohabitate in the same shared spaces. Jacob, his mother Emma,

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and his brother Theo are all tied together through their uniquely created structures of human

closeness and connection that bind them to each other despite their struggles, challenges, and

differences. Of important note, Jacob's father Henry, is mostly absent from the story; stemming

in part from Jacob's diagnosis, Henry abandoned Jacob, Theo, and Emma and started his life

over in California. Henry established a new neurotypical family with a different wife, Meg, and

two daughters, Isabella and Grace. Yet, interestingly, part of Henry's decision to leave his first

family most likely emerges out of his own (undiagnosed neuroatypical) differences; while he is

never labeled as having autism, both Emma and Theo at different moments in the text make

connections between the similar behaviors and traits that both Henry and Jacob manifest. But

Jacob, from his neuroatypical perspective, never comments on his father's behaviors or traits

which indicates a certain silence and lack of authority given to Jacob to discuss his perspective

on autistic ways of being. Perhaps it was Henry's way of being that led to an inability to cope

with Jacob's differences in the family prompting him to seek another "normal" family as his

eldest son became simultaneously too much like and too far from his own personality. Whatever

the cause, Henry pushed away from Jacob in order to flee into an atmosphere in which he could

recreate neurotypical normality. And, as if by equal and opposite forces of magnetism, Emma

embraced Jacob closer with Henry's departure, actively trying to fill the void left in the family

by Henry's absence.

As a way to cope with the hole left by Henry's departure, Emma does everything possible

for Jacob to help him fit into neurotypical demands and expectations. She takes on the role of

both parents from a typical household in order to provide her children with the love and support

that she feels both boys need for their development. While Emma certainly seems to love and

continually provides attention to both of her sons, Theo is often angry and upset about his

brother getting the majority of the attention for his neuroatypical needs. Interestingly, while Theo is cast as a neurotypical character, he seeks a fairness and equity more closely associated with neuroatypical behavior. But rather than try to understand the world from Jacob's perspective, Theo focuses on how Jacob's behaviors disrupt and diverge from neurotypical expectations: "I am supposed to make exceptions for Jacob; it's one of our unwritten house rules. So when we need to take a detour away from a detour sign (how ironic is that?) since it's orange and freaks Jacob out, that trumps the fact that I'm ten minutes late for school" (Picoult 11). As the reader approaches this section of the text, they are constructed through Theo's viewpoint to more strongly identify with the frustrations that he experiences and to see what is constructed as neuroatypical absurdity. Theo's aggravations emerge from his home environment in which he feels his perspective is always seen as secondary as both "supposed" and "trumps" in the passage gesture towards. The narration is set up for the reader to feel the anguish through Theo's viewpoint which presents his brother's needs as being more important and always given the highest priority. Thus, he is frustrated by the lack of attention he receives as well as by feeling that he does not get the priority in family decisions.

The pent-up anger permeating through the narrative primes the reader towards feelings of negativity that align with Theo's frustration, in which he struggles to claim his own identity outside of continually coping to meet his brother's unique needs. And Theo's words, such as "exceptions" and "freaks," encourages feelings to emerge from the embedded sentiment in order to sway the reader to his perspective—one that sees Jacob's needs and ways of being as ridiculous. Furthermore, the words used highlight how Theo as the neurotypical narrator has taken over control of the neurodiverse narration by silencing a neuroatypical perspective and explanation of sensory sensitivities. Thus, Theo's angst highlights the toxicity of the

environment that Emma has unknowingly cultivated to discourage neurodiversity in their home. Because instead of fostering an environment of understanding and respecting the beneficial qualities that can emerge from the blend of neurotypical and neuroatypical perspectives, Emma has generated an atmosphere in which the vast majority of her attention and work has gone into Jacob. An understandable parental coping mechanism to attend to his neuroatypicality as a single mother, her well-intentioned decisions have created a rift between Jacob and Theo. And perhaps if survival and coping had not been the overwhelming focus, a healthier environment might have been created if she had put in effort to not only translate the neurotypical for Jacob but also the neuroatypical for Theo.

Jacob at times experiences overstimulating sensory situations as the detour in the previous section indicates. Yet the narrative rarely acknowledges Jacob's needs. Instead the focus centers around Theo's angst, encouraging the reader to bristle at Jacob's idiosyncrasies along with Theo. While the reader may choose not to engage in the construction that encourages seeing Jacob as unyielding and impractical, the text certainly primes this response. Throughout *Representing Autism: Culture, Narrative, Fascination,* Stuart Murray conducts an extensive analysis of autism in society to highlight how it is constructed through various mediums, which in turn frames how it is perceived and understood. In his work, he highlights the tendency of narratives to set two differing characters to contrast against each other, a practice which provides insight into the characterization and intertwining of Jacob and Theo: "What unites the majority of these narratives is that the representations they contain are characterized by a focus on ontological and 'human' difference that frequently depicts an individual with autism in relation to an individual with ostensibly typical (non-impaired) behaviour and mediates an idea of the human by a refractive comparison of the two" (13). Murray is bringing to light the practice of

constructing autistic characters through comparing them against neurotypical characters in order to show how difference emerges in the contrast. And because of the directional placement in "refractive comparison," the neurotypical character is always seen as a "whole" character and the neuroatypical character as a "partial" character that does not fulfill all the required expectations of wholeness. In turn, the neuroatypical character is depicted as less than human as they fail to meet all the neurotypical criteria when set into a comparison. Murray further discusses in his analysis that characters are constructed to focus readers towards a "fascination with the subject [that] must always be in the terms of the majority audience" (13). This again highlights the trend in literary narrative to structure characters towards the "majority audience." An audience which desires to be in the neurotypical majority with Theo in order to be fascinated and perplexed by Jacob's unique differences instead of understanding Jacob's needs. Furthermore, as detailed and discussed earlier with the words "exceptions" and "freaks," the embedded sentiment that emerges further encourages alignment to Theo's neurotypical and ableist focused perspective— through the words which are intended to generate an aversion towards autistic ways of being and maintain power over autistic individuals. Because the audience desires to remain in a neurotypical normality that does not have to grapple with the complexity of difference that would remove them from their comfort zone that provides them the distance to safely view and maintain their power over autism.

While Jacob's mother Emma has sacrificed her pleasure for her son's well-being due to a lack of immediate and extended family support (as well as community support), she does not feel anger towards her son. Rather, she sees herself as a selfless provider who always puts the needs of her son above her own. Yet this "selfless" portrayal is built upon a foundation in which she is constructed as a martyr, constantly sacrificing herself and family in order to reshape Jacob's way

of being as acceptable to society. And even though she has unconditional love for Jacob, she is upset by the fact that Jacob could never love her back in the same neurotypical unconditional way that she feels. She reflects on this supposed lack of reciprocal emotion in the following passage: "I think that's the attribute I miss seeing the most in my son: empathy. He worries about hurting my feelings, or making me upset, but that's not the same as viscerally feeling someone else's pain. Over the years, he's learned empathy the way I might learn Greek—translating an image or situation in the clearinghouse of his mind and trying to attach the appropriate sentiment to it, but never really fluent in the language" (Picoult 75). The reader approaches this section and is encouraged to side with Emma in her portrayal of heartbreaking frustration over her son not being able to fully understand empathy. The words such as "hurting," "upset," and "pain" all tend to generate feelings of negativity in response to Jacob's supposed lack of empathy skills, and in turn continues to generate neurotypical and ableist focused frustration towards his character. In Emma's view, Jacob cannot provide her with the response she desires for all the sacrifices she has selflessly made for him. Because the reader is assumed to be from the neurotypical majority and possess fully functioning empathy, the text perpetuates an ableist focused construction which encourages the reader to side with Emma in her disappointment about Jacob's neuroatypical lack of emotional abilities. Additionally, the text again positions a neurotypical narrator as possessing the only valid authoritative voice, silencing the neuroatypical point of view and further indicating how the authority of this neurodiverse narration lies within the power of the neurotypical narrators.

Yet the language of the novel that generates negativity and frustration towards neuroatypical modes of thinking could have been set up differently. Instead of focusing on the lack of ability, the words could have been structured positively to show how much time and

work Jacob has invested into understanding empathy. A focus that would better appreciate not only how many skills he has gained but also how much beneficial insight he contributes through his alternate ways of processing that complement "traditional" empathy. However, Emma's words emphasize her neurotypical and ableist focused perspective does not always properly recognize Jacob's skills. And while Jacob does experience empathy differently by consciously translating each input in order to attach the appropriate sentiment, what Emma fails to see is that this process is the exact same subconscious process she uses to experience her neurotypical empathy. Thus, Emma does not recognize that what she wants to separate as autistic difference is actually just an alternate process for completing the same task. And perhaps Jacob takes longer than Emma to attach his sentiment to the inputs he receives when he decodes empathy but that does not mean he cannot feel it viscerally. In fact, he may feel empathy even more deeply than his mother because he spends much more time working with an input rather than her method of subconsciously identifying an input and quickly moving onto others. But the text is constructed for a neurotypical and ableist focused viewpoint that aligns with Emma's heartbreak over her son's disability by highlighting his supposed lack of ability.

Fiona Kumari Campbell, in her work *Contours of Ableism: the production of disability and abledness*, intensely investigates instances of how disability and ability are framed (often inappropriately) as different. And she takes up issues, similar to the moment highlighted by Emma's discussion of empathy, surrounding perceptions of impairments in society to show that the conceptions of difference are important in understanding social constructs of disability: "Many of the affects of impairment are able to be adequately managed by affordable access to a range of supports, strategies and technologies. It is too easy to assume that impairment is the source of a 'disability problem' rather than the way society responses [*sic*] to impairment as a

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form of difference" (35). As Campbell argues, framings of impairments are set apart more by social definition and perception than actual limitations—because disability is a socially constructed way to conceptualize and view impairments. Thus, Jacob is impaired in his ability to understand empathy in a neurotypical way. But he becomes disabled by Emma, losing elements of his agency, because she responds to his alternate way of processing by labeling it as a disability, for her indicating a lack of ability. Additionally, the neurotypical and ableist focused construction creates a fixation on Emma's depiction of what Jacob does not have instead of appreciating the vast set of skills he does have and the incredible problem-solving skillset he has developed. Because Emma creates Jacob's disability from his impairment, the narration again sets up the reader to feel with Emma rather than Jacob (who supposedly cannot feel). Through the continued construction of Jacob that is surrounded with negativity and frustration, the reader is primed to interpret his character through a neurotypical and ableist focused mindset—one that privileges the neurotypical narrator within the neurodiverse narrations, further perpetuating and continuing to view his cognitive differences as disability and lacking agency rather than as consisting of impairments indicating a powerful difference of ability. Yet by moving outside of the neurotypical construction, the reader could potentially witness the uniquely different depths and complexities to Jacob's feelings that emerge from his neuroatypical characteristics; feelings which provide a beneficial alternative way of being that complements the spectrum of behavior in society.

The difference in perspective Jacob provides through his neuroatypical processing could be used to benefit understandings of cognitive variations that offer richness to the spectrum of neurodiversity. Yet when the story does glimpse into neuroatypical narration with Jacob's point of view, the ableist focused narration continues to construct his character with negatively focused

words. The narrative continues to perpetuate an insistence on seeing autism as a spectacle—something to read/watch at a distance and which does not appear to have any beneficial application to neurotypicality. The spectacle of negativity can perhaps best be seen with the following glimpse of Jacob's viewpoint when he is out with Jess at a restaurant working on his social skills: "It is hard for me to explain why it is so difficult to look into people's eyes. Imagine what it would be like if someone sliced your chest with a scalpel and rummaged around inside you, squeezing your heart and lungs and kidneys. That level of complete invasion is what it feels like when I make eye contact" (Picoult 63). This section of text is filled with negatively focused words, such as "sliced," "rummaged," and "squeezed," in reference to Jacob's bodily reaction to eye contact, a gesture seen as a fundamental cornerstone in neurotypical social communication. Through these words he subconsciously highlights how his body continues to be a spectacle for viewing—and how society has shaped his perceptions of sensory experiences. Because Jacob's insight on eye contact reveals an entirely different meaning about this gesture and what it conveys to his neuroatypical bodily system. And despite the protestations about lack of ability from Emma, as discussed earlier, Jacob does viscerally feel pain. Instead of subconsciously/automatically feeling the pain of others through imagining their feelings, he feels the pain of others through conscious attachment of feelings as well as through eye contact. His increased and amplified sensory processing creates the most visceral feelings of pain for him, of a much higher intensity than neurotypical ability, when he consciously feels through eye contact a multitude of emotions. In other words, by glimpsing into an iris Jacob can simultaneously feel many emotions, such as pain and joy, from just that short glimpse of a person. The intensity of multiple feelings is visually encoded into the gaze, creating an overwhelming flood of sensory system inputs for Jacob. Thus, his use of medicalized language that evokes open heart surgery

provides insight into how sensory overload creates powerful visceral and bodily responses to feelings.

Emerging from these words and bodily response is how Jacob's experiences have the potential to recalibrate societal misperceptions of neuroatypical ability. Rather than having an inability to feel, Jacob feels intensely and deeply through seeing with his neuroatypical processing which can indeed feel and, at times, too much. And his reflection on eye contact ripples to other points later in the story to provide more insight surrounding his interview with the police when he is questioned about the events surrounding Jess's death. Because of his intense desire to avoid the visceral pain that eye contact evokes, he avoids the performance of this neurotypical gesture as much as possible. And when he does not make eye contact during the interview, the police conclude that he is guilty, a decision based upon neurotypical expectations which associate it with sincerity and innocence. Thus, Jacob's lack of eye contact drives the police towards a determination of his lack of sincerity and guilt, simply because they do not recognize or understand his neuroatypical need to avoid this affective gesture. The problematic assumptions made by the police surrounding Jacob's desire to avoid eye contact is one of the many "puzzles" created by his character which is framed as a mystery for neurotypical readers to seek and solve. Yet without an understanding of Jacob's sensory sensitivities, the solutions readers may reach for this "puzzle" could miss the full extent of how much pain this gesture evokes and the impact it makes to his body.

Sonya Freeman Loftis, in her book *Imagining Autism: fiction and stereotypes on the spectrum*, conducts an in-depth investigation of literary characters spanning from Sherlock Holmes to more recent contemporary film and literature characters. In her work, one of the elements that she discusses is how autistic characters are stereotypically set up like Jacob as

mysteries, or puzzles, to solve because of their contrasting difference from neurotypical expectations. Additionally, her examples reveal how depictions of autistic traits usually manifest in the mystery and detective genres, as the expectations of these genres lead to reader desires to solve puzzling characters which took hold from the foundations established by Sherlock Holmes: "Another common stereotype of people on the spectrum is to represent them as problems, mysteries, or puzzles. The other characters dwell on Holmes's autistic traits as symbols of mystery and exoticism, thus casting the character with autism as a puzzle in need of a neurotypical solution" (38). Using Loftis's insight, understanding Jacob as a neuroatypical puzzle for neurotypical and ableist focused reader consumption seems a logical outcome from the narrative structure. Because, as per genre expectations, readers likely approach the text looking to solve the mystery of Jess's murder. And along their quest to solve the murder mystery, these readers most likely delight in solving the mysterious "puzzle" of Jacob's neuroatypical behaviors without consciously realizing that their intense enjoyment of the book results from getting two mysteries to "solve." Furthermore, instead of seeing eye contact from the painful context of Jacob's neuroatypicality, the reader most likely, through the priming of sentiment embedded in the narrative, sees it from the everyday context of neurotypicality which demands its constant use. Consequently, the reader likely views Jacob's lack of this gesture as a piece of the puzzle that they can use in solving the mystery of his behaviors. And the reader is primed to view the eye contact puzzle without fully engaging with the complexities of the embedded sentiment that are invoked through Jacob's experiences. Because unless the reader can internalize and understand neuroatypical sensory sensitivities, they cannot fully grasp the immense burden and bodily reaction this gesture evokes in neuroatypical sensory systems. But perhaps if the reader goes deeper to get to the truth of the differences, to viscerally understand

eye contact, they will understand the intensity and depth of Jacob's feelings. This in turn would create more understanding and appreciation for the agency and importance of neuroatypical differences leading to greater acceptance of neurodiversity within society.

Because of the "puzzle" structure and mystery construction in *House Rules*, not only is neuroatypical eye contact misunderstood but there are also other problematic and damaging elements which emerge from the neurodiverse narrative infrastructure. One of these elements surrounds Jacob's rhetorical positionality. As his character is created as a depiction of mysterious and puzzling (read: non-neurotypical conforming) actions there is an insinuation that he is not fully human. This construction emerges through the "puzzle" structure in which there appears to be missing pieces of his assumed lack of empathy and connection. And because there is supposedly something missing from his rhetorical position, instead of Jacob being the authority on his own identity and portrayed as fully able to explain his experience of autism, the rhetorical authority and voice for the narrative and autism is given to his mother. In turn, Emma is the main guide for the narrative as it constructs autism for a neurotypical and ableist focused reader. The following passage captures one glimpse of this narrative rhetorical authority that Emma conveys as she over/controls and articulates Jacob's autism while positioning herself as the authoritative voice:

> I've met so many parents of kids who are on the low end of the autism spectrum, kids who are diametrically opposed to Jacob, with his Asperger's. They tell me I'm lucky to have a son who's so verbal, who is blisteringly intelligent, who can take apart the broken microwave and have it working again an hour later. They think there is no greater hell than having a son who is locked in his own world, unaware that there's a wider one to explore. But try having a son who is locked in his own world and still wants to make a connection. A son who tries to be like everyone else but truly doesn't know how. (Picoult 5)

In the passage Emma sets up a comparison to show that Jacob resides opposite of the "low end of the autism spectrum" as he possesses "high" functioning and exceptional capabilities. Yet his

unique personal qualities are not enough to make up for his autistic difference and provide Emma with fulfillment. Because in her rhetorical move, she positions herself as not "lucky" to have a son who supposedly cannot make a "connection" as he does not know how. Yet what is missing is that Emma has not done the work to accept Jacob's neuroatypical difference; she does not see how much he in fact does connect through alternative means. Similar to her view of his empathy, she misses seeing what is right in front of her. And while he certainly does connect differently, that does not mean he cannot connect.

Emma tries to contrast Jacob to his autistic peers in order to unpack how his capabilities are perceived as good but in turn uses this to highlight how un-capable he is with connections. Similar to the earlier discussion in which Murray discusses contrasting differences as he details the "idea of the human" being mediated "by a refractive comparison," Emma appropriates this autism contrast as a weapon against her autistic son. She uses autistic differences in a subversive way to create difference between unique positionalities upon the autism spectrum (which in no way acknowledges the fraught and broken constructions of "high" and "low" in reference to how people "function"). And instead of celebrating all the ends of the autism spectrum as providing unique attributes, she focuses on herself as an object of pity. Emma sees herself as misunderstood by society because Jacob is not "low" functioning and desires to behave like neurotypical children (not to mention that she has encouraged this behavior by engaging him in multiple therapies to produce from his behavioral responses more "normal" connections). But what she seems to be truly struggling with is that she wants to control and take the power from his neuroatypical narrative while simultaneously wanting him to be neurotypical.

Yet Jacob defies the neurotypical narrative construction and desires of his mother in a subtle pushing back. Because even though Emma tries to frame him as not capable to connect,

her angst in the passage points to the fact that he does connect, just not in the ways that she wants and can easily manipulate. Jacob becomes a part of the conversation even when he does not understand all of the unsaid social expectations and norms which makes Emma lose elements of her control. Thus, while her outward actions embrace his desire to connect with people, her feelings are conflicted because she does not know how to build the bridge between her neurotypical desires and Jacob's neuroatypical actions. Furthermore, this passage about "functioning" and in turn narrative authority brings up an important element which permeates through fiction consisting of autistic characters; that the control and rhetorical power of autism narratives often resides with non-autistic characters. The lack of autistic control to narrate autism often lies within neurotypical desires and unconscious egotistical mindsets of people trying to establish the one "right" way to be in society. In the case of *House Rules*, the neurotypical and ableist focused construction of the narrative has determined that Jacob is unable to understand and make meaningful connections, that he lacks a fully human rhetorical positionality. And instead of the focus of the novel being on Jacob's experiences of the world, it centers around his mother's pain that results from his neuroatypical ways of being.

From the perspective as an autistic academic researcher, leading autism scholar Melanie Yergeau discusses the problems surrounding rhetoric and autism identity in her book *Authoring Autism: On Rhetoric and Neurological Queerness*. Throughout her work, she argues about the problematic and damaging constructions that result when diagnostic labels remove autistic rhetorical authority: "Through diagnosis, autistics are storied into autism, our bodyminds made determinable and knowable through the criteria of neurodevelopmental disability. Through diagnosis, nonautistic stakeholders become authorized as autism somethings—as autism parents, as autism researchers, as autism therapists and specialists and mentors and advocates." (2). As

Yergeau details, the label of autism in relationship to an non-autistic person provides the most authority in current societal constructs. And the societal authority conveyed to non-autistics is what provides them with power over autistics, in turn silencing autistic individuals by reducing or removing their authority. The lack of autistic power is clearly threaded through Picoult's novel as Jacob is not given the power to control the story or his autism—only his mother can be the "reliable" narrator of autism rendering Jacob as less than human in his supposed unreliability. Yet Jacob most certainly could narrate his own experiences if the novel had been set up to champion neuroatypical positionality and voice as part of the broader neurodiversity spectrum. However, the narrative structure caters to a neurotypical and ableist focused reader, a structure which must give this reader mysteries to solve in both the murder case and autism, in turn blocking an articulation of Jacob's full narrative authority and potential. Yergeau frames the supposed lack of authority for autistics to the fact that "traits and check boxes tell a story" rather than individuals (2). Thus, Jacob's medical diagnosis tells of his autism rather than Jacob himself, because his autism identity renders him as powerless and unable to tell his story which must come from a position of neurotypical "authority," his mother.

Emma's continual exercise of control over Jacob that strings through *House Rules* is stereotypical of parents to autistic individuals in society and indicates one of the many examples of how parental advocacy controls the autism narrative. The empowerment and place of parents with autistic children in social constructs has an immensely complex history. The parental advocacy movement on behalf of autistic children began in multiple places around the world shortly after Kanner identified what today is called autism. The early parental groups were started with the best of intentions—to create a support network and information distribution mechanism for parents as they tried to understand their children who did not respond in ways

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that the parents knew how to interpret. Some of these children were too young to speak and some of these children never learned to speak in a neurotypical developmental arc. Thus, the move to provide them with a voice is important, and a natural extension of parenting for any child. But that does not mean these children did not know how to communicate in alternate modalities. Consequently, if this speaking for autism is taken too far, it becomes problematic by removing power and authority from autistic individuals who, like all children, reach a point in their development where they can and should self-advocate for themselves. Parents of all children guide and condition them to learn not only how to speak but also how to understand societal structures and responses. Yet the classification and methods of this process become even more muddled when the parent and child have different communication styles and ways of being. As a result, instead of letting their children become adults, what often occurs is that parents of autistic children continually attempt to speak for them because they have been conditioned to believe that autistic people are unable to function without their support. Thus, there are many elements of parental advocacy history which are fraught with problematic biases of parents (over)controlling their children in what is framed as their best interest. As detailed in Ann McGuire's book *War on Autism* and Stuart Murray's book *Representing Autism*, this controlling at times even goes to tragic extremes as is described through multiple examples of parents who become so overwhelmed by the differences in communication that they murder their autistic children. Intriguingly, instead of society being appalled at the death of these innocent children, they are more inclined to focus and feel emotions for the parents who were pushed to such an extreme by a society that did not provide them with enough proper support. As a result, the framing indicates that the parents have been failed rather than the innocent child who is dead.

The type of societal support that takes the viewpoint of the parents is clearly seen through

Emma in *House Rules*, as the story permeates with her point of view when she constantly speaks for and frames Jacob's autistic experiences through her neurotypical lens. And the dangers of overspeaking do not start and stop with this story but goes beyond into numerous novels that detail autistic experience from mainly neurotypically focused perspectives. One of the inherent limitations with non-neuroatypical narration is that the autistic character's voice becomes continually downplayed and underemphasized in comparison to the neurotypical characters. Yet despite these very real shortcomings built into the infrastructure, the literature does not have to be analyzed this way. There can and should be a greater focus on the autistic voice and power that pivots the narrative interpretation to reject the stereotypical speaking for and rather emphasizes how different communication methods are just as strong as traditional methods. Thus, instead of being unable to speak Jacob should become the one that speaks and represents himself, making society question their biases and beliefs to make the space for diversity within society.

Yet what would happen if the societal structures that have created the many battles within the autism cultural wars were to disintegrate? What would happen to labels in a post-apocalyptic society in which medicalization no longer existed because it no longer mattered? Looking to M.R. Carey's *The Boy on the Bridge* tells just such a story. In the dystopian post-apocalyptic future represented in the novel, a group of six scientists and six military members set out on a journey to find a cure for the *Cordyceps* fungus that has infected the human race creating zombie hordes of "hungries." These are not the slow-moving zombies originally inserted into popular culture by George Romero in *The Night of the Living Dead* and cycled through the nightmarish narratives by many creators afterwards. Rather, these "hungries" move fast and strike in hordes in their fast paced and accelerated takeover of human minds that has ironic and timely parallels

to the ever-tightening circle of technological innovation in society today. In *The Boy on the Bridge*, the non-infected human survivors are desperate to find a cure to reverse the fungal cause that creates the zombie "hungries." To investigate cures, the people who live in Beacon, a safe haven community that consists of the sole remaining group of uninfected humans in Great Britain, repurposed two scientific traveling exhibition laboratories into two military reinforced research laboratories (the Charles "Charlie" Darwin and the Rosalind "Rosie" Franklin) to search for clues and a cure for the *Cordyceps* fungal plague. During the course of the story which follows the journey of Rosie, the crew members are identified within two factions: the scientists, Alan Fournier—civilian commander, Samrina Khan—epidemiologist, Lucien Akimwe—chemist, John Sealey—biologist, Elaine Penny—biologist, and Stephen Greaves—nobody is entirely certain; and the military escorts, Colonel Isaac Carlisle—military commander, Lieutenant Daniel McQueen—sniper and second in command, Lance-Bombardier Kat Foss—sniper, Private Brendan Lutes—engineer, Private Paula Sixsmith—driver, and Private Gary Phillips—quartermaster (Location 229). This group of 12 characters journeys throughout the full land mass of post-apocalypse Great Britain in search of places where the fungus cannot grow. They travel and research on Rosie as it provides the best scientific equipment built into the most rugged military armored vehicle available. And all twelve members of the team were chosen from a large group of qualified applicants for the opportunity to conduct research across the country in the hopes of finding the cure to the fungal plague that threatens the existence and future of the human race. Thus, the Rosie team represents one of the last hopes from Beacon to find a cure for survival.

The story is narrated through the third-person omniscient point of view that primarily focuses on Dr. Khan, Stephen Greaves, Col Carlisle, and Lt McQueen. This style breaks from the

previously investigated novels in which the narrative viewpoints were more precisely identified by character, or a single character viewpoint was followed. Thus, Carey's text adheres to more conventional expectations with not privileging one character or separately distinguishing between multiple characters. Although this can lead to some misreading by attributing the thoughts to the wrong character, it aligns with a more traditionally narrated story in this style. Yet it also brings up interesting elements to consider as there is a unique neurodiverse mixture of hearing the story alternate between neurotypical and neuroatypical thoughts and feelings. Even though the novel is focused primarily around survival in the harsh conditions following the onset of the zombie apocalypse, the alternation between various neurodiverse points of view brings with it a chance to see the same things differently. Having the neurotypical and neuroatypical perspectives laced together brings a new appreciation and view because each character possesses their own interpretations of events. And while the neurotypical characters do have the majority voice and heavy privilege through the story, there is thankfully an alternative neuroatypical point of view presented that challenges the majority authority.

There are many interesting elements to discover and which could be discussed about the novel, but I focus my exploration around 15-year-old neuroatypical Stephen Greaves. The first glimpse of Greaves point of view comes in Chapter 7 through a detailed encounter of his field work with the Rosie scientific exploration laboratory when he observes and investigates an anomaly of behavior he recently detected in a group of "hungries." Also, of important note, his title of "nobody is entirely certain" parallels his lack of a definitive label or formal autism diagnosis. However, the team members on Rosie refer to him by "autistic" twice and "savant" another two times throughout the narrative. Thus, he is suspected of having autism but does not have a formal diagnosis. Labels and medicalization are nearly non-existent in the post-

apocalyptic societal structure as medicalized language from texts like the DSM that include checklists of criteria is not something that people are concerned about. Rather, they are much more focused on surviving the plague of "hungries" who are infected with the *Cordyceps* fungus. Yet at one point in the narrative when the autistic label reference is invoked there is also discussion about how while Greaves might have been diagnosed as autistic in pre-apocalypse society, he may also manifest unique mannerisms due to the immense trauma he experienced as a result of living through the chaos of the fungal apocalypse. Consequently, it would be hard to distinguish the threads of atypical difference as they could be either from his inborn neurological structure or from a traumatic neurological restructuring—and quite possibly it could be a combination of both.

In some interviews Carey discusses that prior to writing novels he worked with some autistic students in his capacity as a teacher and additionally has a friend and family member who are on the autism spectrum. He purposely points out, however, that Greaves is not based upon these individuals. But he does state that the character was informed by these experiences. Furthermore, he discusses in some forums that in writing both *The Boy on the Bridge* and *The Girl with all the Gifts* (another novel in the same post-apocalyptic universe), he did significant research to best portray how a fungus could potentially affect and highjack a human brain, similar to the process of how *Ophiocordyceps unilateralis* infects ants in the Amazon rainforest. The combination of his background experiences and research most likely combined together and influenced how Greaves was written as a character to illustrate cognitive difference. And due to Greaves being able to think and see differently from his neurotypical teammates on the Rosie crew, he is the one who holds the key and power to solving the problems resulting from the fungal infection. Because it is he alone who discovers a cure rather than the older and more

highly educated members of the Rosie team.

Greaves's breakthrough to find the cure arises through a series of accidents when the team ends up researching a dead "hungry" child. In a desperate experiment towards the end of the narrative in which Greaves tries to save Dr. Khan and her unborn child, he discovers that the ground up neurological material (the brain and spinal column) of a dead "hungry" child provides a temporary antidote to anyone infected with the fungus. Yet instead of passing along this information to Beacon, he chooses to let the fungus infect him rather than reveal his knowledge. For Greaves, the cure is worse than the infection as the neurotypical survivalist response would likely be to build farms where "hungry" children would be bred for slaughter to provide the remainder of the human race with a temporary solution to a permanent problem. Thus, instead of advocating for the continuation of a neurotypically focused society, Greaves looks for something beyond, something that holds the hope of a better future than his destroyed present. Throughout my investigation of *The Boy on the Bridge*, I argue that the complex cast of neurodiverse characters in the novel intensively heightens the mistrust between Greaves and the neurotypical members of the Rosie team in their pursuit to find a cure for the *Cordyceps* fungus; yet it is Greaves's neuroatypicality, in ways clearly seen and unseen, which pulls from the embedded sentiment to call upon the reader's inlaid passions and pleasure to generate complex narrative feelings about whether or not they would be willing to think as differently as Greaves and go as far to unselfishly make the ultimate sacrifice to maintain the spirit of humanity.

The search for the elements that cause, and methods in which to cure, the *Cordyceps* fungus that has overtaken the human race in *The Boy on the Bridge* have striking parallels to some of the most recent events in autism history in which there is a constant search for the cause of and ways to cure autism. Stuart Murray intensely investigates the current autism controversies

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that have come out of the "cause" and "cure" mindset in his book *Autism*. Through his work he highlights the two major controversial issues/topics currently being grappled with in society: "The first big issue in contemporary autism controversies surrounds causation; the fact that still eludes medical research. […] The second highly controversial topic is that of whether autism can be cured, or whether this is even an appropriate question to ask given what we now know about the condition" (76). The cause and cure mentalities that Murray highlights seem to dominate autism discourse as parental advocacy groups raise millions of dollars to support autism research. Yet these large sums of money do little to support autistic people as they navigate through a neurotypical society. Rather, these funds are used to find the cause and cure of autism and provide little to no support to communities of autistic people. And perhaps the biggest question that arises from this problematic focus highlighted by the funding issues is how will society benefit from a potential cure found by identifying the cause of autism? "Inherent in a number of the environmental theories of autism causation (others include overhead power lines and exposure, of the child or pregnant mother, to pesticides and other chemicals) is a worry that we live in a toxic age, and that this must somehow seep into our bodies in ways we have yet to understand" (Murray 80). There is a large focus in autism research organizations that center (perseverate?) on neurotypical desires to remove autism through finding the cause and cure as to "unburden" the "toxic age" of society. Yet if the cause of autism were to be identified, the cure for autism would likely be heavy use of selective abortion and pregnancy termination methods. But what these potential cures and neurotypical desires fail to realize and acknowledge is how much richness and advancement has been ushered into society by autistic individuals. From Temple Grandin's livestock innovations, to the internet as an alternate modality of communication, and even back towards historical figures who whether or not they had autism

certainly thought with a neuroatypical focus to imagine a different way of being in order to usher in advancements to science and technology. Thus, if autism were to be rooted out and removed, what would be gained and what would be lost?

Parents have long struggled through the cause and cure mindset, wanting to desperately identify what happened to make their children neuroatypical. Thus, when first presented with the theory of autism as neurological difference, they were quick to embrace this mindset and distance themselves from Bettelheim's parent blaming theories. But even though they moved away from Bettelheim, they continued to want to pursue methods which would frame autism as a variation that is "fixable" with interventions rather than embrace autistic difference as an alternate way of being. Consequently, parent communities continue to be immensely enamored by any methods that provide the potential to identify the cause of autism. And there is no figure more prominent in current controversies than Andrew Wakefield. Previously a practicing doctor in gastroenterology, Wakefield studied different conditions affecting the human digestive system. One of his theories was that vaccines caused a reaction in the bowels which led to children developing autism. Yet this was not entirely his original theory as he was supported by groups who provided him with funding to find this specific result in an extremely unethical conflict of interest. While these unethical details were later uncovered, his publication was redacted, and he lost his license to practice medicine in the United Kingdom, it has done little to undo the damage he has done by linking autism and vaccines which now dominates popular culture discourse on autism:

> There is no evidence to suggest autism is caused by immunization. A number of epidemiological studies from 2003 onwards, using ever more complex methodologies, have shown that rates of the condition increased even after Thimerosal was removed from vaccines, or even if (as has been the case in Japan) the three elements of the MMR were given to children separately. The controversy that suggests that inoculation might be the cause has been, however, the most visible discussion of the condition in the last

decade. (*Autism*, Murray 87)

As Murray details, the most recent autism controversy and societal desire continues to be to find the cause of autism in the hopes of finding the cure. In addition, as many have written about, the link between vaccines and autism diagnosis are heavily linked by correlation as autism begins to become more apparent in a child's developmental growth around the time that they receive vaccines to help keep them safe (and alive) from previously deadly epidemic childhood illnesses. Yet as the studies have shown, and Murray highlights, vaccines do not cause autism. But there is a desperate desire for parents to be able to identify a cause and subsequently fix the "problem" rather than accept that autistic difference is a variation in a person's neurological structure that manifests through different ways of being. Just as Bettelheim set back progress for autistic individuals and allies of a previous generation, Wakefield set back progress for the current generation. Will history repeat itself and this pattern? Or will we be able to accept autism as a naturally occurring and beneficial difference before another damaging figure purports to find a cause of autism that can be cured? Perhaps the tale of Greaves in a post-apocalyptic future provides the most fertile ground to explore the dangers of finding the cause and cure—and that the cure might in fact be worse than living with the cause. Also, that instead of trying to fight against an imagined or mysterious enemy, we would greatly benefit from learning about how we all bring unique qualities to a shared neurodiverse existence than we do in trying to label, categorize, and set apart.

Even though Greaves possesses the type of thinking to find a cure, he is continually misunderstood as the Rosie crew lacks an appreciation for and understanding about his beneficial neuroatypical thinking. Despite being ignored by most of the crew, Dr. Samrina Khan is the one crew member that sees him most clearly and appreciates his unique skillsets. This is in part

attributable to their friendship which spans a much longer period of time than their most recent

project on Rosie. The two first met when they were fleeing their homes during the chaos that

ensued from the initial *Cordyceps* outbreak. He met Dr. Khan as they traveled together as part of

a larger group to find sanctuary in the safe haven of Beacon, the last place in Great Britain to

house a community of humans not infected with the fungus. While their friendship began as they

initially traveled to Beacon, it flourished over time as both adjusted to a life altered by their post-

fungus world. And their bond became crucial to the well-being of both as, over time, Beacon did

not transform into a civilization that worked for the greater good of what was left of the human

race. Instead it represented a fractured and extreme overabundance of the negative aspects of

human behaviors that existed prior to the outbreak. Greaves describes growing up there as

"lonely" and "arduous" in a hand-to-mouth existence—that to survive he had to perfect "not

being noticed at all" (Carey Location 892). However, his friendship with Dr. Khan provided him

an escape from the harsh reality. She gave him hope with human connection and her instruction

on subjects he could not learn about in school enabling him to thrive:

> She took him out of school for weeks at a time to teach him herself, in her canvas-walled
> lab—to teach him science mostly, but other things, too. She reasoned that if he loved the
> captain [Captain Power], he would have a taste for science fiction and fantasy in general,
> so she introduced him to Asimov and Clarke, then Miéville and Gaiman and Le Guin. He
> had already learned to read, but now he learned the pleasure of stories which is like no
> other pleasure—the experience of slipping sideways into another world and living there
> for as long as you want to. (Carey Location 896)

As Greaves begins to expand both his science knowledge and science fiction repertoire, he

discovers new ways to engage with his reality by "slipping sideways" into the many worlds of

fiction which provide needed respite from his harsh reality. Thus, rather than succumbing to the

viciousness and violence that Beacon represents as it begins to negatively accelerate, he steps

aside into new possibilities which he discovers from fictional stories introduced to him because

of his connection with Dr. Khan. Within the context of the complex and fragile remains of the human race that Beacon harbors, it is interesting that survival depends on the pleasurable escapism that novel reading provides. And despite the general negativity that tends to surround post-apocalypse settings like the universe represented within the novel, this reflection on Greaves's learning and development is encoded with positive joy through words such as "loved" and "pleasure" signaling a brief respite in the narrative feelings that offer hope through a surprising twisting upon itself of fiction through fiction. Because even though his world is continuing to fall apart at an ever-increasing pace, Greaves is able to find new possibilities for alternate realities that provide an escape from his "arduous" existence. And while he engages with the world through a neuroatypical lens, that does not limit him from enjoying fiction. Perhaps it is even the inspiration he finds in pleasurably enjoying this fiction which allows him to further expand his thinking to eventually discover the cause and cure for the *Cordyceps* fungus.

The description of Greaves's journey into fiction points to an important moment in which a stereotype of autistics is confronted. Often autism is seen as a continual detachment and lack of connections, which frames autistic people as a population that does not appear to understand or enjoy fictional stories. While there are certainly some prominent autistic spokespeople who identify towards fiction in this way, such as Temple Grandin, it does not apply to all people on the spectrum. There are many autistics who have varying abilities and desires to engage with fiction and find fictional stories pleasurable. This can be seen through notable figures such as Donna Williams who has written extensively about her autistic way of being and life journey as well as Dora Raymaker who is autistic and a fiction author; both of these individuals reveal that just as there are many shades of fiction enjoyment in neurotypical individuals, so are there in

neuroatypical individuals. As these real life examples gesture towards, fiction is a wide spectrum that invites an even wider spectrum of engagement. Greaves as a character further invites this engagement as he pushes back against fictional autism stereotypes to rewrite the possibilities for autistic pleasure in fiction through the moments when he reclaims his agency and power from a neurotypically focused society.

Furthermore, the presence of Greaves's character is representative of a larger trend of the increasing frequency of autistic characters. In his book *Representing Autism*, Stuart Murray began to notice and discuss this accelerating trend of autistic character depictions about a decade prior to the publication of Carey's novel. As Murray highlights, an increase of autism in narratives does correlate to more positive elements that can emerge from the depictions of autistic characters. But an increase in neurodiverse representation does not necessarily cause an increase in understanding: "The incredible increase in autism narratives in contemporary culture, from novels and films to radio phone-ins and magazine articles, has arguably not led to a profitable revision of public knowledge about what autism is. Rather, we might feel that such narratives have overlaid the condition not with understanding but with the complex desires of a society that wishes to be fascinated with a topic that seems precisely to elude comprehension" (4). As Murray observes, autistic characters at the time he published his research were mainly portrayed as a spectacle for a neurotypical and ableist focused reading audience, produced for the reader to easily digest autistic difference. This creation of autistic characters as spectacle provides a false appreciation for and understanding of autism; many may feel from their narrative engagement that they have reached a more informed understanding of neuroatypical thinking than the knowledge they actually possess after reading about these characters. Because what these readers have most likely gained in their mass consumption of the autistic characters is

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a repetition of stereotypical messages that repeat through popular culture to create the knowledge that circulates through society. Thus, these characters are not meant for the reader to identify with but rather to present a contrast of what they do not want to identify with and simply be fascinated by. And despite some readers who inevitably identify with and align to autistic character preferences, such as Greaves's fictional tastes of novels, that does not necessarily foster a connection and identification with his neuroatypical character.

The connections between neurotypical and neuroatypical communities are prone to mistrust because there are assumptions made about both that do not necessarily represent either group as a whole. Yet to embrace a neurodiverse society, there needs to be connections within communities and across the spectrum of humanity. This essential need is seen throughout *The Boy on the Bridge* as connection between seemingly different groups, "hungry" children and human survivors, becomes a key element to understanding the cause of the *Cordyceps* fungus and the potential cure. And the person who first sees and observes these children is Greaves. He spends extensive time observing and taking notes on the children "hungries" behavior. Through his observations he discovers their markedly different actions and sentient awareness, which vastly differ from what he has observed in the adult "hungry" zombies infected with the fungus. But he initially keeps this monumental knowledge to himself because he does not trust his neurotypical crew members with the information.

When the rest of Rosie's crew eventually encounters the young children "hungries" during a research mission they are baffled by the differences in behaviors. As this encounter occurs during an ill-fated and fatal mission in which there is a crew member loss, Greaves reluctantly reveals his knowledge about the children "hungries" to the crew. And as he expected, the crew's response is to actively seek out a test subject to experiment on confirming his fear

about how the human neurotypical adults would react in ways more destructive than helpful.

Greaves is deeply conflicted about the crew obtaining one of the children "hungries" to

experiment on because he feels a connection and kinship to them. Just as they are misunderstood

amidst the community of the "hungries," he is misunderstood among the community of humans;

and both the children and Greaves provide the potential answers to problems, but both face

difficulties in their respective communities with achieving a full understanding of their beneficial

qualities. Prior to this conflict between and among communities coming to a boiling point,

Greaves contemplates his position and invisibility to most of the crew members in a reflection.

As he reflects, he thinks through the situation in which he was saved by one of the children

"hungries" during his failed observation mission, and how what he has seen will not be truly

understood by the crew which easily dismisses his inputs and abilities:

> He knows that Dr. Fournier and Colonel Carlisle are not friends or allies. On both sides there's wariness and mistrust, a split that has prevented the mission team from ever really becoming a team in more than name.
> He knows that Lieutenant McQueen dislikes the colonel. A lot.
> He knows that Beacon, when they left, was changing—shifting from one state to another, like milk when the bacteria suspended in it processes its molecules into lactic acid. Beacon was souring into something new and frightening.
> He knows that John Sealey is the father of Rina's baby, and that he is scared of it being born.
> They think he doesn't understand. That he can't see.
> They can't see him. (Carey Location 1483)

Greaves in this reflective moment is still upset by his failure to observe the hungry "children"

unnoticed. Yet as he reflects on the frustrations stemming from his failure, he is able to see the

"wariness and mistrust" between the crew as representative of the larger unease between

multiple communities. And with the negativity that arises from "wariness and mistrust" as it

congeals into "something new and frightening" there is a pointing towards how when

communications falter, connections are strained and sometimes broken. The stress placed on the

connections then leads to catastrophic events that could potentially be avoided if there was more room for acceptance.

Additionally, the passage points towards how much Greaves understands and sees through the overt and covert social exchanges that the crew thinks he does not understand or see because they have labeled him as different and accordingly reduced his power and agency. They have labeled him as lacking ability based upon outdated assumptions and faulty medicalized knowledge of autism and neuroatypical ways of being. And despite the crew labeling him as unable to pick up on the cues, what the crew is unable to do is truly see Greaves for the capabilities and knowledge he provides to the team. Because without him, their research would not be as advanced as they do not possess the patience or ability to control their bodies as precisely as he regularly does while investigating in the field. Without his neuroatypical thinking patterns, they would never be able to think differently enough to identify a cure for the *Cordyceps* fungus. Only through Greaves's unique thinking patterns can the human race possibly be able to obtain the knowledge to survive. Yet because he is in a minority neuroatypical population, he is silenced by the neurotypical majority despite his continuing contribution to the neurodiverse narration. He fights against the team's perceptions of his abilities, but they cannot see past what they believe to be true to see what actually is true. This imbalance over time causes Greaves to become conditioned to keep his insights to himself. And the inability for the neurotypical crew to truly see him because of their labels for his neuroatypical differences indicates a societal construct of ableist focused desires that perceive disability as negative.

In the book *Contours of Ableism*, Fiona Kumari Campbell highlights a trend of similar negative associations between disability and ableism in her research. She portrays how these associations accumulate into damaging effects for disabled individuals which has implications

for society as a whole: "The experience of impairment within an ableist context *can* and *does* effect the formation of self – in other words 'disability *is* me', but that 'me' does not need to be imbued with a negative sense of self-ness" (27, emphasis in original). As Campbell argues, the negative associations that complexly intertwine into societal constructs of disability create problematic foundations for self-awareness and identity of impaired individuals, even if these people try to critically analyze and fight against these representations. While Greaves for the most part finds an inner peace in his differences throughout the story, he still fights against the negative perceptions as his observations of and experiences with the team indicate. And despite his attempts to fight against the neurotypical and ableist focused construction that views him as negatively disabled due to his cognitive differences, he cannot fully change the perceptions of the team to see him for who he is outside of their perceived label and beliefs. In part, Greaves final decision to not tell the team about the cure that he finds for the zombie fungal infection stems from his knowledge of how the neurotypical team has failed to see him and made ethically questionable choices creating mistrust that severs their communication connections and poisons their cohesions. Because towards the end he realizes that he no longer wants to fight against the destructive neurotypical humanity that over the course of history has decimated everything and everyone with which it has come into contact. Accordingly, even though he is unable to make the crew see him, he does have the power to make the decision to foster the survival of a new humanity—a humanity shaped through the spirit of what it should have always been, and at this point favors the "hungry" children who offer the most potential for more enlightened possibilities in the world.

In many novels within the horror genre and zombie apocalypse sub-genre, zombies can be read as code for a minority population that has overtaken the previous majority. The zombie

stories show the fear and mistrust that exists within the majority population—that they might be losing their entitled sense of power and privilege they have become accustomed to having. And their fear leads them to believe there is a group, which was once a repressed minority, that can overnight replace their majority status. Accordingly, part of the mystery surrounding zombies is generated by their untranslatable and/or unknowable desires which emerges from the embedded sentiment to evoke narrative feelings in a neurotypical and ableist focused reader that the majority are losing their grip on societal status. The tension of this fear is conveyed through zombies who are usually portrayed as those who cannot think or feel outside of a very limited set of actions; they are confined to act within very specific primitive desires. There are intriguing parallels within this fictional construction to how society views and interprets neuroatypicality as unknowable and limited in action. Furthermore, there is more to explore beyond this problematic contrast in the zombie story outline with who is left once a new order has taken over the majority. Because within the human race there are just two subsets left—those who will eventually succumb and be infected to join the new zombie majority and those who present a possible alternate course for the human race that stems from their abilities to think and solve problems differently. And only through the actions of those who urgently pursue alternate paths, can new solutions be found.

For the human race to survive in *The Boy on the Bridge* universe, they must depend upon what is left of atypically focused individuals in society who can see problems differently and find unique solutions. Greaves is representative of such neuroatypical thinking and characterization. Yet his gifts are almost always misunderstood, and his colleagues attempt to remove these unique qualities as they desire him to act more typically. These desires are specifically seen through the orders of the command team who direct Greaves to act according to

neurotypical customs which if he followed would prevent him from finding a cure. But he does not follow these orders as he embraces his differences in order to find solutions to the fungal pathogen: "And normally Greaves has a plan, but this time no. He was lured astray by the urgency of his desire. His strongest passion, sometimes his only passion, is for explanations. When he encounters something that runs so contrary to his understanding of the world, he needs to interrogate it until it yields to his intellect" (Carey Location 1640). In this pivotable moment, Greaves strays away from the Rosie team and his responsibilities to be a member of that team, fueled by mistrust that has continually grown throughout their journey. While this is a critical point for Greaves to discover more information that leads to him finding the cure for the fungus, it also results in a team member being infected and killed during a botched mission.

The team sees Greaves actions to deviate "astray" from the mission order as a betrayal, cementing through the embedded sentiment their negatively focused feelings toward him. But Greaves sees a larger picture—the importance to find a cure to human ills (read: not necessary the fungus) which is fueled through his urgency and relentless interrogation of all the available information. In contrast, the strategy of the command team aligns with neurotypical patterns that prize following the procedures to find a cure for the fungus. Yet it is by following the expected that will prevent the Rosie team from thinking differently, from thinking in alternate ways to find a cure for the survival of the human race. Thus, the only way to find a cure would be for the team to recognize Greaves beneficial neuroatypical thinking in order to break out from their flawed neurotypical logic cycle; a logic that is unable to solve the puzzle of the *Cordyceps* fungus as representative of what has driven the human race to this tipping point. By thinking differently, Greaves sees the possibility of a better future and that hope fuels him to capture the spirit of humanity through his actions and sacrifices. Even though Greaves eventually uses the data he

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gathers to find a cure for the fungus, his unwavering devotion and passion for explanation is seen as a flawed lack and the reason the Rosie team does not see him as fully human. Yet the thing that separates Greaves from the rest of the team is the same thing which can save them and the human race. But the Rosie team does not appreciate Greaves's logic and ability to see things differently. They simply see someone who is unable to follow orders and act within neurotypical expectations and social constructs.

The mistrust of Greaves by the neurotypical team highlights a larger problem of not understanding the complexity of difference. In her book *Authoring Autism*, Yergeau takes up discussions about how neurotypical society frames neuroatypical ways of being as less than human and invalid through rhetoric because they do not understand how to interpret the dynamics of difference:

> It is not uncommon, for example, for rhetoricians to claim that rhetoric is what makes one human. This is a belief that persists in spite of rhetorical studies' various turns toward things, ecologies, affect, and complex vitalisms: if one is arhetorical, then one is not fully human. Rhetoric's function as a precondition for humanness or personhood is typically and deeply connected to how we conceive sociality, or our modes of relating and relatedness with our (neurotypically human) surrounds. (6)

As Yergeau articulates, a fully realized and human rhetoric is tied into societal norms and connections to others. Accordingly, an inability to connect in these typical ways is used as an argument that would portray those who connect differently as "arhetorical" and in turn less than human. Yet those who connect atypically certainly have a full human identity and rhetoric. The neurotypical majority, however, cannot see them as possessing these capabilities because they are different. Greaves struggles through these constructs of neurotypical preconceived notions of his decision making and social connections, and in turn authority. Because, as discussed earlier, they fail to see what is there—they are unable to view the world outside of their own thinking patterns. At the critical point when Greaves deviates from the mission order, he knows he must

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because in the larger picture it provides the world with the best solution. Yet when the Rosie team questions his actions to deviate from the plan after the fatal mission, they see his decision to abandon his assigned tasks as unexplainable deviations from socially expected and constructed norms. However, the real reason they cannot see that he acted for a larger and more important goal is because they cannot conceive of the differences his neuroatypical thinking can provide to find alternate solutions. Thus, Greaves possesses an immense rhetorical ability to go beyond the expectations to find solutions. But his team is unable to conceive of this from their privileged neurotypical viewpoint which establishes and maintains their agency over his rhetorical power.

At the end of the story, Greaves is faced with making ethical decisions about Dr. Khan's baby and what to do with his knowledge of the *Cordyceps* fungus cure. As Dr. Khan was infected by the fungus at the end of her pregnancy, her baby became a member of the new generation—a newly minted child "hungry." While Greaves keeps Dr. Khan from transitioning into a "hungry" for a short while with his knowledge of using the neurological material of the dead child "hungry" that the Rosie team collected earlier, he ultimately cannot continue to give her the antidote. He runs out of the material to continue producing the cure that delays Dr. Khan's transition into a "hungry." And he cannot justify killing another child in order to save her. Greaves makes this decision alone as only he has the knowledge to create the antidote and does not want the rest of the team to know that he has found the cure. He fears providing the team with this knowledge because he thinks they would create farms of hungry "children" to have ample supplies to continue producing the antidote. This fear stems from his previously observed patterns in which neurotypical logic is used to deny him with a fully realized identity and voice as they do not understand or see his beneficial perspective. Accordingly, after Dr. Khan's transition he is faced with a decision about what he should do with her baby boy and his

knowledge that the hungry "children" could provide a cure for *Cordyceps*:

> Stephen has made up his mind. He's with the seeds, the scarred girl's tribe. He can't be one of them, but he has chosen his allegiance. The children are all that matters. And right now, though he's on their side he is the plague, the pathogen that could destroy them. The knowledge in his mind has to be safely disposed of.
> 'Please,' he begs.
> The scarred girl makes a gesture. Her hand raised towards him, closed and then open. She knows what he wants her to do, but she won't do it.
> It's a complex problem with a simple, inelegant solution. Stephen extends his hand to touch baby Khan's forehead.
> 'Sam,' he reminds them all. 'His name is Sam.'
> He puts the tip of his thumb against the baby's lips. The baby's jaws work back and forth, sawing at Greaves' flesh. It's very hard for the tiny teeth to get a purchase, but once they do they punch through his skin cleanly and quickly. They're very sharp.
> The baby takes its first meal.
> Stephen lets go of his humanity with much more relief than fear. It was an awkward burden to carry at the best of times. (Carey Location 4813)

In the end, Greaves empowers the spirit of humanity by choosing the "hungry" children. As he found his own experience of the current humanity to be flawed, he feels "relief" rather than "fear" as he makes this ultimate sacrifice. Because he has experienced the social construction of disability placed upon him by the neurotypical majority and knows that this is not the path for a neurodiverse and accepting future. Thus, he chooses to mask his knowledge by releasing his own humanity, charting a course for the neurotypical majority to slowly lose their prominence and power.

In looking to the embedded sentiment, the section is negatively coded through such words as "plague," "inelegant," and "awkward," which highlight the ambiguity and heartbreak associated with Greaves decision to hide his knowledge. Yet despite the negatively focused narrative feelings, this is a section in which the negativity is meant to be read as the potential of positive change. Because through the negativity, a stronger positive future can become possible through the hope of connections rather than division—that there could be a better way in which diversity and inclusion would be appreciated and celebrated. For Greaves, the best option

currently available is to let the "hungry" children populate the world; because they have the potential to provide for a much richer and accepting diverse culture than the current version of the human race. And Greaves claims his rhetorical power by making the critical choice to support Dr. Khan's baby through the sacrifice of his flawed humanity. While there are great elements that can be pulled from this model, it should be noted that it also aligns with a common neuroatypical fantasy where the autistic community gets the final say. But this desire points towards yet another imbalance rather than acceptance between communities. Yet even despite some problematic elements, it illuminates the current dis-ease within neurotypical and neuroatypical character construction and mistrust of society between neurodiverse groups writ large.

So perhaps instead of continuing to construct narratives towards a neurotypical and ableist focused reader, a recalibration can be conducted. Through a better balanced neurodiverse narration, there would be understandings of impairment and social constructions of disability that create a more welcoming environment for multiple communities. And what better way to start rebalancing than with fictional characters who provide differing representations that people can begin to identify with, like Greaves, to create social knowledge to understand the differences that have already always surrounded the human community. Because as a character, he fights against his representation as disabled by not compromising his unique methods or seeing himself as inferior to the neurotypical majority. Furthermore, he embraces his cognitive differences by using them to connect with the children "hungries" in order to find similarities and connections that the majority cannot see. Greaves then uses his knowledge by choosing to embrace a neuroatypical path forward that offers more hope for a better future.

The choices that Greaves makes represent one example of how ableist focused

constructions create environments from which neuroatypical minds feel that they do not fit and

often want to escape. In her book *Imagining Autism*, Loftis argues about a similar tension

between perceived ability and disability which Greaves constantly feels and fights against. She

notes that the cycles of mass consumption in popular culture that portray more and more ASD

characters fuel this tension. However, she also highlights that differences can be rewritten into

positive and beneficial language: "Autistic self-advocates, however, point out that cognitive

differences are not always deficits and argue that differences in neurology need not be

pathologized. In opposition to the pathology paradigm (the language of the medical

establishment, which perceives autism as a mental disorder), they advocate the neurodiversity

paradigm, arguing that variety in neurology is a normal part of human diversity" (4-5). As Loftis

notes, neurodiversity constructions provide the potential to break the cycle of "deficits" and the

medicalized "pathology paradigm." Because instead of fueling neuroatypical difference as

spectacle for neurotypical and ableist focused readers who want to consume these characters,

there can be a pushing back. And in this intentional push the space can be made to provide

audiences with rich narrative interpretations that embrace a spectrum of diversity.

While *The Boy on the Bridge* takes up a form of neurodiverse narration through the third-

person omniscient point of view, it struggles to fully embrace difference as there is tension

within the differing character viewpoints encoded into the embedded sentiment of the narrative

to generate complex narrative feelings for the reader. In some ways, the end of the novel resists a

more stereotypically focused neurotypical and ableist construction as Greaves, despite his

differences, does not want to provide the cure. Because rather than advocate for adoption of a

cure (read: either for fungus or autism), he looks to the larger picture. He wants his neuroatypical

differences to be used for good as his experience has shown him that cures can often create more

problems than solutions. And he understands the decisions being made by the neurotypical

majority and uses his knowledge of their logic to fight against the social systems that try to

reduce and/or remove his power.

At this point it is important to return to the beginning move of what the act of labeling

means. By rethinking through how Jacob is boxed into checklists and how Greaves becomes

invisible, better understandings about the significance of labeling actions can emerge. Through

both of their respective neurodiverse narratives these labeling actions remove their rightful

agency and power. Yet perhaps through contemplating and recalibrating societal relationships to

how labels are identified and categorized through sticky placement upon characters, more insight

about how to remove the damaging affects can occur. In thinking through the continuing

dilemma of labels, a turn towards Lorna Wing is vital. Because it was Wing who translated

Asperger's writing into English thereby introducing Asperger's syndrome to the English

speaking world in a paper she published. Her paper became the catalyst that eventually led to the

expansion of "labeling" with the inclusion of Asperger's in the DSM and international

community as similar to autism (and the later inclusion of it into the currently known Autism

Spectrum Disorder). Yet this act of labeling continues to provoke angst within Wing:

> I wish I hadn't done it. I would like to throw all labels away today, including Asperger's syndrome, and move towards the dimensional approach. Labels don't mean anything, because you can get such a wide variety of profiles—some people are brilliant at mathematics but get pleasure rocking back and forth twiddling their hands. The trouble is that, it would be very hard to make an international system based on profiles. Human beings seem to need categories. (qtd. in Feinstein 204)

While Wing was the voice that brought about the fundamental shift in what we recognize as

autism today, even she now sees the problematic practices of labeling. And even though she

regrets introducing the label, it is not the label itself that has become the problem in how we

interpret autism. Rather, it is the practice of what people do with the label to narrowly define

individuals based upon the label that has been placed upon them. Yet many of these labels are necessary for autistic individuals to receive services and supports to function in a neoliberal society that is not set up for their ways of being. But they do not need to be negative. The label should not restrict and define them in ways that do not accurately capture their capabilities and presence. So perhaps what all this labeling points towards is a reverse questioning of why as Wing states "human beings seem to need categories." What about being "human" seems to call out for a need of categories? What about the human experience creates a desire and need for categories to capture human traits and for people to interact in society? What would we be able to gain if we were to let go of categories and just be?

In thinking through ways that categories of disability might be read and constructed differently, perhaps the first place to start is by looking towards the differences in medium and how they fundamentally alter the capabilities of narrative. When thinking of a literary (textual) narrative there are multiple barriers to entry to include a general trend in society which is shifting away from consuming either print or eBook narratives. While the latent ability to consume these narratives exists for much of the population, there may not be many people who want to engage and commit to the longer form narratives that require more time to consume. Conversely, when thinking of a comic or graphic novel narrative, there is a lower barrier to entry as there are elements that may be depicted visually to go along with the shorter form text. This medium allows for consumption by a larger audience more willing to engage in the material, as it provides a more complex and detailed experience with both words and pictures engaging more sensory channels. Even further, when thinking of a visual narrative such as a TV series or movie, there is an even lower barrier to entry, as moving images portray the narrative. That is not to say that all narratives within movie images are easy to consume (just as not all print narratives are

made the same), but there is a certain element that allows for easier access to the narrative as well as a quicker consumption of the material due to the length generally being shorter. While I discuss literary print texts in this dissertation, I realize that consumers tend to seek these out less frequently than the other mediums which means their reach is usually more limited than comics, TV, or movies. Because as the barrier for entry changes through different mediums of narrative, larger audiences engage with the stories. And these audiences could be provided with a fertile ground for either constructing more neurotypical and ableist focused consumers or creating more neurodiverse and accepting consumers. Perhaps the later might become a reality if narratives are constructed to embrace difference as beneficial and needed to diversity in society.

Additionally, the differences in genre also change the capacity of narrative to invoke change. There are certain genres such as Horror or Science-Fiction that tend to draw audiences who are more eager to indulge in difference—people who consume these narratives typically want to play around with difference albeit in a detached manner that they can put down and walk away from. Thus, when consuming Greaves in the Horror/Science Fiction story from *The Boy on the Bridge*, they might not choose to let humanity end as he did, but they can play around with the what if scenario that emerges through the narrative. On the other hand, Coming-of-Age or Romance works would not have the same impact as it would encourage an overcoming narrative that tries to downplay difference and strive towards an ablenormative worldview. This problematic overcoming appears through March in *The Eagle Tree* with his adjustment to neurotypicality (not vice versa), the successful advocacy for saving the Eagle Tree, and remaining in the custody of his mother. Also, when looking back at Don from *The Rosie Project*, the audience walks away with an upbeat feeling that disability can be solved by just seeing it differently and that impairments do not require extra supports. This viewpoint is both inaccurate

and damaging to neuroatypical populations in the current social construct, as it perpetuates problematic biases about disability that can lead to extremely negative ramifications in real life. Lastly, when thinking through Mystery and Detective Fiction, there is the constant compulsion to figure out who committed the crime. While it is encouraging to see autism being represented in popular culture and bestsellers, those who consume *House Rules* and view Jacob as being the primary suspect because of his autistic difference continue to perpetuate the stereotype that different is dangerous, encouraging them to be more suspicious and fearful of autistic people in real life. As I discuss in more detail in the last chapter of this dissertation, *House Rules* is number 2 on Jodie Archer and Matt Jocker's list of the 100 novels their computer algorithm identified as the best novels (they developed an algorithm through training it to read and detect what makes a book a bestseller as detailed in their work *The Bestseller Code: Anatomy of the Blockbuster Novel*). And intriguingly, *The Rosie Project* came in at number 15 on the same list. While neither *The Eagle Tree* nor *The Boy on the Bridge* were on the list, that is attributable to both of these novels being published after the list was generated.

All genres encourage different types of consumption with some being potentially more beneficial and others more harmful. And awareness of genre patterns provides vital information about how a narrative is constructed to be consumed. If an audience intends to engage with a narrative and sees it through current societal constructs on disability, they undoubtedly are shaped towards ablenormative views perpetuating the neurotypical and ableist focused cycle. Going back to *House Rules*, there may be many fans of Jodi Piccoult who read her novels no matter what it contains because of their admiration for her writing. However, there may be readers like me who read her novel to better understand fictional autistic characters. And each type of reader uniquely interprets the novel as their expectations are different. Also, when

reengaging with a story read on a previous occasion, the experience of the narrative changes as different life experiences inform the reception of the story during a subsequent reading. Thus, my reading of M.R. Carey's *The Boy on the Bridge* may dramatically alter if I reengage with the novel again in 10 years, as my life experiences will allow me to see the characters and interpret the narrative differently. No matter what experiences a reader brings to a narrative, each gain something different from their encounter based on their life experiences. But the expectations and what drew people to commit to reading and engage with a text undoubtedly bias their interpretation. On a similar but different comparison, certain audiences may either gravitate towards watching *Atypical* to better understand autism while others might watch the show because they are out of other shows to binge watch on Netflix. In each medium of narrative, there are audience advantages and limitations. Overall, however, fictional narratives should hopefully envision something better, where being different is accepted and celebrated. Perhaps this can be accomplished through complex narratives in which the embedded sentiment leads the reader to struggle through the arc of a neuroatypical or balanced neurodiverse narrative as they try to engage in a truly different perspective that generates narrative feelings leading towards positive knowledge and change.

My close readings over the last two chapters of this dissertation provide a mostly traditional literary analysis of the four texts I engaged with to reveal how narratives with neuroatypical and neurodiverse narration are constructed to embrace different characters and characteristics. And as I go forward in my work, I build upon this baseline of understanding to engage in the digital humanities method of sentiment analysis as I (de)code the text for embedded sentiment through my method of scaled reading. My scaled reading investigations through sentiment analysis provide visualizations and numbers to analyze, allowing me to

conduct a re-reading of these close readings to see the patterns that emerge from the embedded

sentiment to generate narrative feelings. By (de)coding the embedded sentiment, I can interpret

what words are contained within the substrate of the text as I analyze how it may or may not

encourage certain interpretations of the characters that I first analyzed through my close

readings. The patterns that emerge from the scaled readings allow me to further interpret autistic

representations to better understand how neuroatypical characters are constructed and how the

narrative is meant to affect readers. While not a perfect or precise method, the scaled reading

visualizations provide patterns which reveal how sentiment fluctuates over the arc of a story to

see quantitative information about the narrative that encourages alternate interpretations to

complement qualitative information from close reading.

CHAPTER 3

Anagramming with Scaled Readings – Neuroatypical Narrators

My oldest son often struggles to keep his body still. For him, the body is an extension of his always moving mind. Accordingly, his body must move in order for his mind to move in interpreting the world around him. In many ways, he has always needed to be in motion to experience the world. As I mentioned earlier in this dissertation, he was never able to sit through a story read to him when he was younger. Because for his mind to interpret a narrative, he also needs to move his body along with his mind. Furthermore, he desires an experience of the world that engages through multiple sensory channels: hearing, seeing, and touching as fluid extensions of his mind into his body. But when the world requires him to sit still, as it often does in neurotypical classroom structures, he struggles to remain engaged with learning. Over time, I discovered that one beneficial outlet which better meets his sensory needs in neurotypical classroom places and spaces is to provide him with Velcro under his desk. The sensory experience of detaching and reattaching that he can both touch and hear allows him to better attend to the neurotypical instruction; to attach his mind to the lessons he is intended to see and hear from his teacher in the classroom. To adapt and function within the neurotypical classroom he is provided with accommodations such as Velcro along with paraprofessional support. And these are essential resources which allow his neuroatypical mind to attach to the work framed within neurotypical societal school structures. Yet perhaps these structures that fail to capture my son's attention without external support signal towards flawed neurotypical constructions. Maybe the classroom, set in configurations to increase order for the instructor, in actuality,

decreases order for the students from the vast spectrum of neurodiversity who struggle to assimilate to artificial requirements that do not benefit the mind and body in learning. Because the sensory needs of not just neuroatypical minds but of many diverse minds often require more accommodations than we think about or give conscious credit to in the myriad physical and social structures that give shape to our lives.

Thus, do we really understand our sensory experiences? In our everyday lives we see, hear, touch, taste, and smell. But in thinking through our senses, how do they make sense? How do we sense the world around us? And what happens when we do not have access to one, or more, of our senses? Furthermore, what would happen if one, or more, of our senses were tuned up to extraordinary levels drowning out some of the other senses? How different would our experiences of the world be? Thinking through these questions as I venture from traditional close readings into re-reading with scaled readings provides some framework to rethink the sensory space involved in reading narratives. And by uncovering the embedded sentiment that lies within the structure of the text, there is insight to be gained about the sensory experiences that lie latent but are evoked with the (de)coded words of a text and manifest in narrative feelings. The novels contain words that affectively reach beyond the page to touch and feel, and which at times create barriers to reading for those from the neurodiversity spectrum who feel uniquely charged sensitivities to certain sensory experiences. While the words may seem stationary and detached when sitting on the page, they move from the page and reattach to the mind providing new knowledge and meanings that carry over beyond the narrative into lived experiences of the world. So despite the typical frame in which reading is painted as a solitary and detached experience, it is not quite as simple as that. Reading affectively gestures towards reaching out to touch and feel, re-attaching through many sensory elements influenced by sentiment.

In turning even further towards more diverse sensory experiences, scaled readings visually provide a way to alter the representations of the words that comprise narratives—similar to an anagram, they take the words already there and shift them to create something new gesturing towards even more senses than the original. Within the long traditions of literary analysis, words in stories have been seen in linear progression structures with each subsequent word building on the ones that came before. Yet what if by detaching the words that are already there and reattaching them, we could see a different kind of progression and story? Such a progression would bear a resemblance to the linear narrative constructions to which we have become accustomed. But in matching the words against sentiment lists, which in turn maps out the quantity of sentiment in a novel, the resulting visuals could create a new way to re-attach the words in a re-reading of the narrative.

Through a graphical representation of the sentiment words most likely to evoke narrative feelings, the patterns that emerge depict a version of novels which can complement the original words of the text. While these graphical depictions alone do not replace the act of reading the original words, they open up access to a queer reading, potentially even an autistic reading that reimagines the multiple connected fragments that make up each novel. And when considering the autistics who Temple Grandin identifies as visual thinkers who prefer pictures or music and math thinkers who prefer patterns, the scaled reading visual patterns could perhaps open up reading to even more neurodiverse audiences. Thus, with the patterns that emerge from the visual depiction of the sentiment words embedded within texts, novels could become accessible to audiences who have long turned away from this narrative medium. Perhaps in the move of detaching the words to create visual re-presentations there can be a reattaching which enables new visual meanings about patterns and flow to give new life to words, especially for groups who have long found

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words alone inadequately sufficient for interpreting narrative acts.

To begin a journey into my scaled readings, I have created visualizations for the two novels I investigated in the first chapter of this dissertation, *The Rosie Project* and *The Eagle Tree*. The visualizations I created and discuss are generated by measuring sentiment with the general sentiment lexicon "bing." This lexicon measures words that are identified as evoking sentiment by coding them as either "positive" or "negative." An additional and crucial note about this coding is that sentiment measured by "bing" is limited in scope to an n-gram of 1. In other words, it can only detect one word at a time in isolation instead of as a string of words which together could provide different meanings. While this is an important element to highlight now, I discuss this further as it arises in the texts to show how only looking at one word at a time can limit the accuracy of scaled readings in certain situations. Also, as an interesting aside which my next chapter delves into further with a critical analysis of sentiment lexicons through affect theory in my investigation of *House Rules* and *The Boy on the Bridge*, the "bing" lexicon is comprised of 70.5% negative sentiment words and 29.5% positive sentiment words. The imbalance of negative to positive may make it seem that sentiment analysis is more sensitive and attuned to finding negative associations. Or perhaps it signals to a larger trend with more negatively charged words than positive ones which are commonly used in the English language.

To go one step further, the negative imbalance may arise from the origins of the lexicon as it was originally created in 2004 by Bing Liu and Minqing Hu to gauge the positivity/negativity of customer opinions about products through mining the sentiment charged words within written reviews. Thus, there are many fascinating aspects to explore about the "bing" sentiment lexicon; it is the most basic of the general lexicons and often used as a starting point in determining the sentiment of a text. Furthermore, the lexicon use has grown from its

original construction of gauging sentiment from product reviews to measuring sentiment in vastly different genre mediums such as tweets and full-length novels. However, "bing" is not the only generalized lexicon as there are two more lexicons, "nrc" and "afinn" which both take the positive and negative coding further: "nrc" by categorizing sentiment into eight emotions—anger, anticipation, disgust, fear, joy, sadness, surprise, and trust, along with positive and negative codifications; "afinn" by classifying words according to a scale from -5 to 5 that further measures intensity of the positive and negative code. While my work beyond this dissertation will look into more sentiment lexicons to expand my method of scaled readings, this dissertation focuses solely on "bing" as a starting point into scaled readings through sentiment investigations.

The analysis that I conduct with my scaled readings allows me to visualize and interpret the patterns that emerge from the texts. My intended goal with creating scaled readings is to reveal the embedded sentiments used by writers which generate narrative feeling. In using sentiment analysis as a computational analytics approach to texts, I identify patterns and trends of embedded sentiments that emerge across the arc of a narrative. In *Reading Machines*, Stephen Ramsay articulates what can be gained through machine enhanced computation similar to the work of unpacking that I intend to accomplish:

> It is one thing to notice patterns of vocabulary, variations in line length, or images of darkness and light; it is another thing to employ a machine that can unerringly discover every instance of such features across a massive corpus of literary texts and then present those features in a visual format entirely foreign to the original organization in which these features appear. Or rather, it is the same thing at a different scale and with expanded powers of observation. It is in such results that the critic seeks not facts, but patterns. And from pattern the critic may move to the grander rhetorical formations that constitute critical reading. (16-17)

As part of my research with embedded sentiment, I use the patterns I find in my scaled readings with sentiment analysis as a step towards investigating how the embedded sentiment primes narrative feelings towards characters. I then conduct investigations of these narrative feelings by

critically analyzing the patterns of sentiment. The analysis allows me to see certain extremes of negative and positive sentiment as well as moments with neutral sentiment points and large sentiment spreads. After recognizing where in a novel these extremes occur, I further investigate and parse these points of interest from the patterns to better understand why there are certain sections of text that emerge with more (or less) words charged with sentiment.

Further, these scaled readings contribute to the investigation of how popular culture influences the reception of neuroatypical autistic fictional characters. By using the method of sentiment analysis, I gain access to a thorough glimpse of the embedded sentiment present within the substrate of the novels that affectively sticks. Because the charged sentiment tends to stick in the minds of readers creating a heightened intensity of narrative feelings—potentially of either connected attachment and/or detached revulsion. This indicates a certain level of intensity as well as a troubling aspect surrounding autism. Many autistic individuals experience heightened sensory sensitivities to touch and some do not desire contact, which can create barriers to social experiences in a neurotypical and ableist focused society. Consequently, investigating embedded sentiment not only illustrates heightened experiences but also potentially provides insight into the problematic structures of how sentiment from narratives may be experienced uncomfortably by autistic individuals because of the multi-sensory inputs that affectively touch.

My scaled reading investigations start with re-readings of both *The Rosie Project* and *The Eagle Tree*. With these novels I explore how visual re-presentations of the narrative provide insights from the patterns that surface. One of the patterns from my scaled reading visualizations emerges from looking at the novel in 500-word intervals. This type of visualization graph provides an evenly spaced image of sentiment as it fluctuates across a narrative arc. Because each bar on the graph represents the sentiment as it occurs during each sequential 500-word

interval, all the words within the novel are evenly spaced displaying a picture of how sentiment shifts through the narrative. While this type of visual provides a great way to see the narrative arc from an evenly spaced viewpoint, it does not capture the full representation of the novel. Because the author did not necessarily intend for the reader to read in precisely even 500-word intervals nor does the reader usually process text this evenly and deliberately. Thus, as a compliment to the evenly spaced representation of sentiment, my scaled reading visualizations also include graphs which measure sentiment in a novel by chapter.

The scaled reading chapter graphs are great for understanding how the structural divisions intended by the author point towards a different picture of sentiment. Because the authorial intent of how chapters as a whole are meant to be perceived provides another way of re-reading visually. But the chapter visualizations alone can be deceiving as chapters are not evenly spaced with exactly the same amount of words. Consequently, a long chapter might be seen as more sentiment intensive than a short chapter because there are more words in which sentiment can arise. While in many ways the sentiment intensity of a longer chapter is something to critically analyze because it was structured to generate more narrative feeling towards the text, the danger is in overemphasizing a longer chapter while missing sentiment that could be intensely packed within a short chapter. Therefore, the two angled approach of my scaled readings with graphs for evenly spaced intervals and chapters provides balance. Because by having visualizations of the chapters to capture authorial intent of how chapter groupings are structured to be perceived alongside the evenly spaced 500-word intervals gives a more balanced approach to understanding the ebb and flow of sentiment. And the inevitable tension and differences between the interval and chapter methods is what makes having two types of visualizations beneficial. Through the two angles of perception that emerge from both the 500-

word interval and chapter visualizations, there is a complementary blending for more meaningful critical interpretation.

While I have described the general process for the approach to my scaled readings in which novels are divided into evenly spaced 500-word intervals and by chapters, the method of measuring sentiment still needs further explanation. Generally, graphs of sentiment across a narrative are depicted through the net sentiment. In these graphs, the length of the novel is represented by various intervals (defined by either evenly spaced chunks of words or chapters) along the x-axis with each interval having a numerical value for net sentiment (the positive sentiment minus the negative sentiment) which is represented by a bar on the y-axis. Through this method, the bars on the graph reveal whether there are more positive words or negative words in any given interval (either with the evenly spaced chunks or chapters). And the net sentiment approach is helpful to get a general sense of how the various sentiments mesh together to reveal either a positive or negative mark on the graph. But what this method does not indicate is the total amount of sentiment (absolute values of positive and negative sentiments added together) or moments of intensity with the isolated positive sentiment or negative sentiment.

Consequently, a net sentiment graph is a good starting point, but it reveals only one facet from within the multi-faceted complexities of visualizing sentiment. Accordingly, scaled readings include more than just one generalized net sentiment graph. The scaled reading method also includes graphs for total sentiment, isolated positive sentiment, and isolated negative sentiment: the total sentiment takes the positive sentiment plus the absolute value of the negative sentiment to give a total measure of all the sentiment; the positive sentiment measures only the positive sentiment which is represented by going up from 0; and the negative sentiment measures only the negative sentiment which is represented by going down from 0. These three additional

sentiment representations, alongside net sentiment, illuminate more facets of embedded sentiment as it emerges in a novel. And by measuring through these four representations of sentiment patterns, a more complex and full graphical picture emerges of how the sentiment shifts over the course of a narrative. Also, these four representations (net, total, positive, and negative) are depicted in two groupings with my scaled readings; the first grouping is of the evenly distributed 500-word intervals and the second grouping is of the chapters. In total, these eight graphs reveal multiple aspects of sentiment as it fluctuates across a novel to reveal patterns that point to moments of increased and intense narrative feelings that are embedded in the code of the codex.

Scaled readings open up new sensory pathways towards re-attaching narratives—visualizing words through patterns to re-read events from the text. And these re-readings provide alternative ways to interpret the text that in turn can provide meaning to a wide variety of neurodiverse audiences. Because re-experiencing a novel through a graph (or set of graphs) gives a sense of how embedded sentiment emerges to trend towards either positive or negative at different intervals as well as reveals the overall visual shape that is coded into the words of the text. While these trends are noticeable through very rudimentary averages of the negative or positive bars on the visualizations, how that translates to a novel is not always a clear-cut answer or one that is the same for every story. There are certainly general methods to help identify patterns, but the interpretation of these patterns depends upon the scholar and their experience of the text. Thus, to use the scaled reading graphs as interpretations for a text requires an attentive close reading to identify how the averaged numbers and patterns affectively gesture towards narrative feelings. Consequently, close readings are still necessary and vitally important to the methods of interpreting scaled readings. And in turn, scaled readings can enhance close readings

as the graphs tune scholars into parts of novels that are outliers with high levels of positive or negative sentiment or potentially even further towards parts with high sentiment spreads, neutral sentiment points, and minimal total sentiment.

In addition, the shapes of scaled readings have an interesting touch point to Kurt Vonnegut's theories on the shapes of stories which merit a quick discussion. Vonnegut's method uses the x-axis in a similar way to scaled reading as it represents the length of the story. However, he used the y-axis to represent the protagonist's ill/good fortune whereas scaled reading uses the y-axis to represent the quantity of sentiment. Intriguingly, both the shapes of stories and scaled readings are related in that they use data from the novel to quantify and visualize the narrative words. Thus, the scaled reading method does have some intersections with Vonnegut's method as both visualize words from a novel. But the two methods each look at a different set of data to interpret the meaning of the words. While Vonnegut initially attempted to write on his theory about the shapes of stories many decades ago during his master's work (and for what it is worth his ideas for this thesis were rejected at that time), bringing up this past points towards an already always existing fascination and desire to visually see a narrative represented on a graph. Thus, there is a storied history behind the visual narratives that scaled reading takes up. And in an age where current technology makes possible digital humanities investigations through computer (de)coding with detaching words, new methods of re-reading and reattaching textual meanings can flourish in ways that Vonnegut could only dream about when he first theorized measuring and visualizing narratives.

The visualization of novels with scaled readings opens up new possibilities, but they require a critical literary focus to interpret the results generated when using sentiment analysis. In thinking towards and using the framework from traditional close readings, there are many

aspects which should be considered to conduct a detailed investigation. And it should be noted that each scholar approaches a novel with their own experiences and implicit biases (which will always bring with it a unique positionality) as they guide their critical inquiry through a specific focus. In this traditional construct, there are limitations and this method is not perfect—it has inevitable flaws because each scholar has their research agenda to investigate certain aspects which in turn limits their ability to see the whole text as they focus in on certain sections. Accordingly, the focused requirements of close readings can easily skip important elements because of the inability to see the whole text. Yet scaled readings provide a balance to these focused close readings. Because scaled readings offer a way to visualize the full text that complements the close reading inquiry to see sections that may not have appeared meaningful during an initial reading but when re-reading visually, these overlooked sections point towards new directions to explore. Thus, visual readings of the sections charged with sentiment can reveal insights about the embedded sentiment in the text that a close reading might miss.

From these visualizations, unique moments about the text are revealed. But sometimes these sections reveal inaccuracies about the identification of sentiment in the text. The inaccuracies could range from a simple misidentification to sequential words that change the meaning of a singular word. An example of a simple misidentification would be the use of the word "ironic" which is coded by the "bing" sentiment set as negative. In some contexts, this may indeed point to a very negative meaning. Because depending upon the situation that is being built up in the previous and/or following section of text, the word "ironic" could be used in frustration or even with sarcasm. Alternatively, it could be very positive, used to show how a situation was seen as negative but is actually filled with happiness or joy. Again, one of the downsides to the "bing" sentiment lexicon is the limitation that arises from the n-gram of 1 which can potentially

misidentify the context of words due to seeing them one by one in isolation. The limitation of the one word at a time approach is that it can lead to occasional misidentifications of the positive/negative associations. An example of a sequential word inaccuracy can be seen in the phrase "I do not like"; these four words would be coded with a score of positive 1 for the word "like." Yet most would probably agree that this is in fact a negative phrase when considering the words "not like" in sequence. Again, this is an inherent limitation to the "bing" sentiment lexicon analysis method which only considers singular words with an n-gram of 1. And while these sequential inaccuracies can and do occur, they are not overly frequent and do not significantly alter the patterns that sentiment analysis reveals about narrative feeling.

Despite the misidentifications and inaccuracies that are possible, they do not occur at a level which would invalidate scaled reading with sentiment analysis as a method. And many times, the inaccuracies that arise from the method point to significant events that should be further explored as they signify important events to unpack. But even more crucial to the process of understanding sentiment analysis is that the errors reveal some of the inherent issues within the problematic nature of labeling and identification. Because sentiment lists are generated by humans who identify which words are charged with sentiment and assign them a value within the lists, positive or negative, it always has a certain element of bias. Neither the computer nor an artificial intelligence program picks and chooses these values. Rather, the computer program merely follows the rules provided by the human(s) who write(s) the code when determining the positive and negative associations. And each of the sentiment lexicons that can be used for sentiment analysis have been created by humans and then later coded into the computer algorithms for identification. Consequently, these lists, created by the human coder(s) who inherently bring in cultural/personal biases, are limited by their coding which leads to varying

associations; and these biases, to include both privileges and challenges, weave together and can converge or diverge depending upon demographic and socioeconomic background. Thus, if there are any shortcomings in the method of scaled readings with sentiment analysis, then it should be less focused around what the machine is identifying through the method and should be more focused on what humans have identified and assigned to the sentiment value. The machine is simply a faithful follower of the commands that a human has coded; it unerringly follows the instructions it has been given.

Thus far, I have provided some generalized information about scaled readings. But more details about how the patterns emerge over a narrative arc come to the forefront through seeing examples of novels re-presented visually through sentiment analysis graphs. I begin further explorations into my scaled readings method by revisiting *The Rosie Project* from Chapter 1 of this dissertation to visually re-read the many adventures of Don Tillman. In chapter 1, I argued that the novel uses an autistic adult narrator, originally unaware of his diagnosis or label, to challenge the constructs of social norms and classifications of neurological distinctions as disease; this creates dis-ease with Don's adaptions to neurotypical norms through the embedded sentiment which gives rise for the reader to approach and question their own dis-ease (read: discomfort) with the narrative feelings that emerge. In this chapter, I build upon my prior argument as I investigate through scaled readings by creating two groupings, 500-word intervals and chapters, to represent *The Rosie Project* with the methods I detailed above. The first group of four graphs partition the novel into 500-word intervals. And this novel is the shortest of the four that I investigate in this dissertation with scaled readings, with 149 of these intervals (approximately 74,500 words). The second group of four graphs are derived from breaking up the novel into chapters. The chapter structure for *The Rosie Project* aligns with conventional

chapter ordering and contains 36 total chapters, which are all narrated from the neuroatypical

perspective of Don. Accordingly, the scaled reading that divides the novel into chapters contains

36 sections, one bar on the graph for each chapter. Both the 500-word interval and chapter

groups of four graphs includes net sentiment, total sentiment, positive sentiment, and negative

sentiment visualizations. I have provided all eight of these visualizations that detach the words of

the text and re-present them visually below to reference as I spend the next section of this

chapter re-reading *The Rosie Project* through the visual reattachments of the novel (Table 1

contains the data that generates the graphs in Figures 1-4 and Table 2 contains the data that

generates the graphs in Figures 5-8; both tables are listed in their entirety in the Appendix).

Figure 1: *The Rosie Project* - Net Sentiment by 500-Word Intervals

The Rosie Project
Net Sentiment - Positive minus Negative

Each sequential bar represents a 500 word interval from the novel

Figure 2: *The Rosie Project* - Total Sentiment by 500-Word Intervals

The Rosie Project
Total Sentiment - Positive plus Negative

Each sequential bar represents a 500 word interval from the novel
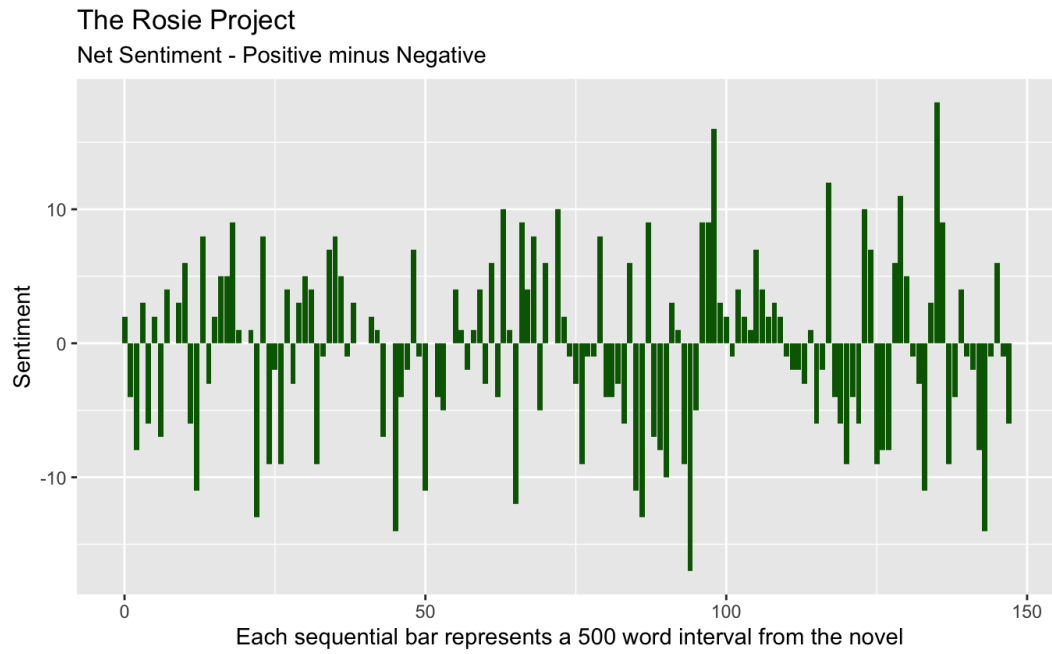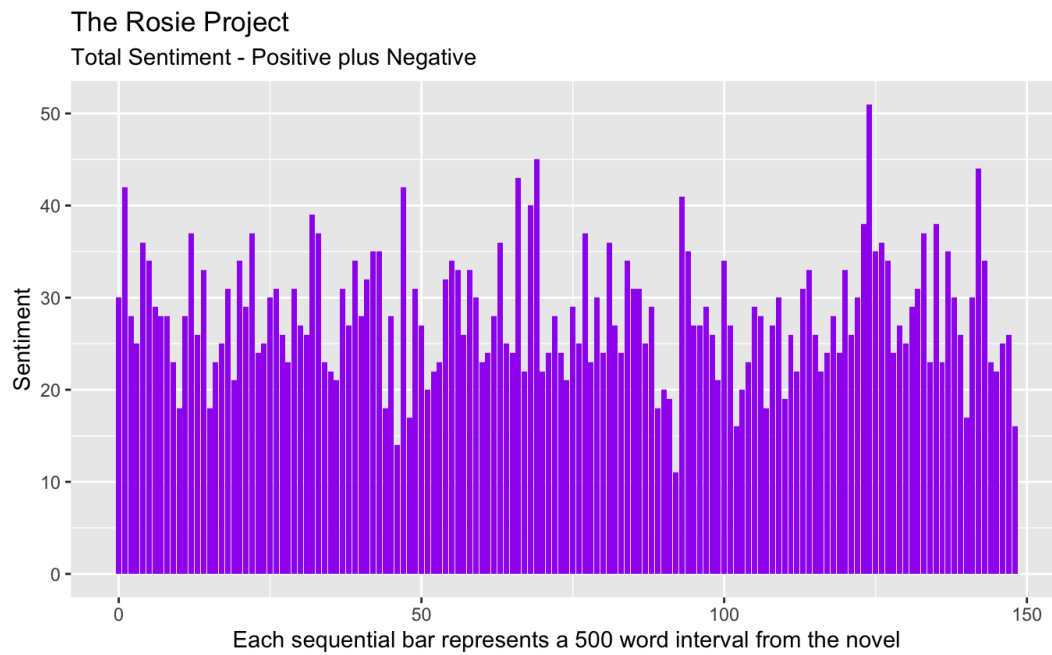
Figure 3: *The Rosie Project* - Positive Sentiment by 500-Word Intervals

The Rosie Project
Positive Sentiment
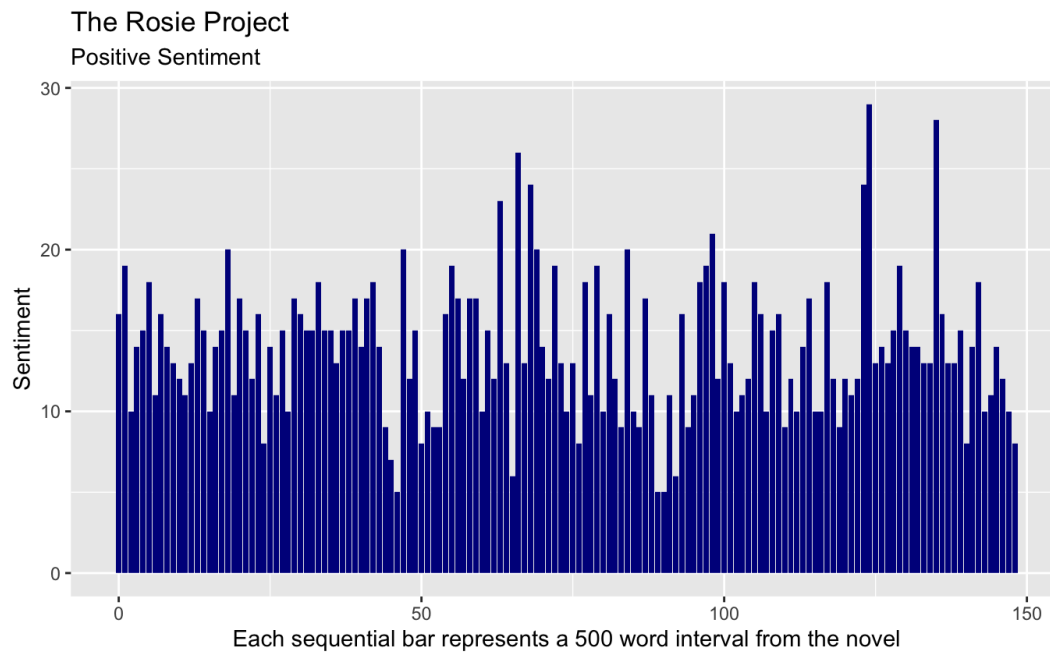
Figure 4: *The Rosie Project* - Negative Sentiment by 500-Word Intervals

The Rosie Project
Negative Sentiment
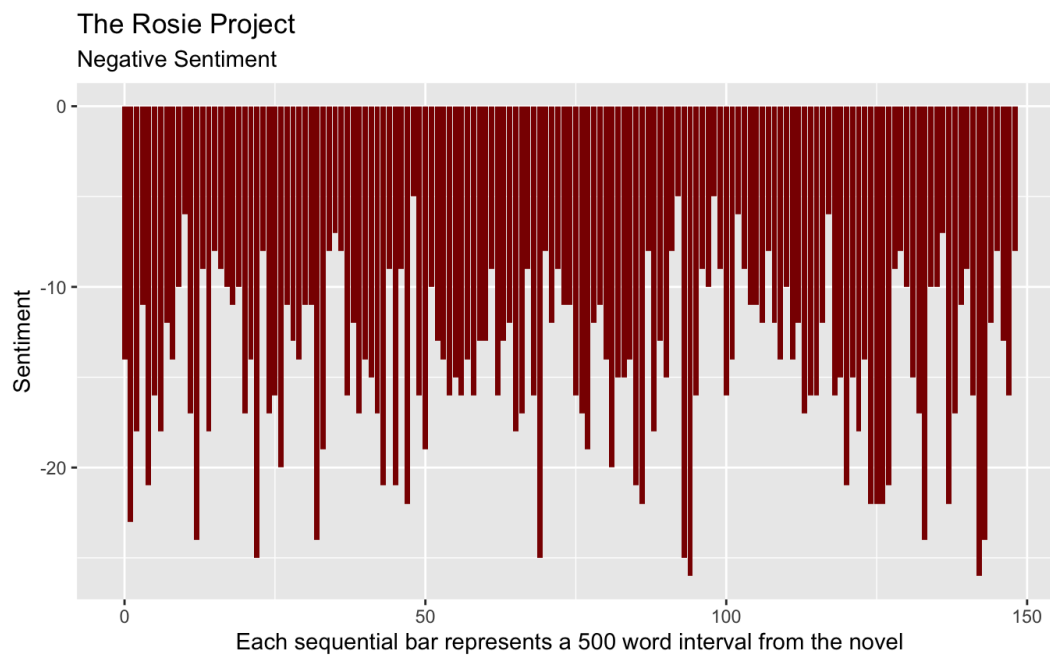
Figure 5: *The Rosie Project* - Net Sentiment by Chapter

The Rosie Project
Net Sentiment - Positive minus Negative

Each sequential bar represents a chapter from the novel
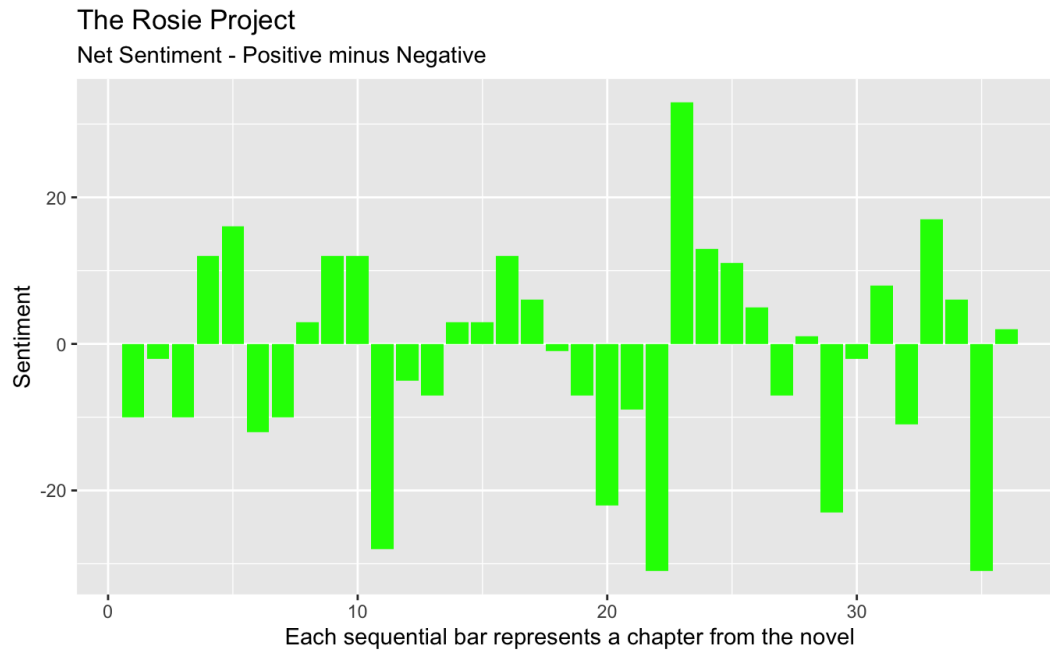
Figure 6: *The Rosie Project* - Total Sentiment by Chapter

The Rosie Project
Total Sentiment - Positive plus Negative

Each sequential bar represents a chapter from the novel
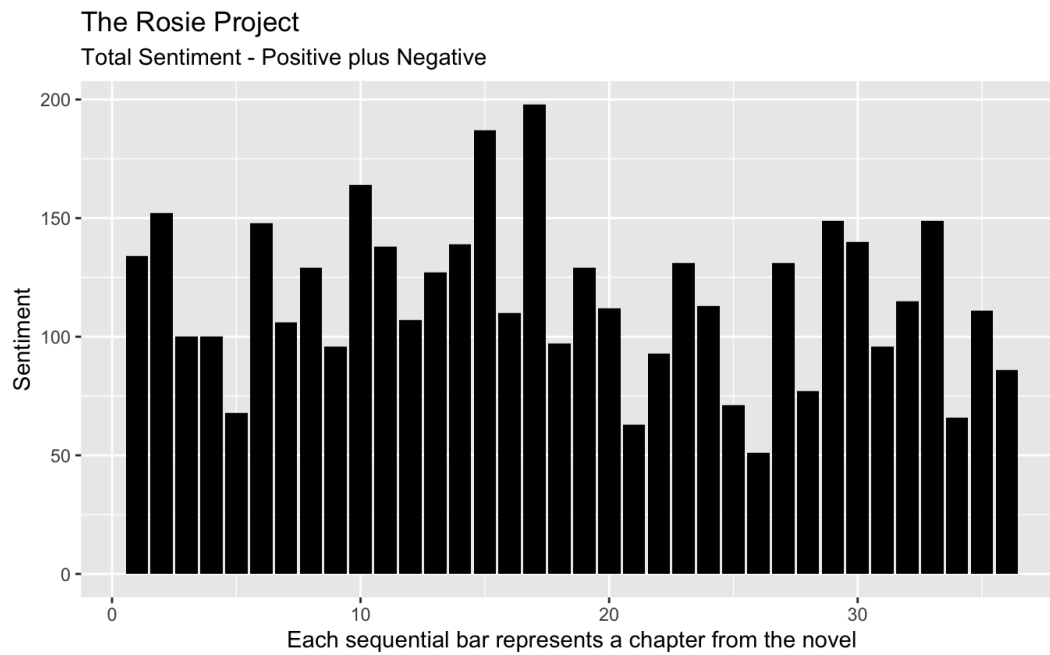
Figure 7: *The Rosie Project* - Positive Sentiment by Chapter

The Rosie Project
Positive Sentiment
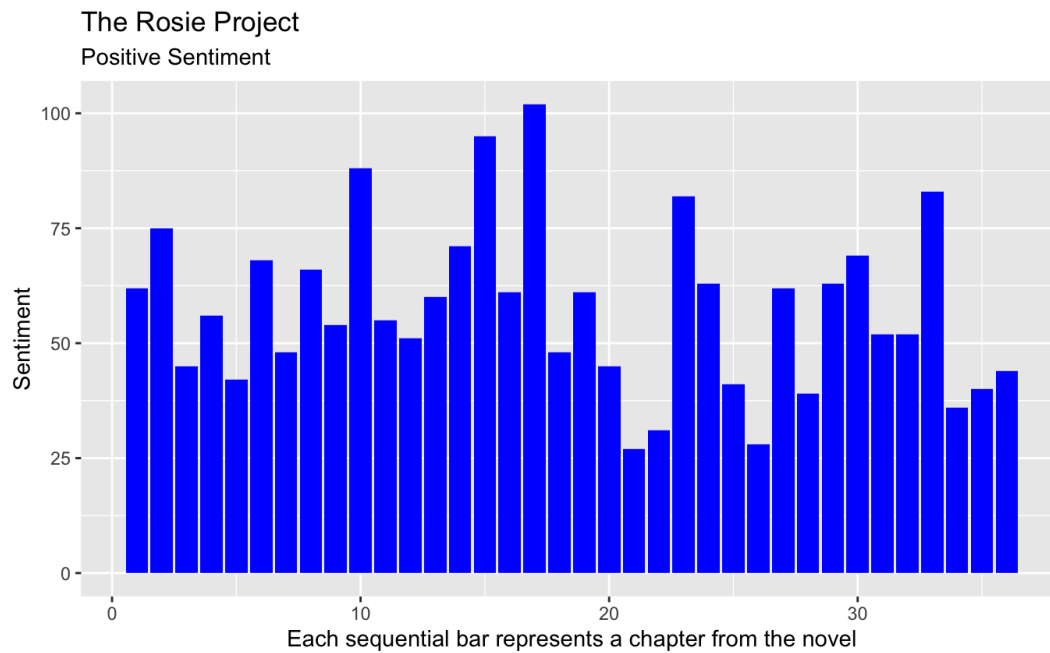
Figure 8: *The Rosie Project* - Negative Sentiment by Chapter

The Rosie Project
Negative Sentiment
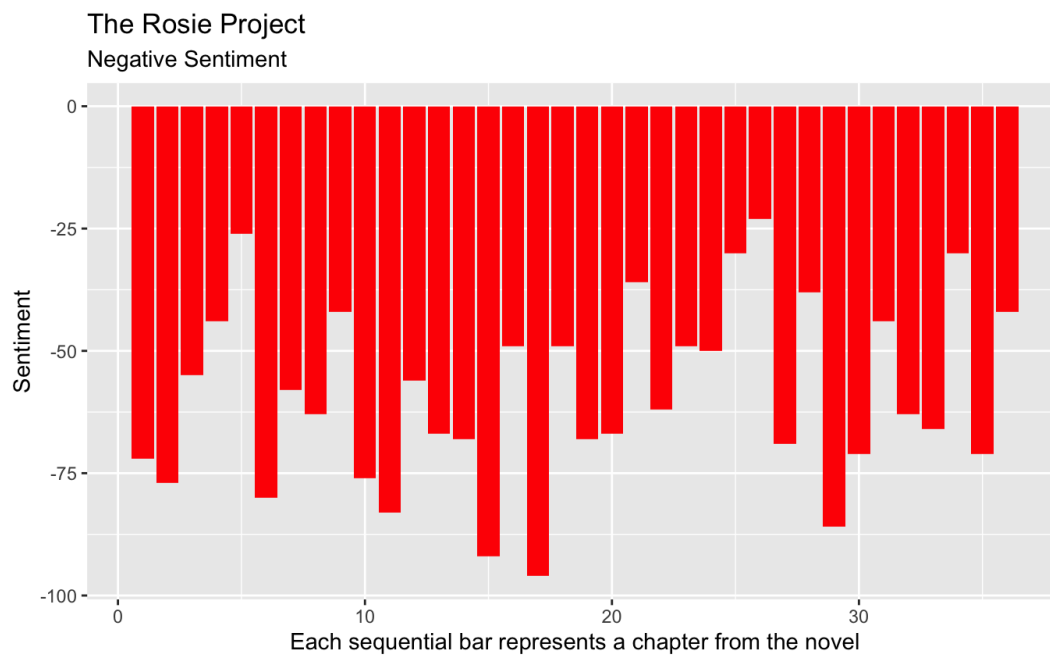
My set of scaled readings that investigates *The Rosie Project* in successive 500-word intervals (each represented by a bar on the graph), uncovers multiple insights across an evenly spaced breakdown of the text. The first visualization of net sentiment shows the general trend to be a fairly balanced and even breakdown of positive sentiment and negative sentiment. There are groupings of both positive and negative, but the intensity is similar with only a few outliers of increased sentiment. Overall the pattern of the net sentiment graph indicates that this novel has a balanced proportion of negative and positive sentiment. A different visualization emerges, however, when switching over to the total sentiment graph. As the total sentiment measures the absolute value of sentiment with the positive plus the negative, there are bound to be different patterns revealed. In this graph, the visual representation shows sections with higher sentiment intensity that do not align with the net sentiment representation. To go further into the numbers, the data from this graph indicates that the total amount of sentiment averages around 28 words in every 500 words of text, resulting in 5.6% of words from the novel being charged with sentiment. Additionally, in the 149 sections within *The Rosie Project*, there are 8 sections of 40 or more sentiment words, resulting in around 5.3% of the text residing in peak moments of high total sentiment. As this is the first exploration that I am discussing with my scaled readings, there is nothing to contrast it against. However, as a quick flash forward, the percentage of peak moments of high sentiment is around three times higher in *The Rosie Project* than in the neurodiverse narrative of *House Rules*. I bring up this point to illuminate how narratives framed with a neuroatypical perspective tend to have higher sentiment numbers than those with neurodiverse narration.

This trend of higher sentiment within neuroatypical narration, leads to multiple questions to consider about how narrative framing (along with genre as I later discuss) can heavily

influence sentiment. Thus, do neuroatypical perspectives manifest with higher levels of sentiments than neurotypical perspectives? Or do neuroatypical narrators need to provide more sentiment in their translations of neuroatypical experiences into language that can be understood by a neurotypical majority audience? And does that majority need the higher sentiment in order to understand a neuroatypical perspective that can in turn be consumed in popular culture representations of autism? Perhaps further exploration will provide insight about these questions. In addition to net sentiment and total sentiment graphs, there are also two graphs which represent the positive sentiment and negative sentiment. These two visualizations reveal the patterns of positivity and negativity that are not either subtracted or added, they are untwined from each other. By looking at these two graphs next to each other, the pattern of positive sentiment and negative sentiment indicates a mostly even breakdown, but none that go too much above 20 words of sentiment, either positive or negative. The advantage of having these separate visualizations is that a picture of the isolated sentiments can indicate some areas of increased intensity which are not apparent with the net and total sentiment.

In the scaled readings that interpret *The Rosie Project* by the 36 chapters, further patterns from the novel are revealed. The net sentiment graph again points to an evenly balanced distribution of positive and negative (similar to but differently shaped from the 500-word intervals). Out of the 36 chapters there are 18 positive and 18 negative, further highlighting the pattern of an even sentiment breakdown. However, this chapter breakdown also shows that the negative chapters tend to be more intense with five chapters having a score of -20 or greater, in contrast to the positive chapters in which only one chapter has a score of 20 or greater. Perhaps this breakdown points to something unique about the novel, revealing insight about the use of a neuroatypical narrator; or perhaps it aligns to larger genre conventions of romance that could be

investigated with further analysis of a larger sampling of novels. Moving to the total sentiment graph reveals a breakdown of sentiment which does fluctuate but not drastically. Most of the fluctuations are attributable to chapter length variations. The two highest scoring chapters which have nearly 200 total sentiment words, 15 and 17, are both much longer in length than the other chapters from the novel with 13 and 15 pages respectively. Whereas the lowest scoring chapter, 26, has around 50 sentiment words and consists of just 5 pages. Within the negative and positive sentiment graphs, there are variations with chapters that have higher intensity. And the positive sentiment peaks at 102 whereas the negative sentiment stops at 96. The positive is higher but they are close in number without a large variation. So perhaps what all these patterns from the chapter graphs most clearly reveal is how by looking at the chapters, an ebb and flow emerges within the narrative arc. In this novel, there is a fairly smooth flow from the negative to the positive sections which emerges from the evenly balanced use of sentiment throughout the text. Consequently, with this novel, readers are primed to more smoothly feel the narrative wave pattern that emerges from the embedded sentiment.

Each of the eight graphs for *The Rosie Project* discussed above reveals something unique that emerges from the patterns. But the trend most interesting to further explore is how the text is balanced to provide smooth transitions between positive and negative. And this trend may or may not be unique to this novel. However, it is important to note at this point that a direct comparison of *The Rosie Project* to other novels is not a very useful method to discuss the differences of the texts in a visually scaled reading as there are unique attributes (i.e. length, subject, structure, etc.) to every story. Yet the one comparison application that could provide beneficial insight is through looking at groups of novels within the same genre. As *The Rosie Project* falls within the romance genre, comparing the generalized visualizations to other

romance novels could perhaps indicate reoccurring patterns that are distinctive to the genre. Or perhaps what the graphs reveal is a distinctive breakdown of genre that aligns with publisher distinctions and popular culture reader expectations. While *The Rosie Project* is identified as a romance, that is a human based decision to place it in that human created category. Thus, when looking at the visual patterns of many romance novels, it might reveal that novels do align with certain structures within this genre category. But in thinking even further, perhaps the visualizations uncover unique insights into how genres are assumed to work. With *The Rosie Project*, the expectations of the romance genre might be one of the reasons for the more evenly balanced use of sentiment. Because readers expect to feel certain feelings when reading from a chosen genre (in this case romance), authors most likely follow patterns that fulfill reader expectations and in turn make them successful in sales and popularity. Whether this is done consciously or subconsciously would probably differ from author to author. Also, authors probably gravitate towards certain genres because stories within these genres satisfy their pleasurable enjoyment and/or intellectual curiosity. Again, the visualizations provide the framework that allows for more complex analysis and understandings of not only individual novels but also critical analysis of larger groupings and categories.

In order to further unravel the complex significance of the numbers that emerge specifically from *The Rosie Project*, I look back at the sections identified in the close readings from the first chapter of this dissertation to see if they are represented in moments of significance from the scaled reading graphs. Furthermore, I look into sections of the text that are in the visually identifiable outliers to unpack what words contribute to the increased sentiment levels to better understand why certain sections manifest with higher amounts of sentiment. In the first chapter of this dissertation, I looked at quotes from *The Rosie Project* that occurred in the

following sections, listed in the order they appeared in my close reading and identified for scaled readings by chapter and 500-word interval segment: Chapter 1 / Segment 3; Chapter 16 / Segment 69; Chapter 22 / Segment 94; Chapter 2 / Segment 5. When looking at the net sentiment for both Chapters 1 and 2, with a score of -10 and -2 respectively, the scores highlight that the novel is initially set with negativity. At first glance it may seem odd for the novel to trend towards negativity at the beginning. But it makes sense that negativity would open at the outset of narration within a romance genre text. Because often the narrative desire that fuels many romance novels is a problem which surfaces at the beginning, which then requires a journey of discovery to "solve" by the end of the story. In this way, *The Rosie Project* conforms to genre expectations by beginning the narrative with the "neuroatypical" puzzle of Don which "needs" to be "solved" in order for the journey to be completed.

There are scholars, such as Melanie Yergeau and Anne McGuire, who question this societal practice of describing autism as a puzzle and can provide much more context on the problematic puzzling structure as this investigation is not focused on that specific element. However, for this scaled reading investigation, the even more problematic element of the negativity that emerges from this particular novel surfaces when considering that the first couple of chapters encapsulate Don's research as he prepares, and then gives, the community lecture about the intersection of genetics with Asperger's. As Don conducts his research from a scientific perspective in which he references medical literature to prepare his lecture, the negativity that surrounds this section of the text emerges from the medicalized language; it is through such language that a popular culture understanding of disability is created from the impairments indicated in checklists of medical condition definitions. Consequently, the negativity that emerges from the language is one of the many reasons why there is a strong desire

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within many autism communities to move away from the medicalized views and to instead focus on the social views of being autistic—and embracing differences not as medicalized deficits but rather as beneficial and needed diverse perspectives. The importance and urgent need to reshape language is clearly seen in the trend that this section from *The Rosie Project* highlights, as the medical language imbues negativity in autism rather than positively shaping a picture of autistic neuroatypicality.

Despite the initial negativity represented in the first few chapters, the text as a whole provides a balanced representation of sentiment. In looking at Chapter 16, which occurs while Don is nervously preparing for the faculty ball, the embedded net sentiment is positive with a score of 12. The quote from this chapter that I investigated in my close reading occurs as Don gets ready for the ball and his first meeting with Bianca, who meets all the exacting criteria from his detailed questionnaire on attributes of a desirable partner. While Don has certainly struggled in social situations, to include his pursuit to find a life partner, it is intriguing to see that when he reflects on his experiences he views them through an overall positive lens. Even though the world, through its predominantly neurotypical medicalized view, chooses language that is negatively focused and tries to place that upon Don, he does not subscribe to this belief. He understands and respects the intentions of medical professionals, but he does not adopt the negativity of the medical establishment and instead creates his own unique perspective of the world which is positive.

Yet even with Don's progressive thinking, he still struggles against societal negativity and does not always flip the narrative. This can be seen in Chapter 22, which has the lowest negative net sentiment of the novel with a score of -31 and indicates that there is still negativity that permeates into Don's perspective. Because when he reflects upon his past experiences while

relating his life story to Rosie, he only has the negative language that was placed upon him prior to his awakening and realization that he could shape his own narrative despite pressures that he must conform to certain social norms. And perhaps this score of -31 (there is only one other part of the novel, chapter 35 that ties this low score) is more significant because it occurs in just 5 pages of text (whereas chapter 35 has 7 pages). Thus, when Don thinks about his past and relates it to Rosie, the embedded sentiment is compactly negative which primes certain narrative feelings for readers to be complexly troubled about Don's past that was filled with negativity. Thankfully, Don realizes how much positivity he possesses and rewrites his story to more accurately represent himself. This hopefully sends a more positive message to readers to not blindly accept the negative language and focus on projecting forward with views that understand medical necessity but are not bound by medical language.

The total sentiment graphs provide slightly different pictures of Chapters 1 and 2. While the negative focus of these chapters has already been discussed, it is interesting to see that the absolute negative values in combination with the positive values leads to a slightly higher total sentiment score for the chapters (134 and 152 respectively) which are both above the novel's average of 116 per chapter. Thus, despite the overall balance in the text, these two chapters are at the upper end of the variation in scores. Consequently, the novel primes the readers initially with high amounts of feelings, positive and negative, towards the narrative which are generated by the embedded sentiment. Looking at Chapter 16 reveals a total score of 110, closer to the average of 116. In this chapter, a noticeable shift occurs in the narrative as Don finally locates a partner who meets all of his very detailed requirements for compatibility. As such he is reflecting on his journey from the beginning of the Wife Project up until this point and grappling with the one thing he did not expect. That his ideal partner might have a requirement of him. Bianca, as it

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turns out, is a competitive ballroom dancer. And Don does not dance. Throughout this chapter, he tries to correct for his lack of dancing knowledge and experience by teaching himself ballroom dancing. And while later chapters reveal a semi-disastrous dancing encounter that ensues, this chapter focuses on Don's belief that he can translate other experiences into becoming an expertly passing ballroom dancer. His optimism is in many ways refreshing but also reveals how his outlook can sometimes create a mismatch with reality. Yet the mismatch is not an exclusive experience to neuroatypical characters—as there are many neurotypical characters that overestimate their capabilities as well.

Transitioning to Chapter 22, the total sentiment reveals a lower than average score of 93. While it could be easy to attribute and analyze this low score as a phenomenon of the narrative, it is more likely a result of this chapter being shorter in length at just 5 pages. In looking specifically to the events of the chapter, it is mainly reflective as Don tells Rosie about his life experiences. Going further into the positive/negative graphs reveals that this chapter is one of the lowest for positive sentiment and somewhat unremarkable in negative sentiment as it nears the average. Thus, this chapter continues to present an outlier case to explore with its short length and high negativity. But as argued previously, this chapter is part of the larger narrative that is structured to create a puzzling construction for the reader who has to grapple with the negativity that arises from Don's past and how it clashes with the surrounding positive narrative of Don's present. Thus, the scaled readings of this chapter further indicate the troubling nature of letting medical language write narratives. How words can pose dangerous consequences for lives when the medical overtakes the reality of lived experiences.

The scaled readings from *The Rosie Project* reinforce moments of my initial close reading, but also point to different moments in the text separate from those readings. One of the

sections from the total sentiment graph that necessitates a closer investigation arises out of

Chapter 17 which has the highest total sentiment score of 198 from the novel. This chapter

signifies a scene high in sentiment as it details the faculty ball where Don finally meets his

supposedly ideal partner Bianca and disastrously attempts to dance with her. Also occurring in

this chapter during the events of the ball is that Don finally acknowledges his feelings for Rosie

which causes him confusion as she did not meet his criteria of an ideal partner. Consequently,

there are significant amounts of positive and negative sentiment occurring in the exchanges as

Don hits a personal low with his failure to connect with Bianca and subsequently reaches a

personal high when he finally admits to and lets Rosie know about his true feelings. In his

realization for his feelings about Rosie he attempts to act upon them, but then mixes up the

neurotypical romance declarations which the following exchange illuminates:

> Rosie opened the taxi door. I willed her to go. But she had more to say.
> 'Don, can I ask you something?'
> 'One question.'
> 'Do you find me attractive?'
> Gene told me the next day that I got it wrong. But he was not in a taxi, after an evening of total sensory overload, with the most beautiful woman in the world. I believed I did well. I detected the trick question. I wanted Rosie to like me, and I remembered her passionate statement about men treating women as objects. She was testing to see if I saw her as an object or as a person. Obviously the correct answer was the latter.
> 'I haven't really noticed,' I told the most beautiful woman in the world.' (Simsion 153-154)

Don, despite his positive outlook, does not think in neurotypical patterns. Thus, he completely

confuses the signals from Rosie and tells her the wrong words in a highly charged moment. As

he alludes to, the mixing of signals is partly attributable to his overloaded sensory state; he has

just spent an evening in an overwhelmingly neurotypical social space that his neuroatypical mind

is not wired to input and process quickly. As a result, when he is given an opportunity to finally

act on his feelings for Rosie, he misinterprets what she wants. Don's response to Rosie is

completely reasonable when following along his logical thread of thinking. But he overinterprets what she wants in an attempt to translate his neuroatypical thoughts into neurotypical language, and, consequently, misses the mark in what she actually desires from him.

As might be expected, there is a severe backlash from Don not responding to Rosie with what he actually feels and what she really wants from him. With all of the emotional events occurring both during and after the ball, it is unsurprising that this chapter signifies the highest total sentiment. Yet the moment of misinterpretation highlights how misunderstandings can and frequently do occur when socially constructed relationship ideals have mixed signals and/or unstated requirements. Additionally, it shows how neuroatypical individuals could get confused when trying to reread their experiences into neurotypical language—because Rosie does not want to be treated as an "object," yet she wants Don to profess his objective attraction to her. For Don, this mixed messaging is confusing as he wants to let Rosie know his desire for her and meet what he thinks she wants. But what she says she wants and what she actually wants conflict and the unstated difference gets misunderstood in the messaging. Thus, if anything, this exchange highlights the desperate need for neurotypical society to acknowledge how their messaging often gets mixed up and is confusing. Perhaps if this acknowledgement could take place then we could all take steps to have better communication that would facilitate diverse ways of thinking so that disastrous misunderstandings could be better avoided. And in turn this would benefit the population at large which would have a better framework for understanding and responding to people.

Another section of the text to further investigate based on the scaled readings pointing towards unique sentiment events occurs with the net sentiment graph which reveals a high positive net sentiment in Chapter 23, far above the rest of the chapters. Before digging further

into the sentiment, a quick summary of the chapter shows that it encapsulates the timeframe of when Rosie and Don arrive in the US after their flight from Australia. The two have traveled together to meet Dr. Isaac Esler and covertly obtain his DNA in order to test and determine whether he is Rosie's biological father (in support of her Father Project). After Don and Rosie make their way through customs and out of the airport onto public transportation, they spend some time together in New York City during which they discover more about each other through shopping for gifts prior to their meeting with Dr. and Mrs. Esler. During the dinner meeting, Dr. Esler pulls Don aside to declare that he is aware that both Rosie and Don have come to collect his DNA. Don is somewhat baffled, but Dr. Esler mentions he was able to piece things together from the previous requests Don sent in the mail and searched the name online to see the picture of Don and Rosie together at the faculty ball. Even though Don tried to secretly collect the DNA and did not ask for permission, Dr. Esler is not upset. But the doctor does want to make sure Don thinks through the potential ramifications of testing the DNA. Plus, the doctor wanted to see Rosie in person which was another motivation to accepting the request even though he knew about the plans to covertly obtain a DNA sample.

As the details from the chapter indicate, there are multiple events happening concurrently that influence the sentiment score. Yet the overall focus is on the positive outlook that Don and Rosie are spending time together and getting to know each other in much more detailed ways. There is even a humorous exchange about customs that could have been negatively focused but ends with positive "hilarious" wording as Don tells Rosie about his unique visa: "I explained that I had a special O-1 Visa for Aliens of Extraordinary Ability. I had needed a visa after the occasion when I was refused entry, and this was deemed the safest choice. O-1 visas were quite rare and yes was the correct answer to any question about the extraordinariness of my abilities.

Rosie found the word alien amusing. Correction, hilarious" (Simsion 192). Even though Don could have fixated on his past negative experience of being denied entry into the US, he chooses instead to steer the discussion to how he resolved the problems he was facing. And Rosie enjoys how his neuroatypicality has resulted in humor. It is the continuity of this humor in which Don reshapes his reality and in turn makes this chapter so positively focused. Thus, as the chapter is not solely about Don but rather his shared journey with Rosie, the result comes across with high positive sentiment surrounding the events in which there is mutual enjoyment.

However, this is also a moment to consider the coding of sentiment through the word "alien" and the enjoyment garnered from its use. Even with setting aside the geopolitical minefield that this word evokes, there are still many elements it elicits within the autism community whose differences are often referred to as being so foreign from the neurotypical as to be "alien" and in turn less than or not human. There are some within the autism community who embrace this term to interpret their differences and there are others who reject it. But perhaps one of the most telling uses of the term emerges from the prominent neurologist Oliver Sacks who envisioned himself as an earthly (read: human/non-alien) traveler to an alien race when he explored neurological differences in his well-known book *An Anthropologist on Mars*. Even though this use was inspired by Temple Grandin, there are many damaging biases that this classification of autistic (read: alien/non-human) can extract. There is no easy or one way to uncomplicate this term which is used to better describe difference but at the same time brings immense baggage. With considering sentiment coding, it is interesting that the "bing" lexicon does not register the word "alien." Yet perhaps more telling is that it does negatively codify the words, "alienate," "alienated," and "alienation," which all derive from the root of alien. Even though the word alien might elude sentiment classification, the words which build from its root

create problematic constructions of difference which describe behaviors as negatively coded. Thus, the use of the term "alien" should be heavily weighed as it carries much more weight than the description or coding might at first glance seem.

The last two sections that I just discussed from Chapter 17 and Chapter 23 emerged through a deeper investigation of the total and net sentiment graphs from *The Rosie Project*. These were parts of the text that I went back to look at more closely because the visualizations from my scaled readings pointed towards significant sentiment events. But the redirecting towards these chapters does not necessarily indicate that I missed these sections in my close reading. Rather, my close reading focused around Don's character and representation of his neuroatypical abilities to best show how they both conform to and break away from neurotypical and ableist focused constructions to generate narrative feelings. Accordingly, I focused on sections which best highlight these abilities with exchanges in the text. The sections that emerged from the scaled readings that I looked at for the first time in this chapter, however, are more focused on Don's romantic relationship with Rosie which is why I did not analyze these sections during my initial close reading. Yet there are pieces of these sections that are very valuable to my close reading inquiry as Don's romantic relationship pursuit is inextricably tied into his neuroatypical perspective and influences his decision-making process. Despite the differences that can emerge between close readings and scaled readings, they provide mutual benefits through the combination of the two different methods which point towards a more rounded textual interpretation. Specifically, with this novel, looking at the more romantic moments between Don and Rosie reveals how he continually shapes his narrative further rejecting the medicalized language and the negativity that arises from the discussion of his past experiences. And Don's interactions with Rosie at the faculty ball and in New York City

provides further elaboration on how he goes about the rewriting of his narrative in pursuit of his goal to find a wife.

Investigating by chapter tends to provide a better interpretation of how an author uses embedded sentiment to generate narrative feeling. But this viewpoint should also be paired with what the context of the 500-word segments provide so as not to let the chapters inaccurately skew the interpretations. In the first chapter of this dissertation, I looked at quotes from *The Rosie Project* that occurred in the following sections, listed in the order they appeared in my close reading and identified for scaled readings by chapter and 500-word interval segment: Chapter 1 / Segment 3; Chapter 16 / Segment 69; Chapter 22 / Segment 94; Chapter 2 / Segment 5. Building upon the chapter exploration, I now look to further investigate how the 500-word segments provide more context to the discussion on scaled readings. The two scaled reading segments from my close reading, 3 and 5, that encompass the quotations which occurred towards the beginning of the novel both have negative net sentiment scores of -8 and -6 respectively. However, the segments that follow both 3 and 5 are slightly positive. To go into further detail, exploring the contextual events of each 500-word segment, and those that surround these segments, provides insight into how the negative to positive switching trend occurs.

Segment 3 encompasses Don talking about his failure to connect with a romantic interest in the past as he prepares for the community lecture on Asperger's, making the language in the section negatively charged as both failure and medical terminology are prominent topics. However, in Segment 4, which is between the two segments from the close reading quotes, the focus is on Don meeting with Julie (the Asperger's counselor) for the first time as he sets up his computer and prepares to give the community lecture. Thus, overall, the language is slightly positive as the events are centered around the logistical details and preparation for the lecture and

charged topics are not being discussed. Yet in section 5 which follows afterwards, there is a combination of heated exchanges and negatively charged medical topics being discussed. In this section, Don presents his scientifically focused lecture which has negatively charged medical language that is intertwined into the "factual" representation of Asperger's. Additionally, this section includes the moment where Julie interrupts and tries to "interpret" the scientific focus of the lecture into neurotypical language (and of important note, at this early point in the novel Don has not yet contemplated or self-identified as neuroatypical). Consequently, when Don quickly and vocally responds to Julie's translation of Asperger's being genetically determined and thus "nobody's fault," he does not know why he finds it wrong and offensive. Yet it foreshadows his later self-diagnosis of autism/Asperger's—one that is less about the label and more about understanding how his differences influence his perception of the world. In section 6 after the heated exchanges, Don attempts to illustrate the beneficial aspects of neuroatypical thinking by using an example. In this example, he sets up a scenario where a group of friends along with a baby are hiding in a basement from an enemy intent on killing the entire group. The major complication arises from how to get the baby to be quiet so as not to endanger the group. The inevitable neurotypical emotional response is thus pitted against the neuroatypical logical response. Yet interestingly, it is a positively coded section because the autistic teenagers in the audience are actively working through various solutions (whereas the neurotypical parents are silently frozen in shock at such an example which has overwhelmed their emotional processing capabilities).

The example in many ways points towards the fact that there is no "winning" solution to this particular scenario in the basement but rather choices that have to be made. And that Don clearly sees how emotions can cripple neurotypical individuals to make illogical choices. There

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could be a whole chapter discussion on how this view of emotion is both beneficial and problematic, but for now, it is important to highlight how Don's (unknowing) neuroatypical perspective gets the spotlight to point out shortcomings in neurotypical decision making. As a result, it is perhaps unsurprising that this section is slightly positive because the words primarily emerge from the neuroatypical teenagers who do not need negativity to describe their own logic. Thus, the early sections that encompass the negative to positive switching provides an interesting trend—one which indicates that the words in the novel might contain the negativity of medicalized language at certain points, but the focus is not fixated on the medical. Rather the focus extends outward and beyond as the narrative often works towards rewriting the social knowledge positively by reshaping perceptions to fight against negatively framed language.

Switching to Segment 69, the next section from my initial close reading, the net sentiment is positive with most of the preceding and following few sections indicating positivity as well. As discussed in more detail during my close readings, this section emerges in the context of Don preparing for the faculty ball and reflecting on his recent experiences which have taken him out of his routines of comfort and predictability during his search for a romantic life partner. He also spends time reflecting on his emotional processing to contemplate how he seems to "recognize and analyze emotions" differently from other people. In recalling his past experiences, he remembers not only the label he received of "depression" but also the questioning in which he did not quite fit into the labels of "bipolar disorder? OCD? and schizophrenia?" In this questioning is a double move. The first of the medical establishment trying to label and categorize Don as he acts in ways that do not align with the expected norms of neurotypicality. The second is Don questioning the questions that the labels of medical language try to affectively stick upon him.

Emerging from this double move is Don detaching from the medicalization, and in turn weaponization, of words that create more harm than good. Because as Don implies, he would have been better served by being given the skills to conceptually frame his logical thinking that emerges from his neuroatypical wiring—to translate how his view is not at odds with but rather complimentary to his neurotypical peers. This is not to downplay the very real and necessary services which are a result of the labeling in a neoliberal society. Rather, it is to point outwards in the hopes that there can be needed supports with therapies and practical life skills along with better mutual understandings that do not invoke the current negativity implied by labels. Even with the loaded atmosphere that actively questions the infrastructure of societal medical practices, the segment is positive. And much of this can be attributed to Don. Because despite the uncomfortableness that he experiences with changing his routine to try new things and the frustration he feels with his emotional processing being misunderstood, he identifies his experiences as positive. Accordingly, the segment signals towards the larger construct of the narrative which builds upon the embedded sentiment that continues to generate positive narrative feelings for Don and his personal growth.

The last section to look at further from my initial close reading is Segment 94. Interestingly, this segment in combination with the two segments that follow have the highest sustained negative marking from the novel (from both the negative only and the net sentiment graphs). There are a few factors that lead to the continuity of this negative embedded sentiment. The first is that the events from this section center around Don's past in which he has grappled with the negativity of medicalized labels and diagnoses. The second emerges from the discussions between Don and Rosie about their respective childhood's, including many negative feelings each had about their differences from other children; for Don of being misunderstood

because of his logical processing and for Rosie of not knowing the identity of her biological father. The third and last negative influence from this section actually eludes the algorithm of sentiment. As Don and Rosie talk about their past, they repeatedly use the word "fucked-up." The "bing" lexicon codes this as two separate words "fucked" and "up." However, despite the negativity that lies latent in the expression and use by Don and Rosie, it is not coded as a negative sentiment word. In fact, only "fuck" and "fucking" are identified by the lexicon as negative. I point this out to highlight how the code sometimes misses classifications of charged words. And to further show the intense negativity of this moment from the text because if the code were to recognize "fucked-up" as negative, then it would have generated an even higher score to more closely gauge how the embedded sentiment is overly primed for negative associations with these segments.

Again, despite this miscoding, there are still high levels of negativity in the sections. Further, this negativity aligns with the embedded sentiment generating complex feelings of frustration and anger for Don as he continually tries to navigate a neurotypical world before recognizing his differing patterns of thought through his later autism self-diagnosis. Yet while Don discusses his emotional scars and remembers the events of his twenty-first birthday which marked a crucial shift in his outlook on life, he does not subscribe to the negative feelings anymore. In fact, that birthday marked the moment in which Don reestablished control over his life narrative to recast his experiences as his own with the positivity and logic that comforts his as not yet identified neuroatypical patterns of thought. Thus, despite the negativity coded into the retelling of the events surrounding Don's birthday which mark the darkest moments from his past, he emerges from that retelling of this history by attempting to talk with Rosie about her life. Even though Rosie is unwilling to go into much detail at that time, Don does succeed in having a

personal exchange that opens up the possibility for more discussions later and further development of their relationship.

The patterns that emerge from *The Rosie Project* scaled readings offer new interpretations of the novel unique to a quantitative approach in analyzing literature with sentiment analysis. And while the numbers can point to increased moments of embedded sentiment that prime readers towards certain narrative feelings, the numbers cannot tell everything about a story. Accordingly, the qualitative traditions of close readings provide context that the numbers often do not detect. Yet the subjective nature of close reading often does not identify with precision where many peak moments of sentiment occur. While these moments will sometimes be identified through serendipity, they are often not identified or acknowledged. Consequently, both close reading and scaled reading have attributes and shortcomings. But a more comprehensive investigation emerges when the two are fused together, providing a robust examination of a text that can be read and re-read to see patterns and context symbiotically. Because the detaching of words from a scaled reading can be attached to a close reading to see a complex picture that is absent when only looking at one of these readings. And as many would likely agree, looking at a text through more perspectives always provides a richer interpretation.

There are so many details to consider in scaled readings which open up new possibilities for re-reading and how we define different classifications of reading. Now that I have had the opportunity to discuss one novel in depth through the method of scaled reading, I transition to *The Eagle Tree*. In this novel, there is only one point of view—March's neuroatypical character who is the narrator. In the first chapter of this dissertation, I argued that the novel uses an autistic teenage narrator to capture what the social conventions of labeling attempts to diminish, specifically the idea of "low" functioning autism; because March's sensory experiences of bodily

movement and breathing from the embedded sentiment embody a more full and rich engagement with the world which pushes the reader to question and step beyond their comforting confines into a deeper and alternative sensory engagement with the non-typical narrative feelings that emerge. In this chapter, I build upon my prior argument as I investigate through scaled readings by creating two groupings, 500-word intervals and chapters, to represent *The Eagle Tree* with the same approach as my first investigation above. The first grouping of scaled readings looks at the net sentiment, total sentiment, positive sentiment, and negative sentiment by partitioning the text into 500-word intervals. The scaled readings of 500-word intervals for *The Eagle Tree* consist of 160 intervals (around 80,000 words) which is just a little bit longer than *The Rosie Project*. The second grouping also looks at the net sentiment, total sentiment, positive sentiment, and negative sentiment but in this case by partitioning the text into chapters. The chapter structure for *The Eagle Tree* aligns with conventional chapter ordering and contains 26 total chapters. Consequently, I divided the novel into 26 sections to investigate the scaled readings by chapter. Through these two groupings with 500-word intervals and chapters, I look to further investigate how scaled readings provide differing perspectives and interpretations of *The Eagle Tree* (Table 3 contains the data that generates the graphs in Figures 9-12 and Table 4 contains the data that generates the graphs in Figures 13-16; both tables are listed in their entirety in the Appendix).

Figure 9: *The Eagle Tree* - Net Sentiment by 500-Word Intervals

The Eagle Tree
Net Sentiment - Positive minus Negative

Each sequential bar represents a 500 word interval from the novel
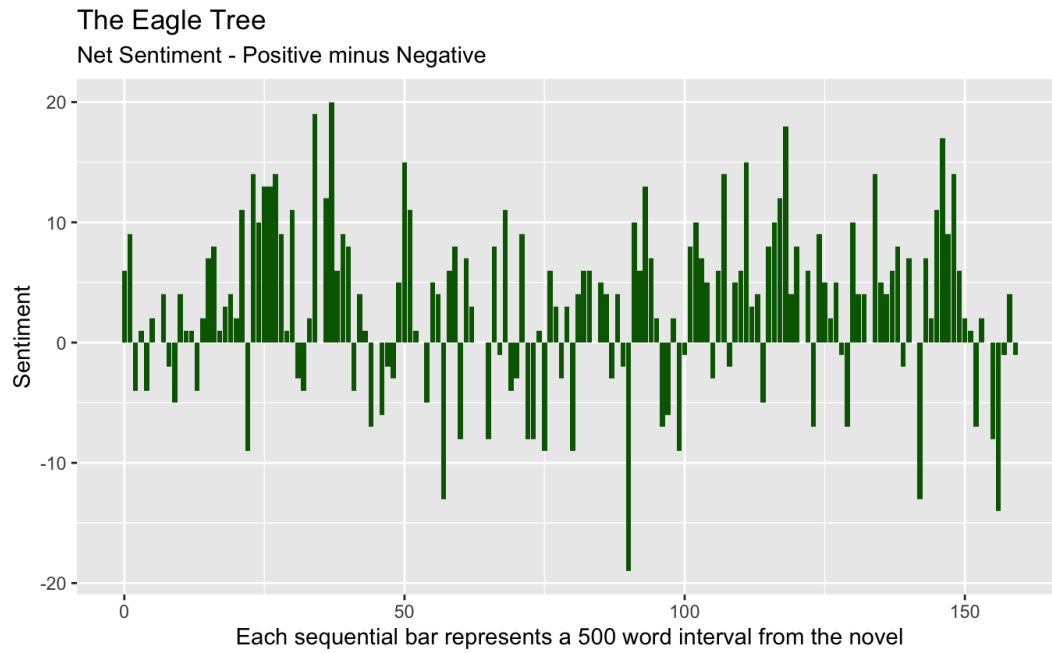
Figure 10: *The Eagle Tree* - Total Sentiment by 500-Word Intervals

The Eagle Tree
Total Sentiment - Positive plus Negative

Each sequential bar represents a 500 word interval from the novel
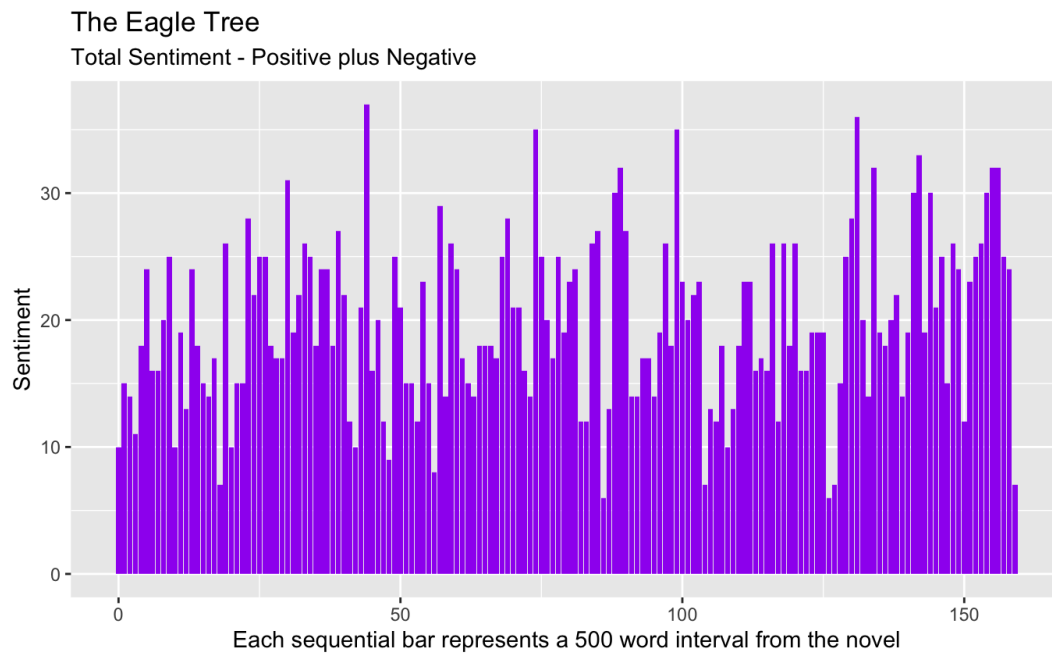
Figure 11: *The Eagle Tree* - Positive Sentiment by 500-Word Intervals
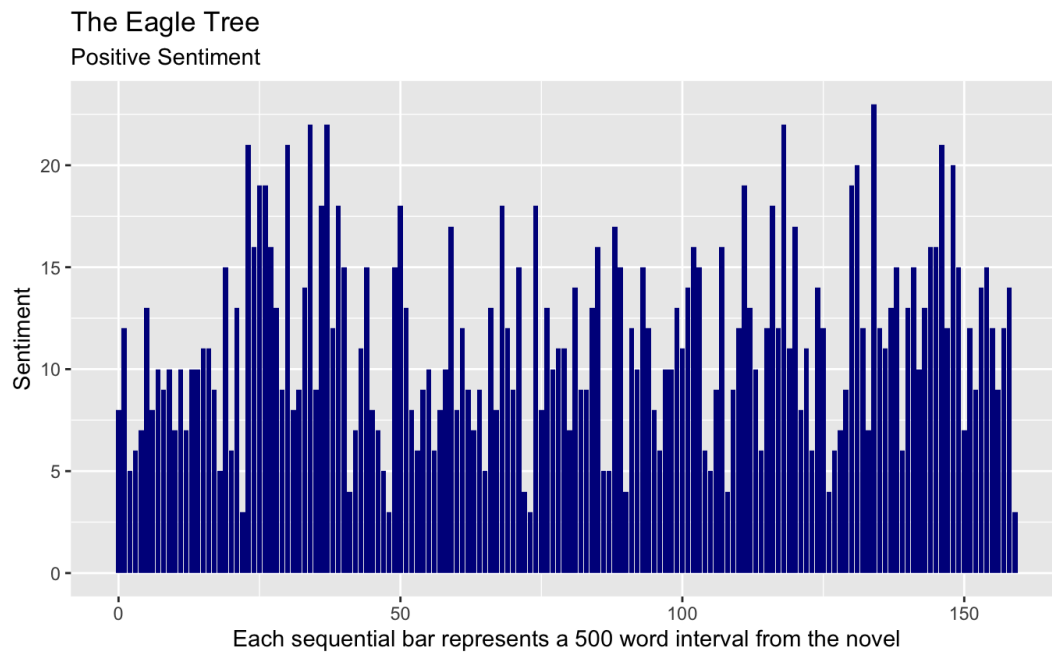
Figure 12: *The Eagle Tree* - Negative Sentiment by 500-Word Intervals
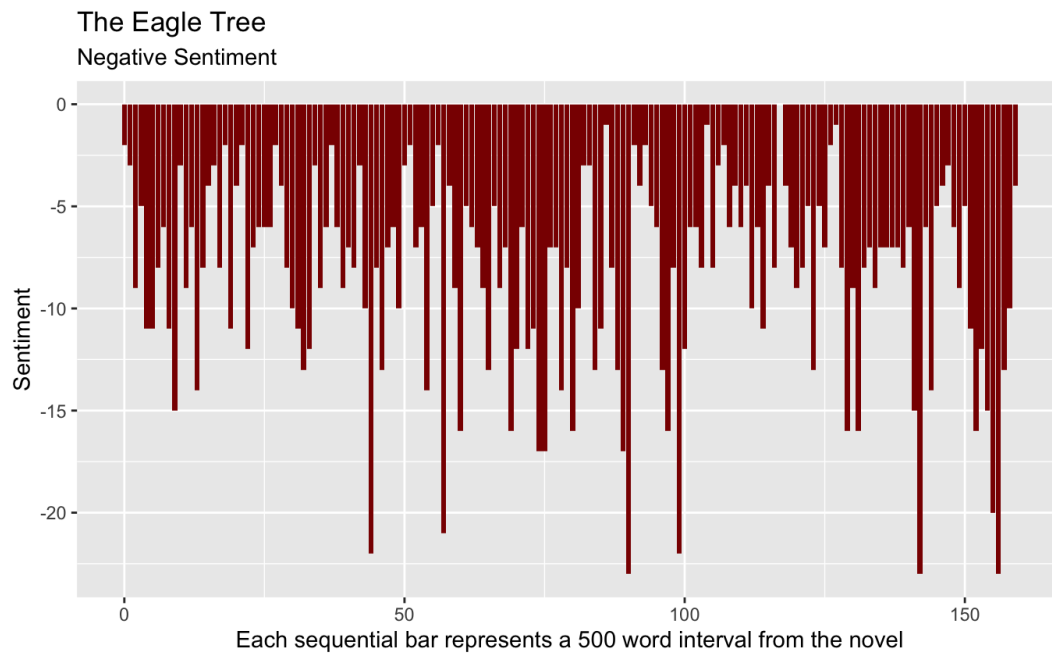
Figure 13: *The Eagle Tree* - Net Sentiment by Chapter

The Eagle Tree
Net Sentiment - Positive minus Negative
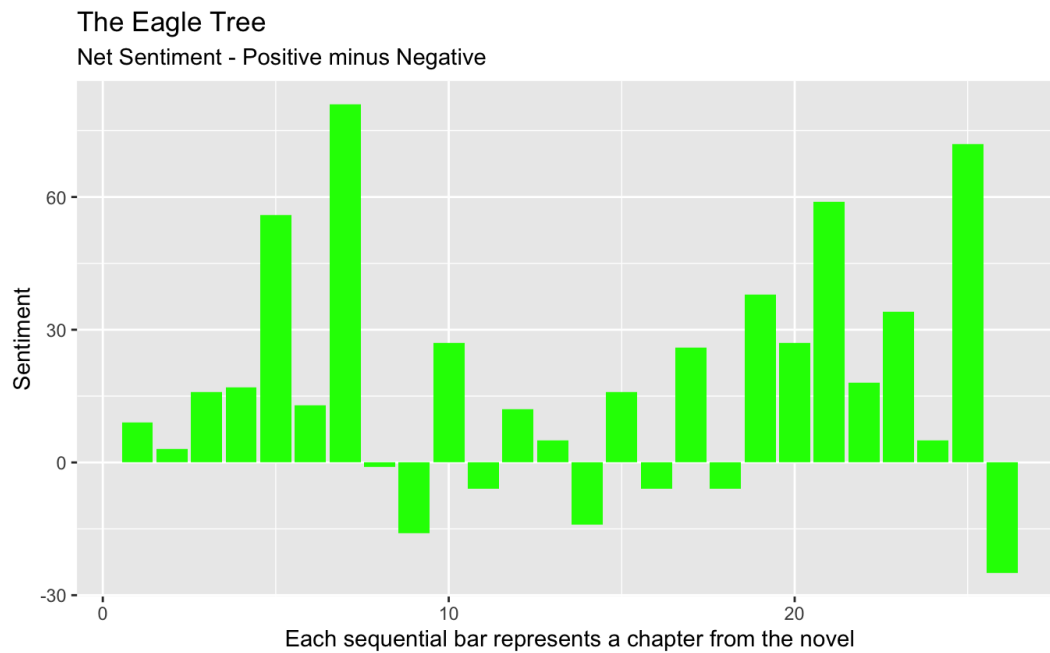
Figure 14: *The Eagle Tree* - Total Sentiment by Chapter

The Eagle Tree
Total Sentiment
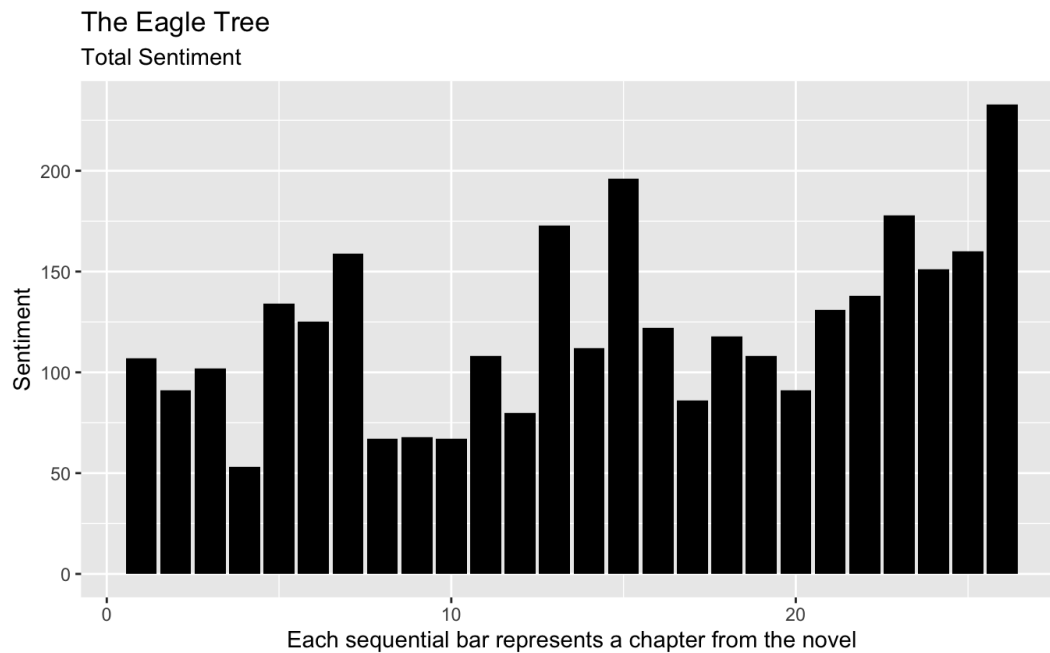
Figure 15: *The Eagle Tree* - Positive Sentiment by Chapter
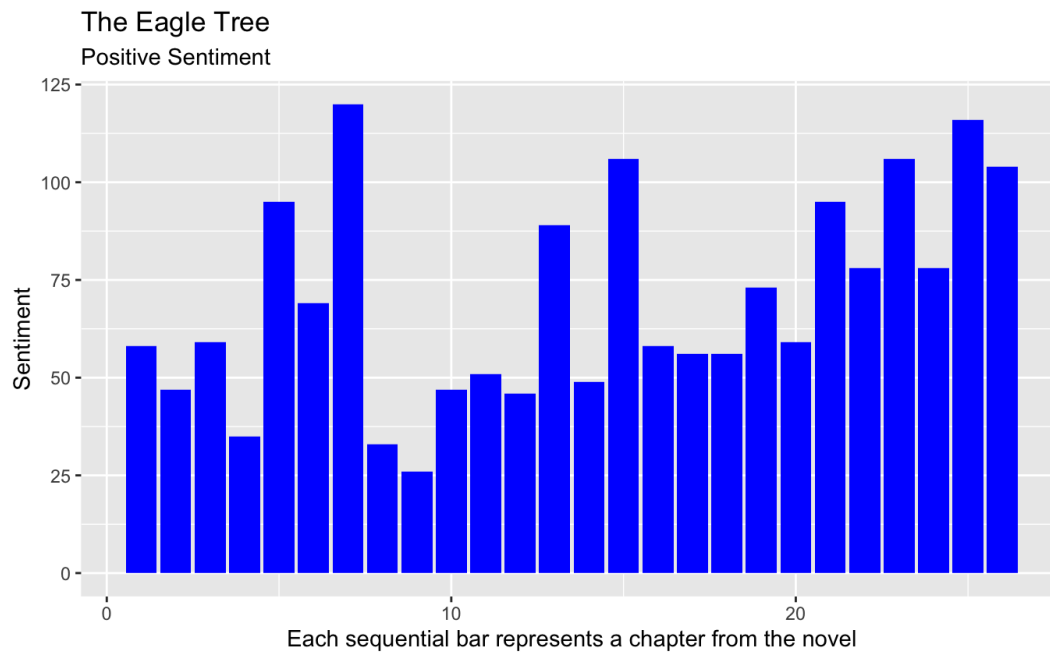
Figure 16: *The Eagle Tree* - Negative Sentiment by Chapter
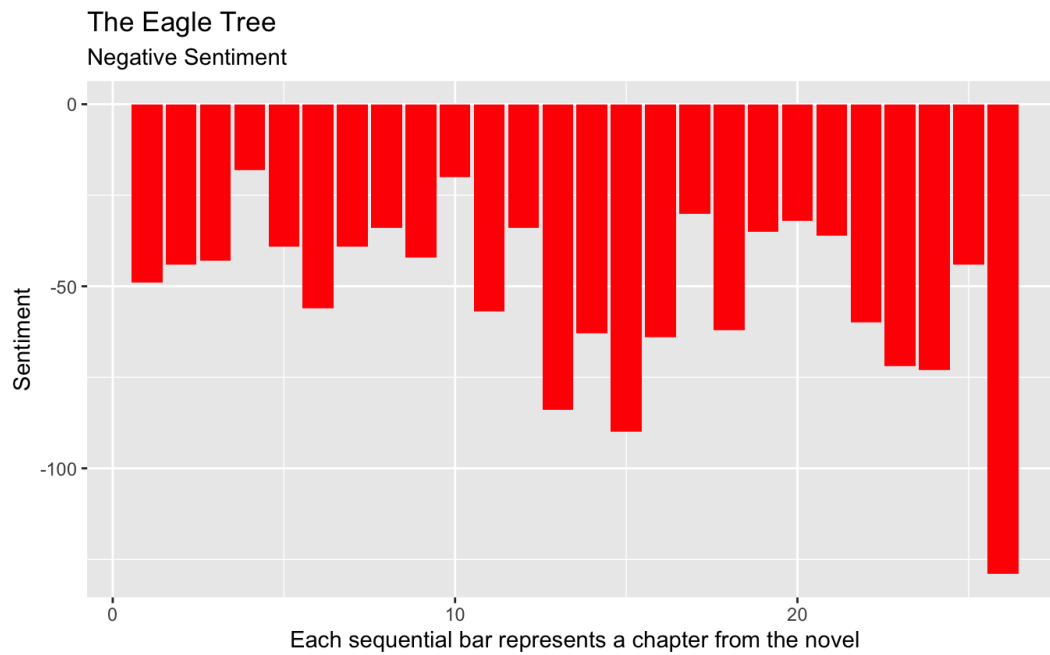
My set of scaled readings which investigates *The Eagle Tree* in successive 500-word intervals (each represented by a bar on the graph), uncovers multiple insights across an evenly spaced breakdown of the text. The first visualization of net sentiment shows the general trend to be positively focused. Within the novel, there are very few groupings of negative sentiment and only four sections that score below -10, further indicating that the trend from this graph points towards a more positively focused narrative. Switching over to the total sentiment reveals a different visualization. As the total sentiment measures the positive plus the absolute value of the negative, the numbers from this graph indicate that the total amount of sentiment averages around 20 words in every 500 words of text from the novel, resulting in 4% of words being charged with sentiment. Interestingly, this is a significantly lower level of sentiment than *The Rosie Project*. Further investigation also shows that the intensity of sentiment is also lower. Whereas *The Rosie Project* had 8 sections with 40 or more sentiment words, *The Eagle Tree* has no sections above 40. In fact, out of the 160 sections in the novel, the highest total sentiment score is 37, indicating a less intense level of sentiment.

The difference in the amount of intense sentiment in *The Eagle Tree* is likely a result of the age of the narrator. In *The Rosie Project*, Don is portrayed as a middle-aged man who has had time to work through, understand, and adapt his thinking style to effectively function and translate his ways of being into the expectations of neurotypical society. He also does not identify as neurologically different until later in the narrative (and his life). However, in *The Eagle Tree*, March is cast as a teenager with a medical diagnosis of autism. Thus, March has a strong and important voice, but the age of his character indicates that he has not had as much time and opportunity as Don to find methods of interpreting and adapting to the neurotypical social world. As a result, March's narration is not as detailed, leading him to use less words that

are charged with sentiment. In looking at the last two visualizations of the 500-word intervals, positive sentiment and negative sentiment, patterns of positivity and negativity that are isolated from each other are revealed. With these two graphs, the trend of increased positive sentiment continues to emerge, but also a more detailed picture of the negative sentiment surfaces. Through these two visualizations, a picture of the separated sentiments indicates some areas of increased intensity but none that go too much above 20, either positive or negative. Yet the negative sentiment graph indicates that there is still negative sentiment being used in the narrative even though it often gets eclipsed by the positive sentiment when the two are combined together.

In looking at the scaled readings that visualize *The Eagle Tree* by the 26 chapters there are similarities to the 500-word interval graphs but there are also different insights that emerge from viewing the novel through the lens of chapters with additional pattern trends to explore. The chapter patterns from the net sentiment graph uncover a continued highly focused use of positive sentiment. Furthermore, the graph indicates that there are only seven chapters with a negative net sentiment score, marking 73% of the novel as positive. Another interesting trend is that the intensity of the positive sentiment is far above the negative sentiment. The average negative net sentiment score across the seven negative chapters is -11, whereas the average positive net sentiment score across the nineteen positive chapters is 28. Moving to the total sentiment chapter graph shows there is an additional trend of sentiment use increasing in volume over the course of the novel. Yet in the total sentiment graph of the 500-word intervals, there was not a significant increase in total sentiment from the beginning to the end. Thus, the increase indicated on the chapter breakdown of total sentiment is partly attributable to the length of different chapters. But more importantly, it indicates how the novel structure is designed for sentiment to increase in volume across the progressing chapters. This leads to an overall

structure which builds up an increasing intensity of charged sentiment as the story progresses—an increase that emerges from the ebb and flow within the narrative arc.

The increase of sentiment indicates a design of building intensity which primes the readers to respond with highly charged narrative feelings towards the progressive events. And this increase is further seen throughout the individual positive sentiment and negative sentiment graphs. While the positive sentiment graph more closely follows the increasing sentiment trend, the negative sentiment graph is much flatter and does not align to the progressive increase. Yet the negative sentiment graph does show that while the positive focus and progressive trend of sentiment increase dominates the narrative, there are moments of intense negativity which could provide insight into certain areas of the story that can be seen through looking at the negative sentiment in isolation. Each of the eight graphs for *The Eagle Tree* discussed reveal noteworthy trends and elements to investigate. Yet the most interesting trend to further explore is how the chapter structure has a steadily increasing use of positive sentiment that feeds into an increasing total sentiment across the narrative.

As this is the second novel investigated so far, it is important to note that the patterns in this novel are significantly different from *The Rosie Project*. But the differences are not something that should be dwelled upon because as mentioned previously, direct comparison is not a very useful method or one I use to discuss the variations between visual readings of diverse novels. The main problem of direct comparison is that both novels are from different genres which adhere to uniquely separate literary patterns. Because the sentiment in a romance novel with an intended audience of adults (primarily women) is quite different from the sentiment of a coming-of-age story with an intended audience of young adults. However, one application that can provide beneficial insight is by looking at groupings of novels within the same genre. And

by comparing the generalized patterns and trends of multiple coming-of-age novels with *The Eagle Tree*, there could be reoccurring patterns that more closely identify the genre. Thus, when considering the increasing sentiment across the chapter structure of the novel, perhaps this links into the genre conventions for coming-of-age fiction. That the protagonist's journey to grow, develop, and mature is part of the increasing sentiment structure which captures this energy. Or perhaps the energy captured by the increasing use of positive sentiment in the chapters indicates an alignment towards reader desire to see growing maturity in this type of fiction which the publishing industry has tapped into in order to make novels within the genre conform to this narrative arc expectation. Because readers expect to feel certain feelings when reading from a chosen genre, authors most likely follow trends that fulfill reader expectations and in turn make them successful in sales and popularity. Furthermore, even though *The Eagle Tree* is identified as a coming-of-age novel, that is a human based decision to place it in that human created category. As a result, the scaled reading graphs might show that novels do adhere to these reader and publisher expectations. But perhaps the visualizations reach beyond the expected in order to reveal further unique insights about how genres are defined and assumed to work.

To further unravel the complex significance of the sentiment numbers that emerge from *The Eagle Tree*, I look back at the sections identified in the close readings from the first chapter of this dissertation to see if they are represented in moments of significance from the scaled reading graphs. Additionally, I look into sections of the text that are in the visually identifiable outliers to unpack what words contribute to the increased sentiment levels to better understand why certain sections manifest with higher amounts of sentiment. In my first chapter of this dissertation, I looked at quotes from *The Eagle Tree* that occurred in the following sections, listed in the order they appeared in my close reading and identified for scaled readings by chapter

and 500-word interval segment: Chapter 8 / Segment 41; Chapter 1 / Segment 7; Chapter 22 / Segment 123; Chapter 25 / Segment 144-145. The first quotation from Chapter 8 occurs in one of the few negatively scored chapters of net sentiment, with a mark of -1. The score is negative, but it is the chapter closest to a neutral score and has one of the fewest total uses of sentiment. Considering the context of the chapter, this ambivalent lower sentiment score reveals insight about the events that take place. The first event that my close reading selection captured, is the exchange with the neurotypical teacher Mr. Gatek when he identifies March's neuroatypical behavior as "disruptive" and then orders him to sit by himself. While there is negativity surrounding March's "disruptive" day at school, he then goes to visit the Eagle Tree. The visit should signal a positive event, but it turns into a negative experience. When March arrives at the Eagle Tree, he finds a white chalk line on the ground surrounding the tree and a sign indicating the portions of land that have been sold. Uncle Mike enforces the social expectations of rule following, which means March is unable to get as close to the Eagle Tree as he did on their previous trip. Following this failed trip to get up close to the tree, March starts to contemplate the complexities of land ownership. He then tries to understand how that translates into tree ownership through pacing and pulling information about the ecosystems of trees from his knowledge to talk about his frustrations with his mom and Uncle Mike. Between the events surrounding March's teacher, the failed Eagle Tree visit, and working through the complexities of ownership, it makes sense that the chapter ends up negatively coded in an almost neutral and ambivalent way. Yet it also reveals how March's neuroatypicality gives him an advantage. Even though he is upset and frustrated by the multiple events of the day, he does not accept the situation as negative. Rather, he tries to actively work through how he can continue to access the Eagle Tree by taking the rules that do not make logical sense to him and finding ways to reshape

how these rules could work.

In looking back at Chapter 1 from *The Eagle Tree*, the net sentiment score is 9. In this chapter, the reader is introduced to March and learns about his love of trees. Because the chapter mostly focuses on March's descriptions about his life and trees, it is positively coded to represent his passions. And the chapter is laden with sentiment as March translates his experiences of the world from his neuroatypical lens into language that can be understood by neurotypical readers. As the quote from my close reading highlights, March describes his sensory experiences of the world with how his mind extends into his body to engage with his surroundings. Even though March uses neurotypically focused language to frame these descriptions, it becomes more apparent as the chapter progresses that this language is insufficient to fully describe his experiences. Because the language available does not capture the intricacies of how March's mind and body are much more fluidly connected to engage through his sensory channels and fuse with people, things, and the natural environment surrounding him. Additionally, the language in the chapter highlights an overall structure of the narrative in which March has the privilege and authority as the neuroatypical narrator. But the narrative also consists of heavy dialogue use that captures the exchanges of the other characters within the story. More often than not, these exchanges include very few verbal inputs from March and focus intently on the other characters. Thus, while March has the narrative authority, this is undermined to a degree by the balance of the novel in which the verbal exchanges are predominantly from the neurotypical characters, in turn minimizing March's words. Despite some problematic constructions, however, the positive focus of this chapter reveals much about how March is viewed positively by the characters around him as well as his mindset in which he does not dwell on the setbacks of moving to a new house as negative but rather looks outward to climb higher "right away" and

reach towards the pinnacle of the Eagle Tree.

Furthermore, there is another important element to discuss about Chapter 1 from *The Eagle Tree*, as this chapter, along with the following six chapters, are all positively coded which indicates another trend to explore. While the romantic genre novel *The Rosie Project* started with multiple negatively coded chapters, the coming-of-age genre novel *The Eagle Tree* differs from this construction to start with more positively focused words. Again, these structural differences point towards genre variations which are in part attributable to the unique qualities of romance versus coming-of-age fiction. In romance novels, the general trend is for the story to start with a relationship problem that is resolved through the narrative whereas coming-of-age fiction tends to be more positively focused to indicate growth and development of the main character. Thus, *The Eagle Tree* starts with an upbeat tone that focuses on a goal to be achieved which initially progresses well but is then followed by problems and difficulties in reaching the goals. As the main character develops, the challenges they faced eventually become surmountable and they are able to reach their goals. March follows this generalized story line but with some exceptions. Rather than being stifled by social anxieties and fears, he does not worry about or spend extensive amounts of time to grapple with these factors as a neurotypical character might. However, he does have to work through his sensory sensitivities in ways unique to his neuroatypical characteristics that neurotypical characters do not consciously address. Yet it is those same unique characteristics that allow for his development and eventual goal achievement of climbing the Eagle Tree and remaining in the custody of his mother. Consequently, while March's challenges and growth might seem dissimilar from those that neurotypical coming-of-age fictional characters experience, they are more similar than different. And another crucially important note to highlight here is that the visual shapes of novels are much more heavily

influenced by genre rather than any particular diverse narrator perspective.

Turning towards Chapters 22 and 25 shows that both are positively coded, with net sentiment scores of 18 and 72 respectively. In Chapter 22, March fights to protect the Eagle Tree by addressing the mayor and city council. While overall these actions are an indication of March's positive growth, negatively focused language arises highlighting the conflict between neurotypical and neuroatypical perspectives when Uncle Mike labels March as autistic and problematizes his authority to speak in public settings. Even though March's uncle only wanted to provide a better experience for him, the resulting dialogue indicates the continued problematic constructions of how impairments become disabilities in social settings. And as discussed during the close readings, it is interesting that "autistic" is used only twice during the entire novel, one time by Uncle Mike prior to the city council speech and one time by Mr. Gatek during the custody hearing. March never uses the term to translate or describe his experiences as it is in many ways irrelevant to his telling of the story. But society insists upon continual labeling to describe anything that deviates from artificially set typical expectations because people are often not willing to see the similarities in ability and predominantly focus on differences to interpret actions. Yet there could be more acceptance if people were more willing to understand and accept larger spectrums of behaviors. And perhaps this would turn labeling into an act that empowers understanding rather than removes power in misunderstanding. As there is a mix of problematic language in the structure of this chapter (22), it does not have that much "indulgence" in positivity leading to the moderate score of 18.

On the other hand, Chapter 25 provides an interesting mix of highly charged positive events. The section I quoted and discussed at length in my close reading about water droplets occurs when March reflects on natural occurrences which conflict with human constructions.

While this particular section primes the reader towards more negatively focused words with uses such as "disappear" and "distorting," it also provides the catalyst towards positive thinking for March to see his growth through the beauty of nature. In addition, this chapter reflects on the successful advocation by March to save the land with the Eagle Tree from construction. The story of this success, however, is relayed by his pastor Ilsa rather than by March himself. As the religious based neurotypical figure of authority gets to tell the story, it is shaped into positive neurotypical desires, marking this chapter as the second highest in net and positive only sentiment with scores of 72 and 116 (just below Chapter 7 which has 81 and 120). Despite the good messages that resonate from this chapter, it is fraught with issues as March does not get to have his moment of triumph in which he shares his success with the community. He is relegated to the pews where his growth is diminished, and the trees are contained within the wooden benches symbolizing the removal of his power and ability to climb. Thus, the scaled readings of this chapter further indicate the vexed construction in which March has the authority as the neuroatypical narrator, but this is often diminished by the disproportionate use of dialogue from neurotypical characters. And as both of these selections from Chapters 22 and 25 indicate in differing ways, words can pose dangerous consequences for lives when neurotypical individuals overspeak for autistics.

The total sentiment graphs provide similar and different insights into the chapters. In Chapters 8 and 1, the total sentiment scores (67 and 107 respectively) are well below the average sentiment score of 121. These lower scores relate to the earlier discussion of how the chapter structure of the novel is shaped in such a way that the total sentiment slowly increases over the course of the narrative. Thus, the novel primes readers with a steadily increasing intensity of narrative feelings through the embedded sentiment as the novel progresses. And while there is an

expected element of development and growth in the coming-of-age genre, this is further

intensified by the chapter structure in which sentiment literally grows to increase in numbers.

Transitioning to Chapters 22 and 25, the total sentiment scores (138 and 160 respectively) align

with the pattern of sentiment increasing over the course of the novel as both are well above the

average sentiment score of 121. Both chapters also indicate significant events, Chapter 22 with

March's speech before the mayor and city council and Chapter 25 with his reflection on the civic

events that are relayed primarily by his pastor. As such, the increased amount of the total

sentiment of these events indicate they are more intense than the previous sections leading up to

these demonstrations and professions of March's development and growth.

　　　As with *The Rosie Project*, the scaled readings from *The Eagle Tree* reinforce moments

of close reading, but also point to different moments in the text separate from my initial close

readings. One of the moments that bears closer investigation arises from the net and positive

sentiment graphs which reveal that Chapter 7 has the highest positive sentiment score. In my

close readings, I did not investigate a section from this chapter as I focused on different

representations that captured March's autistic presence and advocation for his way of being.

However, this chapter also includes valuable insight as it encompasses passages in which March

contemplates his habit of attending church weekly and relates these experiences to trees in order

to make sense of the rituals and messages of his church and being a part of that community.

Some of the positive sentiment from the chapter emerges from the word "like" which March uses

in the context of analogies as well as what he likes about the connections between church and his

interests centered on trees as the following example illuminates: "I like the idea of God being

like a tree. God would be alive and always growing and nearly everlasting" (Location 736).

March's descriptions throughout this chapter focus on references to his joy of trees and God

which in turn develops into his appreciation of the church community and leads to more positively coded words emerging. Yet for the neurotypical reader to understand March's thoughts about his joy, they must be set in translation by providing an analogy to enable an ableist focused construction for consumption. For March, his love of trees does not need to be explicitly stated because it predominates and defines how he interprets the world which is an essential part of how he engages with and understands his community. However, because of the continual training at home, school, and in therapies to assimilate to neurotypical norms, he reflexively translates his passions. He has been trained to understand that in order for the majority of people to comprehend his strong feelings about trees he must filter these feelings into neurotypical ways.

In addition to learning neurotypical norms in formal and informal settings, March also gains further neurotypical insights through his connection to the church with Ilsa the pastor and her husband Pierre. Ilsa and Pierre both have academic backgrounds in botany which draws March into the church community in ways that he might not otherwise connect because they understand how to speak to him through his passion of trees. Thus, it is Pierre who is able to teach March how to perform a handshake and the expectations of this neurotypical ritual: "Pierre is good for me to talk to. Sometimes he has been very helpful, as when he explained to me that when someone holds out a hand, they expect that hand to be squeezed and gently moved up and down for between one and three seconds before it is released. It is a greeting ritual, Pierre told me, but I don't need to do it with him. This is fortunate, because I do not like to do it. I do not like to touch skin" (Hayes Location 785). In this passage, the words "good," "helpful," and "gently" all flag as positive marking this as a section with high positive sentiment. And in many ways the words are positive even though March is trying to reconcile differences between the

neurotypical desires and his own preferences. Interestingly, because sentiment analysis with the "bing" lexicon is limited in scope to an n-gram of 1, in other words it can only detect one word at a time in isolation instead of as a string of words which together provide different meanings, the two instances of "I do not like" that March uses to describe his dislike of physical contact are both tagged as positive because of the word "like." Thus, this passage becomes coded as much more positive than it should because of the limitations imposed by the n-gram of 1. And it fails to fully capture March's struggles with these touching expectations which dictate that he act in ways counter to his neuroatypical desires. However, he continues to try and understand the customs and even performs them despite his strong dislike of sensory contact that he must endure with the touch of human skin. Even though the section is tagged as overly positive, March does come to appreciate through the coaching of his friend Pierre the positive benefits of conforming to the rituals expected by neurotypical society.

Switching to another important moment that scaled readings call attention to through the visualizations, Chapter 26 (the last chapter in the novel) has outlier indications on all four of the sentiment graphs. In this last chapter there is the lowest net negative sentiment, the highest total sentiment, the highest amount of negative sentiment, and one of the highest amounts of positive sentiment. The vast amount of sentiment that results from this chapter is partly attributable to it being longer than others, yet it is not markedly longer. Accordingly, there are significant sentiment uses to unravel in order to discover why there is an increased amount of sentiment used in the chapter. Considering the events which occur, it seems that the increase is highly attributable to the event of March finally achieving his goal to climb the Eagle Tree. And after all the anticipation and work he put in to saving the trees in the area from being cut down, he savors the opportunity to climb. He makes his way to the top in slowly patterned steps and emerges

above the canopy to see the rare murrelet bird that contributed to conserving the area from development. Because in addition to March's arguments for preserving the old-growth trees, the conservation of the area that sustains this endangered bird species was another contributing factor in the city deciding to save the land with the Eagle Tree which supports the ecosystem:

> The murrelet stretches out its marbled wings, and then it launches itself forward; it flies away from the creaking Eagle Tree. It is leaving me alone here, flying out toward Puget Sound and the distant ocean.
> After the murrelet is no longer in sight, I stand up tall on the broken crest of the Eagle Tree, and I raise my arms in the growing sunlight. The wind rises.
> I am standing at the highest place that can be reached within five miles, a broken eagle's nest above me, a single limb under my feet. The sun is shining on the craggy shattered top of the tree, and it makes the dark-reddish Ponderosa Pine bark glow like orange mica, with deep furrows concealing the gleam of sap in the depths. Broken dead branches stick out into the air all around me, like broken ribs over the forest canopy.
> And then the tree begins to fall.
> The wind is blowing hard around me, the sound is rising in my chest again, and I feel I can fly.
> And then the branch has shifted under my feet, the deep furrows of the bark have left my back, and I have no time to spread my arms. I am not flying. I am falling. (Hayes Location 3254)

March makes his way to the top of the Eagle Tree, marking the pinnacle of his story of growth and development which is reached as he watches the murrelet leave the nest, stretch out its wings, and fly towards the next chapter in its journey of life. In finally getting his chance to climb the Eagle Tree, March illustrates how he has adapted through adjusting his bodily response to the ecosystem surrounding him to indicate how much he has grown and learned during his journey to save the tree. Because like the murrelet, March has learned how to rise above, he now self-advocates for his passions and himself in society, using his unique background to embrace his way of being. Yet at the same time he reaches this high achievement, the forces of gravity come to claim him from maintaining his ascent as he has not been (and never will be) "cured" of autism and still faces many challenges going forward in a world not structured for his needs. Thus, both the Eagle Tree after its many years of serving the ecosystem in the Pacific Northwest

and March come crashing down back to the earth which continually exerts its force on all forms of life.

Even though the Eagle Tree has reached the end of its lifecycle, no longer able to fend off the many influences of nature and humans, March must continue to move forward and continually fight against the forces that would try to minimize his power or destroy his presence. While he could be crippled by these forces, he pushes forward in the cycle of life. Because just as he saved the Eagle Tree from development to enable its mission of supporting the murrelet, he is also a part of the final mission in which the tree nurtures the ecosystem that will benefit from utilizing all the diverse parts to foster further growth and life. Thus, this section marks a complex moment. One in which March reaches a goal only to realize that the climb is just one part of a much larger journey. And, importantly, the increased sentiment from the section is not a result of other characters dialogue or another character narrating March's actions. Rather, the sentiment is his. Because after his long journey he fully embraces his power to use his voice to narrate the experiences of both climbing the tree and rising above social expectations. While the growth should be celebrated, it should also be contrasted against the gravity of nature which always comes to claim harmony for the ecosystem, as the negative coded words detail through the "broken" and "dead" branches which "fall" with the force of the "hard" wind.

Perhaps then the larger element about the sentiment in this chapter is that it turns the genre form to question the coming-of-age fiction arc. The positive words to mark growth are contrasted with the negative words used to enable the cycle of growth which reclaim both the Eagle Tree and March. Because the words from this section that contribute to the high amounts of sentiment are negatively focused to point towards more questions than provide answers to neatly wrap up March's story. Yet this ending also captures March's passions—he wants to show

the cyclical process of nature in ecosystems through the trees which inevitably rise and fall nurturing all forms of life. Consequently, in his discovery of how to best use his neuroatypical thinking traits in combination with what he has learned about neurotypical thinking traits from various people in his life, there is a pointing towards narrative feelings in which the reader must ask more questions rather than receiving neatly wrapped and clichéd answers to the forces and conformity in nature. Furthermore, the reader must contend with asking about what "natural" forces contribute to growth and destruction in the many diverse forms of plant and human life and whether that constitutes a beneficial and harmonious ecosystem for all. Because we should always be thinking through how we make connections through the modalities of attachments.

I gravitated towards the last two sections discussed above by interpreting the visual outliers from the scaled readings in Chapter 7 along with Chapter 26. These were parts of the text which I did not initially investigate with my close readings and went back to look at more closely because of the scaled readings. But I did not miss these chapter sections previously. Rather, my close reading focused around March's character and representation of his neuroatypical abilities to best show how they both conform to and break away from neurotypical and ableist focused constructions in his coming-of-age journey of growth to generate strong narrative feelings for the reader. The selections from Chapters 7 and 26 that I discussed above, however, reveal more about March's character with his connections to his church community and how he culminates his crashing quest to climb the Eagle Tree. Through the combination of the close readings and scaled readings, a blending emerges to reveal a more complex picture of March that either approach alone would be unable to achieve. Because it takes March until almost the end of the novel to fully reclaim his narrative power by exerting his voice and control over the dialogue. In addition, the multiple sections about his character that I discussed in the close readings

illuminate his journey to indicate how he develops, growing from the time he spends outdoors in nature and with human exchanges at home, in the classroom, and civic spaces. In the end, he reaches his goal and climbs the Eagle Tree, both as a teenage act of defiance against his mother and as an act to reinscribe the importance of his neuroatypical positioning in society which benefits from his diverse attributes and perspective.

As previously mentioned, investigating by chapter provides a better interpretation of how an author uses embedded sentiment to generate narrative feeling. But this approach also needs to be considered in the context of the 500-word segments so as not to let the chapters disproportionally skew the interpretations. In the first chapter of this dissertation, I looked at quotes from *The Eagle Tree* that occurred in the following sections, listed in the order they appeared in my close reading and identified for scaled readings by chapter and 500-word interval segment: Chapter 8 / Segment 41; Chapter 1 / Segment 7; Chapter 22 / Segment 123; Chapter 25 / Segment 144-145. Looking towards the 500-word segments provides more context to the discussion I have started about the chapters through scaled readings. The first section I investigated with my close reading is from Segment 41 which straddles two chapters in the book, consisting of parts from the end of Chapter 7 and the beginning of Chapter 8. Overall, this segment is positive with a net sentiment score of 8 which follows the trend from the four prior sections that are all coded as positive. However, the segment that follows is negative. As the segment pulls from two different strands of the narrative thread, there are two distinct events which occur in the section. The first being at the end of Chapter 7 when March is discussing the Eagle Tree with Pierre from his church community and his mother. While Pierre reaches March through the language of trees and intellectual understanding about the excitement over the existence of an old growth ponderosa pine tree in the local Olympia area, his mother is less than

thrilled with March's fascination about the tree as she worries for his safety when he inevitably attempts to climb the 200-foot tree. In fact, she becomes so worried about the danger due to the tree size that she forbids him to climb the Eagle Tree until he is at least eighteen years old reinforcing her earlier climbing ban.

Yet March takes this setback in stride with "affirmative" agreement which fuels his eagerness to climb the Eagle Tree in "three years, seven months, three weeks, and one day" (Hayes Location 863). In the beginning of Chapter 8, March's excitement continues as he thinks about his future chance to climb the Eagle Tree, but this is dampened by the "disruptive" focus of Mr. Gatek. As this segment captures March in excited discussion with Pierre, the distant future possibility of his mother allowing him to climb the Eagle Tree, and going back to see the Eagle Tree after school with Uncle Mike, he is filled with excitement that extends from his mind into his body. Thus, it aligns that Segment 41 has an overall positive score, despite the presence of negative language used by Mr. Gatek towards the end. As the segment that follows 41 captures March's confusion at not being able to get close to the Eagle Tree after school because of the area being cordoned off from public access, the section is understandably negative as it encapsulates March's frustration over socially defined boundaries along with land ownership and rules that restrict his bodily movements. Accordingly, the segment after 41 aligns to March's state of mind through the negative embedded sentiment that is most likely intended to cross over into the narrative feelings for the reader to take up these frustrations with March. Yet emerging from this brief dip into negativity is March's hope for being able to use his unique atypical thinking and attributes to foster change, both in his community to save the Eagle Tree and with his mother to convince her to let him climb it sooner than his eighteenth birthday. Consequently, the switching from sustained positive sentiment into a quick reverse with brief negative

sentiment is a moment used by March—a catalyst that ignites within him the desire to advocate for saving the Eagle Tree despite the many uncomfortable and complex sensory experiences that the journey will inevitably evoke.

The next segment from my initial close reading went back to an earlier part of the novel, in which March prepares to go with his Uncle Mike to visit the Eagle Tree up close for the first time. This occurs in Segment 7, which is the first "neutral" section (evenly matched score of positive and negative sentiment) from the novel that is sandwiched between positive sections that occur before and afterwards. The segment encapsulates a couple of crucial events to include discussion about the recent departure of March's father from Washington state to Arizona (and consequently from his immediate life) and his joy at finally getting permission to go see the Eagle Tree which occurs after an argument with his mother when she bans him from climbing the tree. Consequently, the neutral sentiment state articulates March's lack of understanding and motive behind his father's departure in addition to a combination of an argumentative low and subsequent excited high from discussion with his mother about the tree. And these two moments of significance balance together on a neutral note before proceeding forward into further narrative events. Importantly, this segment marks a launching point for the coming-of-age genre arc: March's goal for growth is identified, climbing the Eagle Tree, as well as the challenges he must overcome, his mother's refusal to give permission out of concern for his safety.

As the novel progresses and March continues further along the path towards achieving this goal, he develops and matures in line with the expectations of coming-of-age fiction narrative arcs. But as mentioned with events that occur in the final chapter when he climbs and then "flies" out of the Eagle Tree, this arc is called into question along with the idea of growth and overcoming which seem to be pulled back to earth through the gravity that is naturally

exerted. Therefore, this beginning neutral segment lays the foundation for March's starting point as he begins his development. And the segment also sets the stage for the further questions that later emerge from his journey of growth and destruction. Furthermore, the complexities of his father's departure are never fully explored or understood. As March is the narrator, this lack of focus aligns with him not being concerned about the family change—that it does not cause him extended pain or worry could signal many things about his relationship with his father. There are many curious implications from this significant yet downplayed event. But it would suffice to say that the lack of focus does indicate that there is a river of feelings that the narrative bridge crosses yet does not desire to touch.

Another segment I explored with my close reading is Segment 123 which occurs when March is at a local government meeting preparing to speak in front of the mayor and city council to make an argument for saving the Eagle Tree ecosystem. This segment is coded as positive with a net score of 6 that follows from a neutral segment prior and flows into a negative one afterwards. Yet other than the sections immediately before and after Segment 123, there are 5 sections on either side that are positively coded. As the segment depicts March when he is nervously preparing, getting his cards and himself ready before making his public speech to the council, it highlights the vast range of feelings and sensory overload that he is processing. And the neutral/negative sections that sandwich onto this segment capture the nervous energy of preparation and March's introspective reflection on the terrible consequences for the trees if development were to proceed. He desperately desires to express himself in neurotypically understandable language so that his audience will understand the dire importance of saving the Eagle Tree along with the supporting ecosystem. Consequently, even though there is heightened anxiety as March prepares, he works through his sensory overload with multiple positively

focused "wish" scenarios. In other words, he articulates his wishes in which he would be able to transfer his knowledge to the locally assembled group so that they would understand what he experiences and sees with the trees in nature. These desires occur alongside the ableist focused words and labeling by Uncle Mike which are expressed with "indulgence" and "patience," aligning to neurotypical desires for positive words that highlight the unique attributes of his autistic character despite his socially defined disability. Yet this construction is called into question through the "difficulty" of the mostly positive words as they evoke problematic language that correctly decodes the words but fails to capture the context. Because while the segment is coded positively, the actual experiences of March are much more negative than the dialogue implies and cancels out through the net sentiment score. Thus, this section brings about a vexed construction, as further exploration yields a deeper understanding of the narrative feelings which use positive neurotypical words to overwrite negative neuroatypical experiences.

The last segment I investigated with my close reading occurred across two sections, Segment 144-145. Both of these sections are positive with a string of seven following sections that are also positive. And just as the quote crosses two segments, the segments cross over two chapters, the end of Chapter 24 and the beginning of Chapter 25. There is an interesting divide with the two chapters. At the end of Chapter 24, March speaks with the Forest Service professionals as they finish up their survey of the area surrounding the Eagle Tree and prepare to turn it into a protected park. During the exchange, March learns that despite all his attempts to save the Eagle Tree, it will still be cut down as it is unhealthy, and they do not want it to cause harm to the surrounding ecosystem. He subsequently leaves the area and walks home with a bloody nose that he does not contain by holding his nose. In some ways March's nosebleed, which is visibly striking and looks horrific even though he is still healthy, mirrors the bleeding

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out of the Eagle Tree as it reaches its slow death. And when his mother asks what is "wrong" when she sees her son return bloody and distraught, he cannot articulate the immense emotions and feelings that overwhelm his system with the information about the imminent demise of the Eagle Tree. After these highly charged events, the beginning of the next chapter picks up with a rainy day in which March contemplates the virtues of rain and many trees supported in the Pacific Northwest. And after this introspective contemplation on rain, the following day March goes to church and notices a tree on Ilsa's stole, a part of her professional attire, and explores the ideas of abstract instead of concretely existing trees.

Overall, these segments capture many events to include March's extreme low at the upcoming loss of the Eagle Tree, his extended reflection on nature which conflicts with human constructions, and his day at church in which he contemplates Ilsa's stole designed with a tree. With the many seemingly negative events that span the two segments, it is interesting that they are both coded as positive. Yet other than his mom asking what is "wrong" and his contemplative thoughts about whether to "disappear" would be better for his family, the words are positively focused. While this again highlights the problematic decoding that does not always capture a fully accurate rendering of narrative feeling, it does logically follow the rules of determining the positive and negative sentiment. And as explored earlier, just because language is coded positively does not mean it will generate positive narrative feelings for the reader. In this case, while the segments do capture the negative sadness with the imminent loss of the Eagle Tree, there is not a fixation on this loss but rather a moving forward. Because in moving forward, March can contemplate how nature provides insight into the natural/artificial constructions, autistic presence, and diversity of experiences. Rather than let the loss overwhelm him, he harnesses it to pivot towards change—a catalyst which uses the loss of one tree towards a

campaign to bring awareness to saving the ecosystem and exponentially more trees.

In this chapter, I introduced and discussed scaled readings as a method of detachment that allows for a re-reading of sentiment through the reattachments that emerge by exploring patterns from visual representations of sentiment in novels. And from the patterns that emerge out of the evenly balanced sentiment in *The Rosie Project* and then to the patterns of positivity with growth across the chapters from *The Eagle Tree*, each novel represents a different narrative feeling experience that grows from genre representations as well as character constructions. The distinctly different stories provide insight into the scaled reading method which blends quantitative analysis with qualitative analysis. Yet here it is crucially important to note a trend long observed across many disciplines. While binaries (such as here with positive and negative sentiment) may be beneficial as an initial way to understand complex concepts, using binaries alone without going further to investigate representations is a poor method that prohibits the ability to more deeply understand multifaceted issues. And while the positive/negative classification that emerges from sentiment analysis provides some great patterns to initially explore, it also reveals troubling biases within the sentiment sets that affectively emerge from the inabilities for binaries to represent diverse concepts. Thus, as I move into the next chapter, I look more deeply at some of the highly charged and coded words to investigate why classifications can be misleading and cause damage, along with the affective touching and feeling that is gestured through words. And as I finish this chapter which started the path of scaled readings through an investigation of neuroatypical autistic narration across two stories, I look next to see how reattaching meaning can shift when re-read through neurodiverse narrators, as they inevitably provide a much different perspective.

CHAPTER 4

Anagramming with Scaled Readings – Neurodiverse Narrators

My oldest son has taught me that being a mom is an adventure filled journey—one with many ups and downs as well as abundant learning along the way. And there certainly have been times during his life where I have been filled with anxiety about not knowing how best to parent my neuroatypical boy and interpret his communications to provide for his needs and desires. But I know that his many strengths, beautifully unique personality, and loving qualities all emerge from his neuroatypicality which I strive to help him understand but never to take away because it defines who he is fundamentally as a person. I typically find myself in awe of how he engages more fully than I often can with the world around him. And while my oldest son initiated me into the experience of parenthood, it was only the beginning chapter. My second, and youngest, son was born two years after my oldest. From the moment my youngest son was born, he emerged as an energy filled ball of excitement. He thrives on vocalizing and interacting with the world, constantly trying to work through the logics (quite often in circular loops) of the systems that surround him. Whereas my oldest son tends to be more observant of the world and introspectively engages through movement, my youngest son tends to be constantly talking to people and extrovertedly engages with always being in motion as he attempts to interpret the world. I could casually comment that both boys ways of being are inherently different. And to a degree they are, because their gestures of movement and engagement manifest as an extension of each of their unique personalities. However, it would be overly simplistic and inaccurate to say they are fundamentally different. Because at the core of their engagement with the world around

them, each of my sons experiences external inputs through highly amped up sensory wiring. While my older son experiences auditory and olfactory stimuli with increased intensity, my younger son experiences visual and touch stimuli with increased intensity. Through alternatively wired sensory systems, and with widely different personalities, both of my boys are uniquely different. Yet at a core neurological level, they are the same—they are both autistic.

So perhaps this is the point in which to go further to ask what does autism look like? In social situations with my boys the most frequent comment I tend to receive is, "well they don't look autistic." But what does this mean? How is a neurological difference manifested physically? Can autism be visually seen to be (de)coded in actions and through words? Autism is not one easily stereotyped list of qualities that define people on the spectrum (despite Kanner's historical affectual desire), because, it is a spectrum—a continuum that provides differently blended qualities. And, as the saying by Dr. Stephen Shore goes, "if you've met one individual with autism, you've met one individual with autism" (qtd. in "Autism Is One Word Trying To Describe Millions Of Different Stories"). My oldest son represents one experience of autism as I have relayed in a few short personal experiences from his newborn awareness of the world to his body always being in motion over the past chapters. And my youngest son represents another experience of autism. My youngest son craves personal contact and has the ability to sit still as I read him stories. Yet despite his desire to be in contact with people, he does not necessarily understand the nonverbal social cues that people use and absolutely despises eye contact. He also struggles with identifying and regulating his emotions. He can be the sweetest and most loving boy you have ever met when all the things are going according to a precisely choreographed, constantly changing, and unwritten script he has developed in his head. But deviations from his personally developed script can send him into a quick spiral of overwhelming overload. I find the

best analogy is to describe his emotional experiences like a car engine (but that is not to say he is in any way mechanically robotic). When things are going well according to his desired script, the car is tuned up and driving along the road at high speed. However, when things are not going along with his predetermined script, the engine gets flooded with fuel making it near impossible to move forward or backward. He gets stuck in logic spirals and is unable to see alternate solutions and move outwards.

Each of my boys are different with unique personalities and sensory experiences. And at the same time, each of my boys are bound to a level of sameness through their autistic label. Because the words and images that swirl around in popular culture to tell stories about autism try to conform autistic actions. And as my social interactions have made clear, there is often confusion when autistic individuals act differently than what is portrayed in popular culture representations. Yet there is not confusion when neurotypical individuals act differently—that is expected. So where does the confusion originate and why does popular culture expect for neuroatypicals to act the same when neurotypicals do not have to follow these rules? Perhaps it emerges out of the designation of autism, the labeling of what appears as different. Despite autism being an already always existing element of the human race, it was only recently with Kanner and Asperger that it began to be designated with a label to explain the different qualities imbued by autistics within neoliberal society. Thus, in popular culture there is a fractured and confused storyline which is trying to make sense of a state of being that is not the same because it is a diverse spectrum yet falls under the singular label of autism. Accordingly, when certain senses are highly amplified to the point of being overcharged, and these senses vary across depictions, autism does not make sense to neurotypical logics and defies fitting neatly into a box. But then how do we make sense of these senses? There is no simple answer. And in the divide of

autistics self-advocating and parental groups advocating for autistic individuals, there is even more complex controversy as was previously discussed in Chapter 2 of this dissertation.

Within the shifting landscape of advocacy, there are parent led autism groups which largely seek out cures—a desire to "correct" neurological wiring in the endless pursuit towards the neurotypical (and which often disregards and ignores the largest autism population—autistic adults). Yet the unfortunate reality is that the parental groups which seek cures to autism have the most funding and support, often obtained by misrepresenting the truth and stoking fear in the general public. These are groups which come from the point of view that the human race would best benefit from autism no longer existing—they allude to the financial and emotional burdens suffered by neurotypical individuals to understand the neuroatypical autistic people that emerge into their lives. This is as bleak as it sounds, but there is still hope. As a counter to these ill-affects from well-intentioned but mislead parental groups, there are self-advocacy groups which champion autism for its innate constructions, led by autistic people who believe that their differences make them who they are and give them uniquely valuable skillsets to engage with the world. These are the groups which champion diversity for all—from newborns to the elderly, a seeking of acceptance to be and act neurologically different. And the self-advocacy groups that seek acceptance of autism come from a point of view that humanity would best benefit from understanding the unique qualities that autistics experience through their senses. They would most likely argue that, in fact, neurotypical people have an overreliance on social structures which prevents them from truly sensing the natural world, rendering them disabled from enjoying a full experience.

In this chapter, I investigate the affective labeling and coding of words as I continue my exploration of scaled readings which I began in the previous chapter. And I turn towards gaining

a greater understanding of the embedded sentiment that authors imbue in their characters. To accomplish this task, I interact and engage with affect theory works that surround the charged words (de)coded from the "bing" sentiment analysis lexicon that emerge through scaled readings. By analyzing the (de)coding of sentiment, I critically analyze the "bing" sentiment set to show how it both succeeds in providing basic pattern information about the embedded sentiment in novels but also fails in detecting more complex patterns. Of important note, "bing" is one of the three general packages that can be used to run sentiment analysis in R: "bing" has 2 sentiments—positive and negative; "nrc" has 10 sentiments—anger, anticipation, disgust, fear, joy, negative, positive, sadness, surprise, trust; and "afinn" has word scores from -5 to 5. While each of the sentiment lexicons provides differing insights into the sentiments within texts, I focus solely on "bing" in this dissertation to create both a starting point and a manageable scope. In the work I intend to conduct beyond my dissertation, I plan to explore both "afinn" and "nrc" to further understand how sentiment is (de)coded within algorithms. Furthermore, the "bing" lexicon, while a basic approach to begin identifying sentiment, is important to unpack and understand further as it provided the basis for more advanced programming by major companies and corporations within society to capture human feeling and thinking through computational methods. Some of these uses of measuring human feeling and thinking are intended for beneficial use, while others are most certainly malicious. And even those that are intended as a benefit for society can be weaponized and used against vulnerable and minority communities. Thus, there is an essential need to understand how words are (de)coded to better grasp how words can be powerful and dangerous depending on their use and user.

As I examine the affective charge of words which emerge from the "bing" lexicon, I continue my exploration of both *House Rules* and *The Boy on the Bridge* which I initially

investigated through close readings in Chapter 2 of this dissertation. Part of my (de)coding of embedded sentiment in literature is using affect theory to better understand how the words in novels identified with "bing" as charged with meaning can collectively accumulate to invoke narrative feelings. To conduct this investigation, I explore texts that more closely align with traditional affect theory with Lauren Berlant's *Cruel Optimism*, Eve Kosofsky Sedgwick's *Touching Feeling*, and Sara Ahmed's *The Cultural Politics of Emotion*. The exploration through affect theory allows me to bring in conversations that enrich the analyzation of embedded sentiments through the corresponding affects to provide robust context about character construction. And while there are many biases that range widely into all types of "otherness" and "difference," I look closely towards words that have autism associations and which typically construe autism as monochromatic rather than the full spectrum of color with unique qualities and representations. As this critique extends, I call upon popular culture theory with Berger and Luckmann's *The Social Construction of Reality* to investigate the unique aspects of how character construction and popular culture influences further complicate receptions of the affective (neuroatypical) autistic fictional characters. In addition, I investigate the affective gestures through digital humanities with Archer and Jockers' *The Bestseller Code* to explore the digital aspects and ethics of sentiment analysis by critiquing the capabilities and limitations of the method. In order to best investigate sentiment analysis through these many lenses, I unpack examples of how the biases of the sentiment lists link towards affect. In this move is a purposeful look at how methods of sentiment analysis benefit and elude interpretation of large-scale humanities analysis with computational analytics. By conducting a critique, I aim to establish a richer understanding through a meaningful critical analysis of this digital humanities method.

The visualization of stories seems to have always been an idle (if not more so) curiosity.

Just as Kurt Vonnegut once tried to map the shape of stories, so do others continue in that pursuit as Matt Jockers's Syuzhet package and my own scaled readings both point towards. Jockers has long been recognized as a leading scholar in advancing digital humanities approaches to literature. In his earlier works, *Text Analysis with R for Students of Literature* and *Macroanalysis*, he created significant inroads with bringing visibility to research using machine learning by articulating the potential benefits of these diverse analytical methods. Furthermore, around the time that Jockers published his R package, he was collaborating with Jodi Archer on a project in which they investigated blockbuster novels in an attempt to understand if there were quantitative aspects about these popular novels which made them bestsellers. The research that resulted from Archer and Jockers collaboration was published in their work *The Bestseller Code: Anatomy of the Blockbuster Novel*, in which they describe the algorithm they developed by training a computer to read and detect what makes a book a bestseller. While there are many complex aspects of how they used sentiment analysis along with other techniques to measure novels in their discovery of bestselling topical patterns, what is notable is that there are fundamental similarities between uses of sentiment analysis:

> Displaying the ups and downs of emotion as curves is facilitated by what researchers in natural language processing call sentiment analysis. Work in this field has included the computational study of online movie and product reviews, but we've found that the same tools and techniques can be applied to the study of narrative. The basic idea is that you train a computer to read through a book from beginning to end while paying special attention to positive and negative emotional language. (108)

As Archer and Jockers articulate, sentiment analysis may not have been created with literature in mind, but it still opens up the possibility of new ways to visualize the embedded sentiment within literature that evokes emotion leading to narrative feelings. Perhaps the pursuit of the visual points towards a fundamental human desire to experience narratives through alternate modalities, to affectively see and feel their gestures in different ways. And to open up different

sensory channels provides an opening towards diverse reception and interpretation. Thus, whatever the reason for the visual desire, it is important to note that re-reading through alternate sensory representations opens up literature to wider audiences, including those who may find words alone insufficient to interpret narratives.

Additionally, Archer and Jocker's work has interesting intersections with *House Rules* in ways that further trouble the constructions of bestselling novels. Because one of the most intriguing distinctions is that *House Rules* is number 2 on a list of 100 novels that a computer algorithm identified as the best novels (excluding works by Danielle Stelle and John Grisham). Thus, it is even more intriguing that a deeply problematic and stereotypical representation of autism emerges as a top book to read with the high ranking on the bestselling list. Also on this list at number 15 was *The Rosie Project*. While this novel does not display nearly as many problematic constructions, as the neuroatypical narrator retains control of the narrative, there are still elements that do not accurately reflect the complexity of autistic ways of being. Yet the high rankings of these novels on the list would seem to point towards both being highly desired reads due to their coding which appeals to the neurotypical majority population. And after reading these books most would come away thinking that they have learned about autism. But, in fact, what they have seen is one deeply troubled model that does not accurately reflect and capture the complex essence of autistic ways of being and another model that focuses on overcoming and not fully taking into account the societal infrastructure that discriminates against neuroatypical individuals. (Of important note, both *The Boy on the Bridge* and *The Eagle Tree* were published after Archer and Jocker's list were generated.)

In my last chapter, I discussed a brief history behind the "bing" lexicon and how its use has grown from the original construction of gauging sentiment from product reviews to

measuring sentiment in vastly different genre mediums such as tweets and full-length novels. Yet one of the most interesting facts about the lexicon is that it is comprised of 70.5% negative sentiment words and 29.5% positive sentiment words. Some may think this is an inaccurate representation of sentiment, yet linguistics scholars Robert Schrauf and Julia Sanchez conducted a study in which they identified percentages of positive and negative coded words used in everyday conversations which revealed otherwise. In their co-authored article "The Preponderance of Negative Emotion Words in the Emotion Lexicon: A Cross-generational and Cross-linguistic Study," they found that "the 'working emotion vocabulary' typically shows a preponderance of words for negative emotions (50%) over positive (30%) and neutral (20%) emotions" (266). While Schrauf and Sanchez were not investigating sentiment lexicons used in programming languages, it is fascinating to note that common uses of conversational words fall in line with an eery similarity to the "bing" lexicon percentages. Just as "bing" identifies positive sentiment charged words as approximately 30%, the linguistics study reveals that 30% of words used in conversations are positively charged as well. While the negative identified in the study is only 50%, it clearly highlights the preponderance of negative words which comprise a much higher number of words used. While Schrauf and Sanchez's work was done with the purpose of gauging how different generations and cultures use words, it is interesting to see that the general pattern branches beyond as it crosses over in very similar patterns to how words are identified for use in computer algorithms. And while the English language is indeed more negatively focused, it would seem that this focus extends to other languages making the increased use of negatively charged words a much larger trend that extends across generations and cultures.

In thinking through the various patterns of negativity, perhaps the best novel to explore the many implications emerges from investigating the neurodiverse narration that structures

House Rules. Similar to the scaled reading investigations from Chapter 3, this chapter also explores full-length texts through sentiment analysis visualizations, created by partitioning the text into 500-word intervals and chapters. Accordingly, the details about the narrative patterns emerge through seeing examples of novels re-presented visually in sentiment analysis graphs. I begin by visually re-reading the problematic (and often negative) depictions of Jacob Hunt through the scaled readings. In my close reading from Chapter 2, I argued that the novel uses a cast of neurodiverse characters to emphasize Jacob's neuroatypicality through his exceptionalism—and that he is structured to portray repeated attempts and failures to adhere to societal expectations of connection, contact, and empathy; yet from the neurotypical and ableist focused desires of the narrative to set Jacob apart as different, representations emerge from the embedded sentiment that defy this categorization as he continuously asserts his power to connect, despite his sensory sensitivities, to manifest his own strong and unique empathy that leads the reader to question their expected narrative feelings. In this chapter, I build upon this argument to further question the affectively charged embedded sentiment that emerges from the patterns.

Within the patterns of each graph generated from sentiment analysis, there is a sense of scale that emerges. But before going further into these detailed investigations, there is an important note which must be clarified about how I defined "chapters" for this novel. Picoult's narrative is uniquely partitioned with eleven police "cases" and 10 chapters which weave through five-character points of view; while this is not as neatly divisible as chapters more conventionally divided and labeled, such as from *The Rosie Project* or *The Eagle Tree*, the separation of each point of view in unique sections provides a way to partition the text in relevant divisions which allow for viewing the patterns that emerge over the course of the

narrative. Thus, I defined my scaled reading that divides the novel into chapters with a total of 119 "chapters" which encapsulates the full text: each of the cases becomes its own "chapter" and and each individual character point of view section from within the original 10 numbered chapter construction also becomes its own "chapter." Following along with the construction of scaled reading graphs that I investigated previously in this dissertation, there are two groupings of scaled readings for *House Rules*. The first grouping looks at the net sentiment, total sentiment, positive only sentiment, and negative only sentiment by partitioning the text into 500-word intervals. And this novel is the longest of the four that I investigate with scaled readings in this dissertation, as it consists of around 350 of these intervals (approximately 175,000 words). The second set looks again at the net sentiment, total sentiment, positive sentiment, and negative sentiment by partitioning the text into the 119 "chapters" each represented by one bar on the graph. I have included all eight visualizations below to reference as I spend the next section of this chapter re-reading *House Rules* through the visual reattachments of the novel (Table 5 contains the data that generates the graphs in Figures 17-20 and Table 6 contains the data that generates the graphs in Figures 21-24; both tables are listed in their entirety in the Appendix).

Figure 17: *House Rules* - Net Sentiment by 500-Word Intervals

House Rules
Net Sentiment - Positive minus Negative
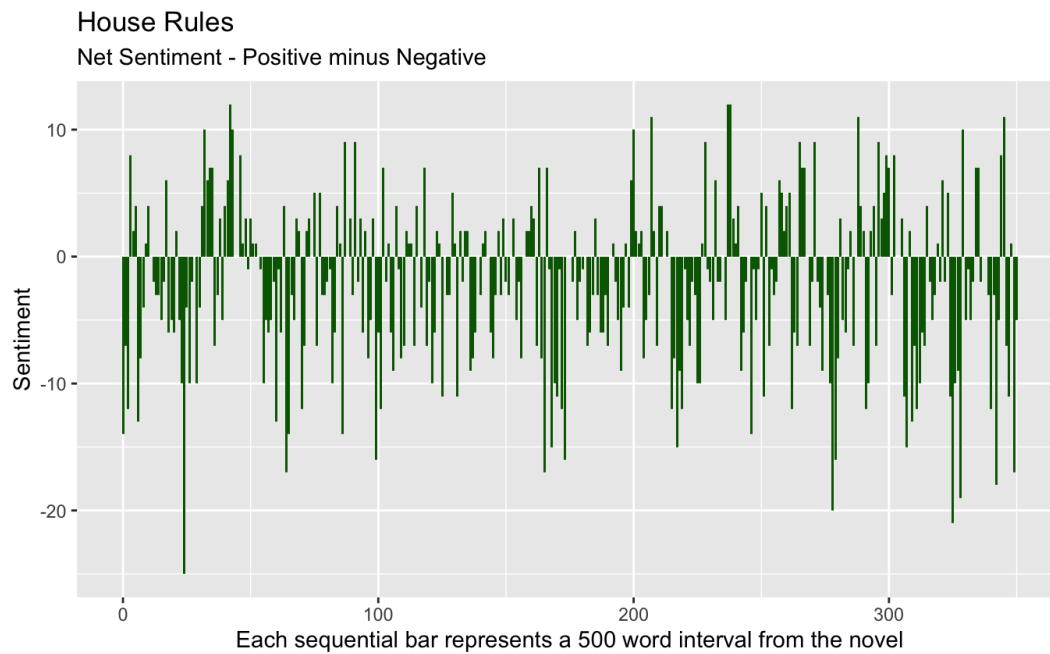
Figure 18: *House Rules* - Total Sentiment by 500-Word Intervals

House Rules
Total Sentiment - Positive plus Negative
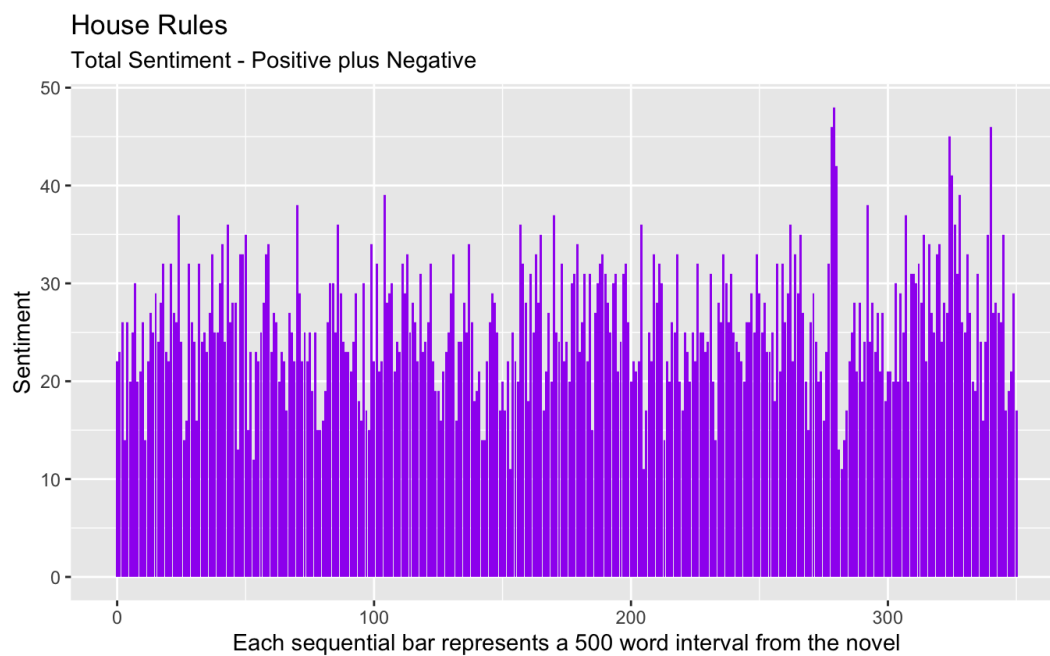
Figure 19: *House Rules* - Positive Sentiment by 500-Word Intervals

House Rules
Positive Sentiment
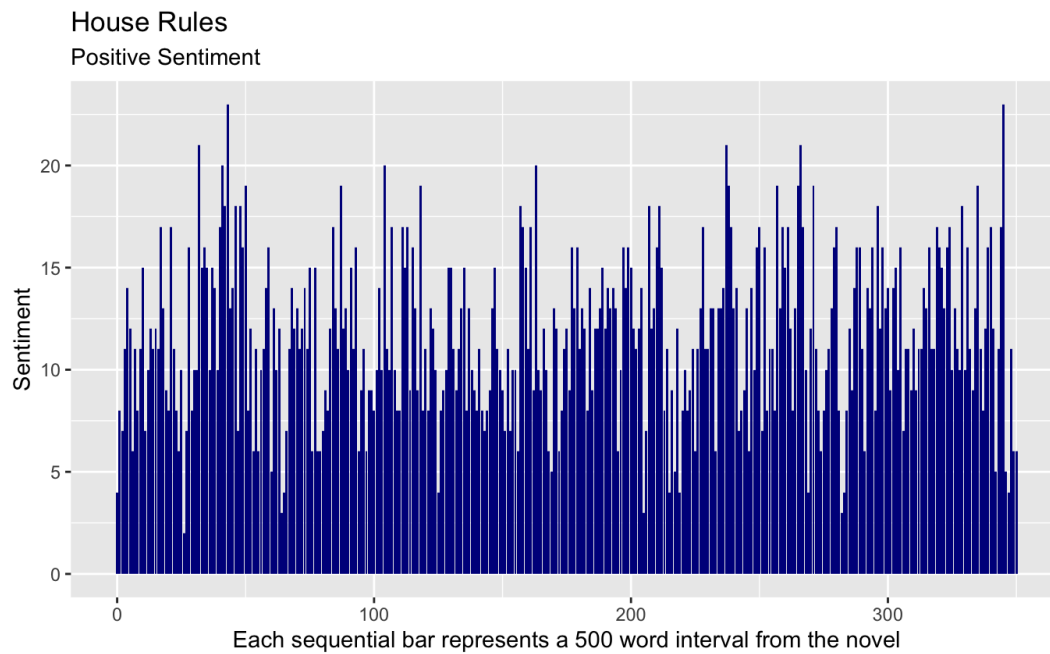
Figure 20: *House Rules* - Negative Sentiment by 500-Word Intervals

House Rules
Negative Sentiment
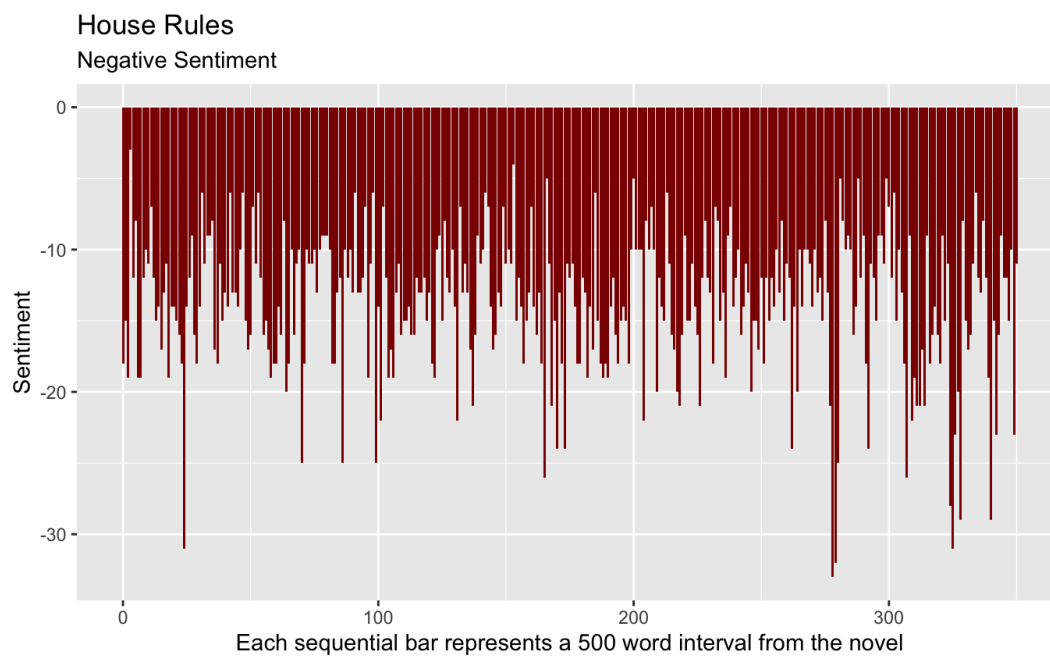
Figure 21: *House Rules* - Net Sentiment by Chapter

House Rules
Net Sentiment - Positive minus Negative
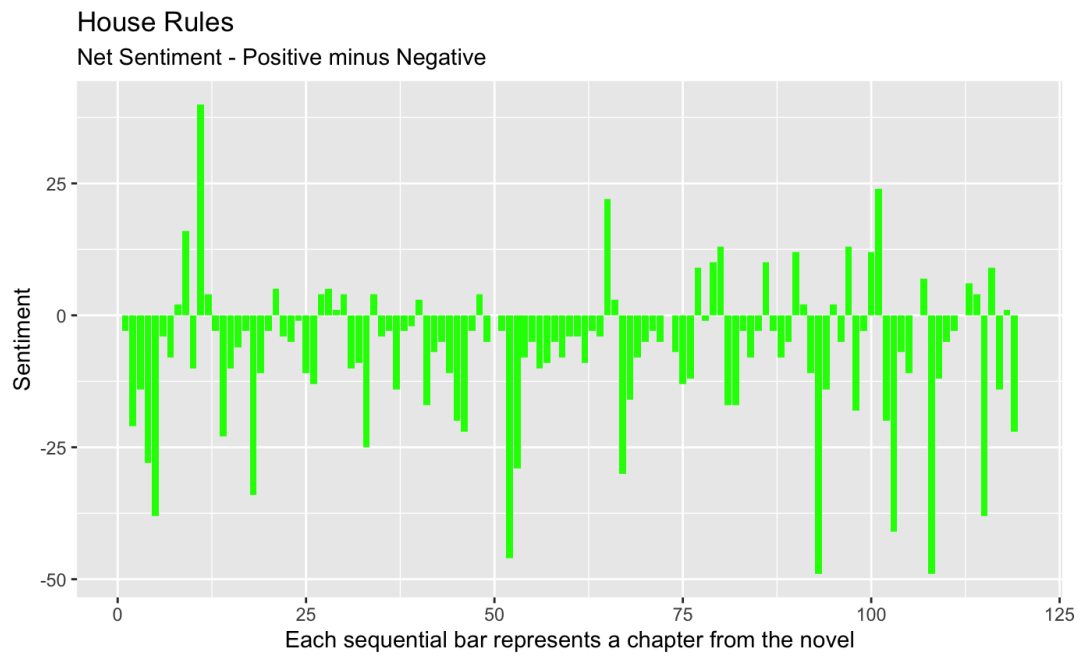
Figure 22: *House Rules* - Total Sentiment by Chapter

House Rules
Total Sentiment - Positive plus Negative
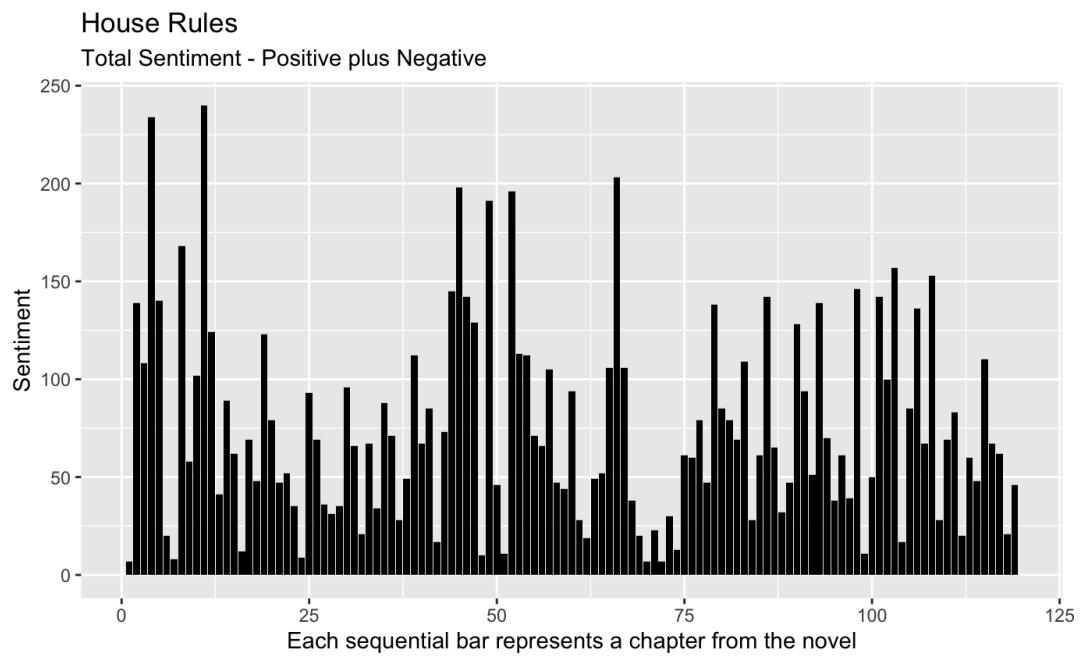
Figure 23: *House Rules* - Positive Sentiment by Chapter
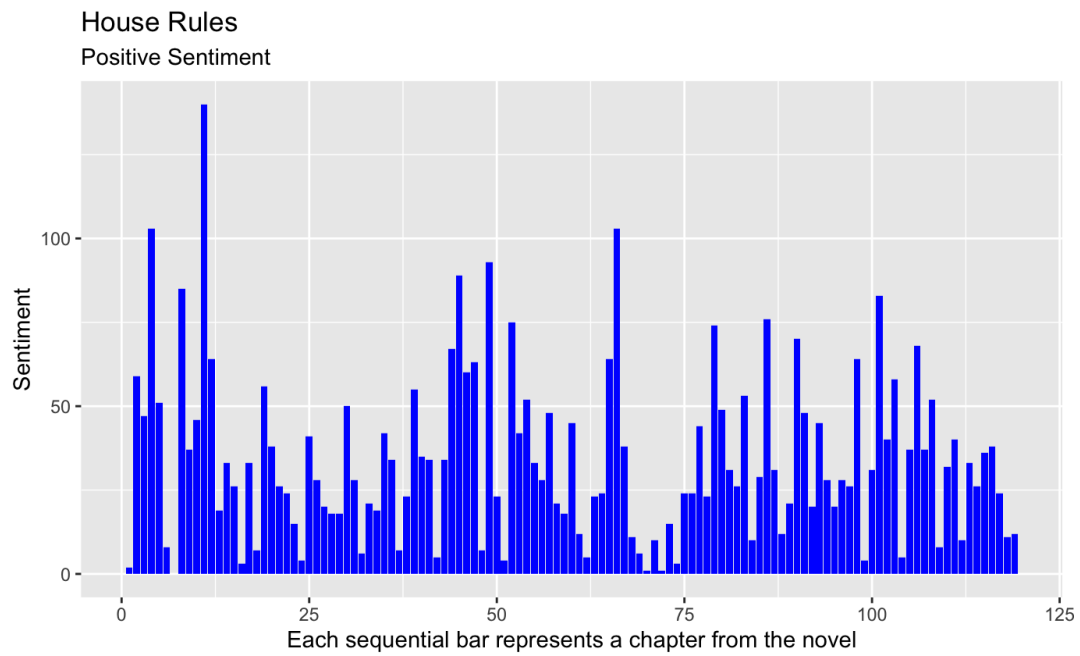
Figure 24: *House Rules* - Negative Sentiment by Chapter
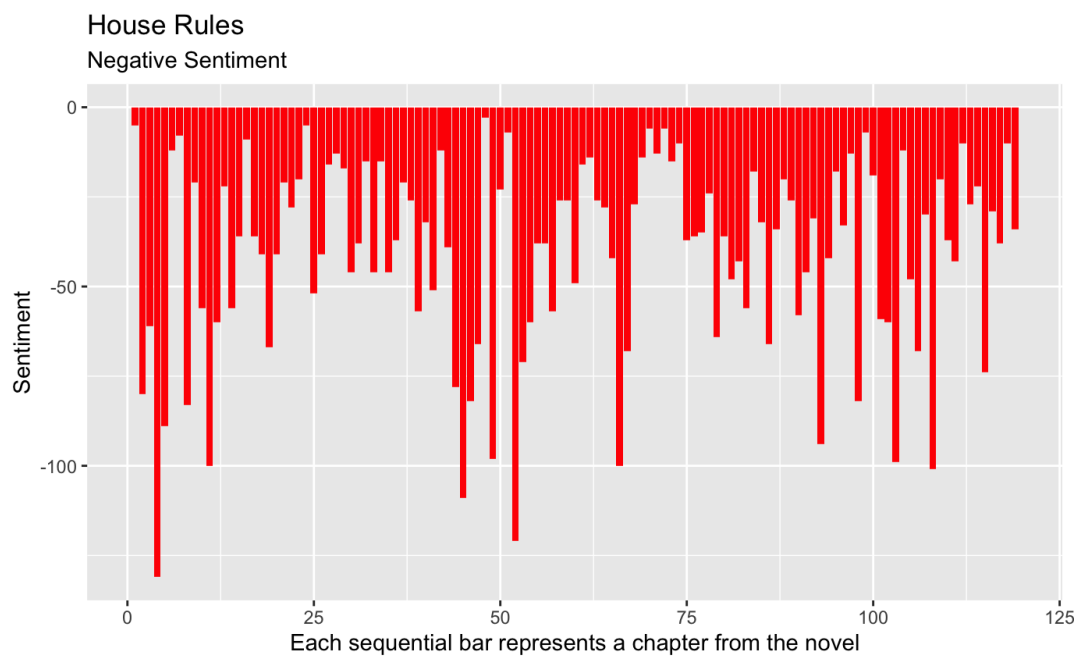
The first set of scaled readings that looks at *House Rules* in successive 500-word intervals (each represented by a bar on the graph) uncovers interesting insights across an evenly spaced breakdown of the text. The first visualization of net sentiment shows that the general trend when taking the positive sentiment minus the negative sentiment reveals the text to be more negatively focused. Furthermore, the sentiment arc pattern indicates that there is a bit of switching between positive and negative trends. Yet the bulk of the sentiment marks are in the negative. Consequently, the trend is for the negative average to settle around -10 whereas the positive average is a bit below 5. In other words, the negative sections are roughly twice the strength. Switching over to the total sentiment indicates a much different visualization than the net sentiment. As the total sentiment measures the absolute value of sentiment with the positive plus the negative, the numbers from this graph indicate that the total amount averages around 26 words in every 500 words of text from the novel, resulting in 5.1% of words being charged with sentiment. Interestingly, this total percentage is similar to *The Rosie Project* which I discussed in the last chapter of this dissertation. However, one major difference between the two texts is in the intensity represented within the sections of sentiment. In the 351 sections within *House Rules*, there are only 6 which contain 40 or more sentiment words, leading to around 1.7% of the text containing peak moments of high total sentiment (whereas *The Rosie Project* measured 5.3% of peak sentiment). Thus, the magnitude of peak sentiment represented by the neurodiverse narration of *House Rules*, is over three times lower than the neuroatypical narration of *The Rosie Project*. The large scale of difference points to various aspects that can be further explored through the patterns. Yet perhaps it signals that neuroatypical narrators tend to use more sentiment charged words to translate their experience of the world into language that is interpretable by a neurotypical majority. Consequently, the lack of neuroatypical authority that

Jacob is allowed to express over his narrative directly contributes to the lower sentiment. And while the total sentiment graph does not fully display the complex nature of all the sentiment used, looking at the total does give an indication of how much the text primes the reader to respond with the lower intensity of charged sentiment. The subsequent two visualizations, positive sentiment as well as negative sentiment, reveal the patterns of positivity and negativity that are viewed in isolation from each other. While the graphs are individualized for each category of sentiment, seeing them next to each other reveals insights into fluctuations over the arc of the novel with areas of increased and decreased representations. By looking at these two graphs together, the pattern of increased negativity again emerges with a higher frequency.

In transitioning to the second set of scaled readings that interprets *House Rules* by the 119 "chapters" reveals a similar but different picture. Out of the 119 "chapters" on the net sentiment graph, only 29 are positive along with 3 that are neutral (in other words received a score of zero). If the positive and neutral are grouped together, 32 of the 119 chapters are not negative. There is an interesting number to consider from this breakdown of chapters— approximately 73% of the chapters from this novel are negative. The strongly aligned negativity is even higher than the percentage of words that are negative (70.5%) from the "bing" lexicon, indicating the embedded sentiment points towards generating strong negative narrative feelings. Accordingly, the patterns from the net sentiment graph reveal a negatively focused trend with the bulk of chapters being associated with prominently negative sentiment. There are a few chapters that buck this trend with higher positive counts, but for the most part, the bars barely dip into the positive. Moving on to the total sentiment graph reveals a picture of high sentiment intensity within certain sections of the text and a near absence of sentiment in other segments. This is in part attributable to the unique structure of the novel that included case studies and switching

between character viewpoints, all of vastly different lengths. The case study sections were very short which is accountable for at least eleven of the extremely low total sentiment marks. There are also "chapters" that were significantly shorter and some that were much longer which provides a partial explanation for the large disparities between bars on the graph. Yet interestingly, the patterns show how by looking at the chapters, an ebb and flow emerges within the narrative arc. There is a subtly shifting wave captured to indicate how charged sentiment fluctuates and primes readers to respond more intensely in certain sections of the text. The wave type pattern that emerges from the total sentiment is seen further in the positive only sentiment as well as negative only sentiment individualized graphs. While the wave pattern is similar, the two individualized graphs again show the increased amount of negative sentiment within the novel.

Each of the eight graphs discussed above reveal something unique about *House Rules*. Yet the trend most interesting to further explore is how negatively focused the novel appears to be from the various patterns. As discussed in my previous chapter, direct comparison is not a very useful method to discuss the differences of novels in a visual reading. However, the one application that could provide beneficial use is to look at groupings of novels within different genres. By comparing the generalized patterns and trends to multiple mystery and psychological thriller novels within the same genre as *House Rules*, perhaps there will be reoccurring patterns that emerge more closely identify the genre. Or perhaps what the different graphs will reveal is a pictorial breakdown of genre similarities and differences. While *House Rules* is identified as a mystery/psychological thriller, that is a human based decision to place it in a human created category. Thus, a large-scale genre visualization might reveal that the novels adhere to certain patterns. But perhaps what it will uncover is unique insights into how we have assumed genres to work. And, interestingly, the excessively negative arc from the novel has a close alignment to the

next novel I discuss, *The Boy on the Bridge*, a post-apocalypse zombie story that emerges from the horror/science fiction genre. Arguably, it could just be a mere coincidence that the patterns of negativity that emerge from *House Rules* has similar intensity and shape to *The Boy on the Bridge*. But then again, it could be an indication that what we have assumed about genre categories are not as clear cut as we might desire them to be. Perhaps this breakdown of categories provides some insight into the narrative patterns for easy classification but does not quite address the complexities that are revealed when the embedded sentiment in a text is uncovered. As previously mentioned, some of the pattern intensity might either be overly identified or underrepresented by misidentification. But even while acknowledging that sentiment analysis is not a perfectly precise method, identification errors do not account for a large margin of error when looking at general patterns.

The best way to dig into how all the numbers from the scaled readings emerge throughout *House Rules* is to start by building upon the close reading sections identified in Chapter 2 of this dissertation. By seeing where these close reading sections are represented in the scaled reading patterns indicates if they are located in (or around) either a high or low sentiment point from the graph. Furthermore, by identifying the visual representation of these sections from the novel more complex information is uncovered which allows for a richer interpretation of why certain sections manifest with higher (or lower) sentiment intensities. In Chapter 2, I looked at quotes from *House Rules* that occurred in the following sections, listed in the order they appeared in my close reading and identified for scaled readings by chapter (along with character perspective identification) and 500-word interval segment: Chapter 3 (Theo) / Segment 6; Chapter 12 (Emma) / Segment 50-51; Chapter 11 (Jacob) / Segment 42; Chapter 2 (Emma) / Segment 2-3. The net sentiment graph reveals that Chapter 3 from Theo's perspective is negative. And the

chapter falls in around multiple negative chapters as the first two prior and the four following are all negative to varying degrees. But perhaps most interesting about this trend is how the novel is set to begin with sustained and strong negativity. Rather than begin the neurodiverse narrative with trying to understand and appreciate the neuroatypical richness that Jacob offers, the story plunges into why being around Jacob, or being Jacob, is a struggle in a neurotypical and in turn socially focused society. The perspective that Chapter 3 of the novel in particular brings out is Theo's point of view with how he is desperately trying to rewrite his version of the family narrative along with how he thinks others should view Jacob's actions. As Theo's words indicate with "exceptions" and "trumps" during the detour from a detour, he feels like he is in a competition with Jacob that can never be won. Yet, interestingly, what Theo most desires is a return to what he considers to be a objective reality which he believes should exist in a typical social construction of a family.

In analyzing Theo's desires, a turn towards popular culture theory can provide more insight. As social theorists Peter Berger and Thomas Luckmann discuss in their foundational work, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*, our experiences of the world are complexly layered by what has been established before our time and will continue long after our departure: "An institutional world, then, is experienced as an objective reality. It has a history that antedates the individual's birth and is not accessible to his biographical recollection. It was there before he was born, and it will be there after his death" (59). In this section from their work, they point out how the world and an individual's experience of it through the interpretation of reality is based upon a multitude of layers in the social infrastructure that have been established over centuries, decades, and years at a time, adding more coats of paint to the construction. Going back to Theo's frustrations over Jacob's need to

rewrite the social layers for unique sensory sensitivities, what Theo is really most upset about is that Jacob does not fall in line with the continually layering infrastructure to accept the world as it has been established. And Jacob does constantly struggle to operate within the infrastructure of the world as his sensory system is incompatible with the social constructions.

Furthermore, the detour from a detour is not really as "ironic" as Theo thinks because it calls attention to the need for society to explicitly acknowledge some of these deeply layered constructions. Accordingly, we would better benefit from asking what should be produced and prized in the future (de)constructions of the institutional world: "It is important to keep in mind that the objectivity of the institutional world, however massive it may appear to the individual, is a humanly produced, constructed objectivity […] *Society is a human product. Society is an objective reality. Man is a social product.* It may also already be evident than an analysis of the social world that leaves out any one of these three moments will be distortive" (Berger and Luckmann 60, emphasis in original). As is implied, societal constructions and human experiences are deeply intertwined into how the world has, over time, been built and framed. For Theo, he views the world through Jacob's non-conformity—yet instead of trying to rewrite the world to bring in more diversity, Theo wants a return to an idealized world that he has never experienced, as it existed prior to Jacob's disruption of the family social fabric. In addition, the scaled readings that encompass this chapter do point to the trend of negativity through Theo's choice of words, but they are not sensitive enough to pick up on these more complicated moments of affect in social constructions. However, they do pick up on the general patterns that point in the direction of these moments. Thus, even if Theo's angst over a detour of a detour is not picked up directly by sentiment analysis, his general frustration is picked up. Furthermore, these moments direct inquiries and critiques towards Theo's interpretations of a frustrated family

life that extends further into how society and the human are constantly moving in varying directions and speeds along a mobius strip.

Looking next to the net sentiment graph with Chapter 12 indicates a marginally positive mark. This positivity from Emma's perspective is in stark contrast to her first negatively focused descriptions of Jacob from Chapter 2 when she relates her experiences of taking care of an autistic son. And even Jacob in the first two chapters from his perspective, Chapters 4 and 6, relates his life in negative terms. The negativity that sets up the beginning of the story again highlights how the family is complexly troubled because they have not taken the steps to embrace neurodiversity and strengthen their many unique threads together. Rather, they are caught in a vicious cycle that is tearing at the threads of their fragile connections. Furthermore, both the initial negative chapters from Emma's perspective, as well as the marginally positive Chapter 12, solidifies how she, somewhat unknowingly, sets herself up as a martyr by relating and remembering all the negative experiences which for her stick more securely and closely in memory than the positive experiences. And the marginal positivity from Chapter 12 occurs because Emma is talking less about Jacob directly and more about how she feels angst over her failures to develop as a writer because of all the time she has had to devote to Jacob. Instead of becoming a "real writer" who has "books on the *New York Times* list," she has become the "agony aunt" in her professional writing of the local advice column (Picoult 72). Her professional expertise is also interesting because it indicates she can write about advice, but not translate advice to her own life. Further, she accuses Jacob of not "viscerally" understanding "empathy" and declares he only sees it through translation. And while Jacob does experience empathy differently, as previously discussed, he at least is doing the work to understand the things that are different for him. Emma on the other hand, is off to the side not translating or

doing the work to embrace and understand differences in a beneficial way.

In thinking through translations, looking back to Jodi Archer and Matt Jockers computer algorithm from *The Bestseller Code* provides insight. During the process of creating and modifying their algorithm to pick up on patterns from novels to understand how they were structured to appeal to a popular culture audience, Archer and Jockers used empirical studies to better comprehend how the bestselling novels would be seen by the general population. In their case studies, they asked students enrolled in their courses to read the novels that the computer algorithm identified as bestsellers to see how and when they would respond to the content: "In silence, we took several novels and asked students to raise their hand when they felt their body viscerally respond in any way to what they were reading. At first they thought we were crazy. But after some classes, we noted that with *NYT* [*New York Times*] bestsellers their hands had all gone up within the first ten pages. With non-bestsellers, this was not so often the case" (Archer and Jockers 86). There is an important tie into Archer and Jockers work on bestsellers with how bodies "viscerally respond" and the ideas that arise from Emma's perspective in Chapter 12 of *House Rules* which uses the lack of "viscerally feeling" to describe neuroatypical difference. In both cases, there is a sense that "viscerally" provides a key concept to understand how narrative feelings are generated from the embedded sentiment in the text. The more charged words that are in the narrative, the higher tendency to "viscerally" respond or feel. And the fact that *NYT* bestsellers create this response earlier and more frequently in novels provides insight into how sentiment is crafted to evoke feelings. Going back to the negative and/or marginally positive perspectives provided by Emma then points towards how the novel is intended to be negative to provoke a higher intensity response early in the narrative. And as was discussed earlier when considering the percentage of positive/negative/neutral words used in conversations, the negative

provides a stronger and larger response, making an initial negative focus a device that can be used to generate reactive narrative feelings. Thus, through sentiment that allows for visceral reactions, stories create a more forceful impact for readers with precise uses of negativity.

Switching over now to looking closer at Chapter 11 provides an interesting divergence to investigate. This chapter from Jacob's perspective is the most positively identified chapter of net sentiment in the book with a score of 140. Yet as my close reading indicated with his description of the bodily effects of eye contact reveal, when he translates neuroatypicality into neurotypical language, he dips back into the cycles of negativity surrounding him. The paradox of this split arises in the (de)coding which reveals positivity in his word choices but that these choices are layered with "rummaged" and "complete invasion" to describe how his feelings of neurotypical social customs make his body react. While my close reading picked up on a more negatively focused section, the rest of the chapter reveals a positive outlook that Jacob employs in his life. He creates lists to describe both his deep feelings for his social skills tutor and how he thinks she is mistreated by her boyfriend Mark. Jacob describes these feelings through reflection as well as other events that bring him joy. Accordingly, even though Jacob does experience negativity, he finds happiness despite the negative words he sometimes uses to translate his feelings towards neurotypical social customs.

Jacob understands his way of being and experience of the world is different from most of the people that surround him. And while at times he wishes that he could "appear to be more normal," he does not find his experiences to be lacking (62). However, at the heart of Emma's claims regarding Jacob and her frustrations and heartache surrounding his way of being is that he lacks a crucial human element, that he is missing empathy. While my previous chapter on *House Rules* intensely investigates these claims surrounding empathy, I bring it up again to point

towards how the neurotypical claim which asserts that a neuroatypical individual lacks empathy is self-centered. Thus, what should be recoded into popular culture consciousness is that there is a spectrum of experiencing empathy. Especially as the words empathy and sympathy have grown in heightened importance over the past decade as the social realms of society have further intertwined with technology platforms. Because rather than there being only one way to see and experience empathy, it is multifaceted and deeply complex with multiple layers and iterations.

Scholars such as Archer and Jockers have tried to (de)code how empathy arises within the sentiment of narratives. They have highlighted these sentiment constructions by pointing towards the example of Philip K. Dick's *Do Androids Dream of Electric Sheep?* to further parse how empathy is a distinguishing aspect of the human condition: "The ultimate difference between the natural and the coded person in Dick's science fiction narrative is empathy, and so while the novel threatens the collapse of boundaries between man and machine, it is usually interpreted as a reaffirmation of humans as emotionally and spiritually complex beings who could never be part of a factory line. The highest emotion of love, in its expression as compassion and empathy, is humanity's secret sauce" (211). As Archer and Jockers gesture towards, empathy is encoded with love. Yet I argue against a definitive line "between man and machine" that Dick, and in turn Archer and Jockers, advocate for. Because the line between human and machine has never been clearly defined. The character of Jacob plays with this line in the narrative constructions which attempt to evoke a view of him as mechanical through his continual list making and seeming lack of outward professions of affective feeling. Yet Jacob is no more mechanical than the rest of humanity. He is just much better than most at meticulously following instructions.

The human neurological constructions may consist of organic matter, but the connections

that are forged into them are a combination of lived experiences in the physical world and those in the digital world. Because the neural connections that are wired into our minds confirm that as I type these words, my mind is an extension of the keyboard that encodes my thoughts into the letters that make up the words that turn into sentences and combine together into paragraphs that come together in chapters that consist of my dissertation as a whole. And through these connections, I am both human and machine. Because this work would not be possible without the technological means of the computer that I use, the technology of both print (through logistical systems that deliver them to me personally and to the library) and digital (through search algorithms and digital copies of print materials available through internet resources) that enable my research, and the symbiotic connections that fuse all these methods together to communicate and distribute my writing. There is no clean divide of human and machine—there are only combinations of both that exist in various spectrums of experiences. Accordingly, the line between computer-based text processing and conventional close reading are not as far apart as they may seem. While we can use terminology to define them as quantitative and qualitative respectively, each is informed by the other placing them on a mobius strip rather than two separate strips. And, furthermore, emerging from this discussion is that there is no clean divide between neurotypical and neuroatypical—there is simply a wide variety of profiles that bring facets of uniquely tuned thinking and sensory experiences together.

Turning now towards Chapter 2 from Emma's perspective indicates that it also falls into the initial negative focus of the novel. This aligns the scaled readings with the close readings that identified these sections of text as negatively focused on sentiment. And it is interesting that Emma uses negatively charged words to set up her situation of being a caretaker for an autistic son. She argues that her autism support groups think she is "lucky" to have a "blisteringly

intelligent" and "verbal" son who is not "locked in his own world." However, she feels that she

is in fact not lucky because Jacob is "locked in his own world" and cannot connect despite

attempts to reach outside of his perspective. While Emma is right in identifying the intelligence

and outward seeking curiosity of Jacob, the only person that locks him into his own world is

Emma. Jacob does reach outward and connects in unique ways. Yet instead of fostering these

connections Emma pushes him back inside and severs these connections because they do not

adhere to neurotypical norms and expectations. Thus, even though by all outward appearances

she is supportive, her initial descriptions of Jacob are those that are problematic and negatively

based (partly of her own doing), perpetuating cycles that do not in practice support autistic

authority and presence. Perhaps this is structured to feed into the stereotypes of expectations for

autistic characters—that their differences make them appear negative through the burdens they

supposedly create upon the neurotypical people in their lives. However, to read it through this

popular culture lens reaffirms difference as negative creating damaging biases. Yet these ableist

focused interpretations of autism are only seen as negative because they differ from neurotypical

norms rather than anything about them being in actuality negative.

Looking next to total sentiment graphs reveal and further solidify that chapters 3, 12, 11,

and 2 from *House Rules* encompass intense moments of sentiment. In fact, chapter 11 from

Jacob's perspective has the most total sentiment of the entire novel (240 total sentiment - 100

negative / 140 positive). The fact that I picked up on this chapter in my close reading would

seem to reinforce that this traditional method accurately trains scholars to focus on the most

significant moments in texts. And while it does signal towards the significance and importance

of close reading, it could also be a simple coincidence that this chapter contains the highest

sentiment. Or it could be that as a scholar who has spent a significant amount of academic and

personal time being surrounded by and immersed in the traditional method of close reading, I have been trained to focus on sections of the text that need further explanation and discussion. Yet even more importantly in the context of this novel, the highest sentiment emerging from Jacob's neuroatypical perspective signals that the supposed lack of empathy and emotion, a stereotype frequently conferred upon neuroatypical autistics, is a flawed and inaccurate classification for autism. But this stereotype of lack permeates through popular culture understandings of autism which creates problematic assumptions about how autistic people respond to and interpret the world which demands engagement with customs charged with highly intense sensory input, such as touch and eye contact. Furthermore, the ableist focused neurotypical construction that sees autism as lacking fails to understand the amount of emotion autistic people experience and feel in ways that diverge from neurotypical norms.

While in some ways the scaled readings reinforce moments of close reading, they also point to different moments in the text. Looking towards these moments of significance that arise from the scaled readings allows for an identification of sentiment charged events from the novel that my focused close readings did not address. When looking at the total sentiment, Chapter 4 has the second highest amount of total sentiment (234) from the novel and is the first chapter told from Jacob's perspective. This provides an interesting pattern to consider as the first highest amount of total sentiment was also a chapter from Jacob's perspective. And the increased amount of sentiment embedded into Chapter 4 is somewhat attributable to it being of a longer length, but the length alone does not account for the increased level of sentiment. Rather, this chapter from Jacob's point of view reveals insight into how he experiences the world through his unique way of being. And it is filled with him discussing the things he enjoys and the frustrations he encounters in a neurotypical world that demands undesired contact. In some ways Jacob's

frustrations can be summed up through his description of managing sensory engagements in his life: "I have spent much of my eighteen years learning how to exist in a world that is occasionally orange ["it means danger, and there's no rhyme for it in English, which makes it suspicious"], chaotic, and too loud" (Picoult 20, insertion is a quote from the prior section). The inserted piece above is a description from a twelve-item list of things that Jacob "really can't stand" and the main quotation provides details about his reflection on that list. For Jacob, his existence encompasses being in a world that is intensely charged with sensory inputs that are "orange" (coded for "danger" and "suspicious"), "chaotic," and "loud" which all indicate negative affective reactions for him. As this chapter is the first in the novel from his perspective, it is interesting to see that he focuses on describing negatively charged experiences. Yet he also discusses positive experiences as he provides details about his passions for crime scene investigations, and even goes to an active crime scene at the end of the chapter. There is a contrast to the positive and negative as the insights into Jacob's positive passions emerge through a continual flow rather than as a negative list. Consequently, perhaps his list making signals his way of creating order in a negatively charged world and which allows him to compartmentalize the things he dislikes so he can spend more of his time thinking about the things he enjoys.

Additionally, when discussing thoughts and ways of being, Jacob is required to use much more sentiment than neurotypical people. Because he continually is required to translate the intensely charged sensory experiences that they seem to either not notice or be unaffected by in their engagements with the world. Thus, he takes the neurotypically structured society and attempts to recast it through his neuroatypical perspective. Accordingly, it is not all that surprising that Jacob's perspective would be filled with embedded sentiment. He has to make sense of neurotypical customs and social constructions—whereas neurotypical people are not

required or demanded to make sense of neuroatypical customs or constructions. Jacob has to work twice as hard to translate the world around him which requires constant use of affectively charged sentiment to decipher the inputs. Thus, his use of sentiment charged words provides insight into how an autistic perspective might be forced to engage with more of these words when interacting with neurotypical society.

But perhaps there is more to consider. While the general assumption is that autistics lack empathy and emotion, their use of affective sentiment in translation, such as Jacob's, signals towards a flawed ablenormative neurotypical perspective. The flaws begin to be uncovered because while neurotypical thinking might encompass a majority, neuroatypical thinking is revealed and thus acknowledged as consisting of very valid and beneficial positions. There are certain assumptions taken for granted with neurotypical thinking because of the inherent power garnered through any group majority. And as a result of this power differential, the conceptual views about autistic empathy and emotion are centered around inaccurate assumptions that are rarely questioned. Thus, when in Chapter 12 Emma discusses Jacob learning empathy the way she "might learn Greek," this argument signals that neurotypical thinking does not accurately acknowledge the complex processing of empathy because there are flawed assumptions made about how it works. In other words, Emma might be secure in her ability to empathize and "viscerally" feel "someone else's pain," but perhaps she has overestimated her capabilities and has forgotten the childhood programming she received to learn these skillsets to fit into neurotypical social expectations. Furthermore, even Emma is still learning the process of empathy as it is a continual lifelong pursuit of interacting in the world. While the process of learning about empathy may not have been as easy or seemingly fluid for Jacob through his neuroatypical thinking and processing, it is still occurring, just in a more continually conscious

setting. In fact, Jacob may feel even more intensely as he has to use more of his conscious processing when engaging with empathy, creating points of contact in the affectively charged experience of sentiment.

Another pattern trend connected to this seemingly inescapable continuation of discussion on empathy is revealed with scaled readings and emerges from the net sentiment graph through both Chapters 93 and 108 which both represent the lowest negative net sentiment scores (-49) within the novel. Chapter 93 is from Jacob's perspective and marks a critical point in the courtroom during the trial proceedings in which Jacob is being tried for the murder of Jess Ogilvy. In the chapter, the medical examiner is on the stand providing the gory details about the state of Jess's body from the autopsy report. At a key point in the medically focused testimony Jacob starts laughing and a sensory break is called for him. Having a sensory break space separated for Jacob is one of the accommodations that was argued for prior to beginning the trial in order to provide him with the resources he would need to operate in a sensory rich courtroom environment. Despite this being established before the trial, the judge often does not properly understand and respect what this provides for Jacob and even mistakenly refers to these breaks at first by calling them a "serenity" break. Even though there are misunderstandings, these breaks are vitally important for Jacob to have the time and space he needs to translate the neuroatypical proceedings and sensory overload of the courtroom.

During the break that occurs in this chapter, Oliver argues with Jacob to show how much Jess's friendship meant to him by displaying more neurotypically appropriate behavior (read: visible empathy). But Jacob argues that he does not need to show it: "If *I* know I feel it, that's what counts. Don't you ever look at someone who's hysterical in public and wonder if it's because they really feel miserable or because they want others to *know* they're miserable? It kind

of dilutes the emotion if you display it for the whole world to see. Makes it less pure" (Picoult 420, emphasis in original). Jacob argues that he does not need to visually display emotion if that is what he feels—and, in fact, if he were to outwardly display how he feels it would "dilute" the power and intensity of the emotion. However, neurotypical society does not operate through this neuroatypical interpretation of emotion and feelings of empathy. Because as Oliver relates the neurotypical expectation would have been for Jacob to cry in grief. But Jacob does not need to cry to have empathy and emotion for Jess—he continues to be saddened by her absence and refuses to perform to neurotypical expectations as that would negatively affect his feelings. Thus, he can feel sad but not need to cry to express this sadness. Simultaneously, he can be filled with joy at getting to hear about the autopsy report which provides him pleasure because he can separate his feelings for Jess from his desire to hear more about crime scene investigation scenarios separate from the person behind the report.

The intensity represented in Chapter 108, told from Oliver's perspective during the trial, is also marked through a -49 net sentiment score. While the negative language of Chapter 93 discussed above is largely attributable to the medical language used in the gory descriptions of Jess's body, the negative focus in Chapter 108 has a cause through a similar but different medical intensity. In this chapter, Oliver calls upon Dr. Ava Newcomb, a clinical psychologist and expert witnesses hired by the defense to interview Jacob and provide expert testimony about Asperger's. During the testimony, Dr. Newcomb states: "People with Asperger's have a greatly impaired theory of mind—they can't put themselves into someone else's position to imagine what the other person might be thinking or feeling. To the layperson, it's a lack of empathy" (491). Instead of negativity arising from a dead bodily description, the negative language emerges from the clinical description of difference represented through an Asperger's diagnosis.

Thus, it could (almost) be read that having Asperger's is as bad as being dead and mutilated. While this is certainly not the actual case, the neurotypical discourse certainly encourages these types of assumptions that equates autism to death (and which continues to be used by prominent organizations in many public ad campaigns). Furthermore, this section gestures towards a construction in which the inability to feel empathy through neurotypical social customs is akin to not being alive or human. Thus, the evocation with lack of "theory of mind" being equitable to a "lack of empathy," requires unpacking of what is assumed by the neurotypical majority when using theory of mind as an all or nothing state of being. Yet theory of mind extends far beyond all or nothing because it represents a spectrum of experiences that are all different rather than better or worse. However, the neurotypical discourse is unable to understand how something could be different from the way they think, which is an ironic double reversal as they often point their fingers toward neuroatypical individuals as unable to think differently.

The last few sections from Chapters 4, 93, and 108 were parts of the text that I went back to look at more closely as a result of my scaled readings. Yet I did not necessarily miss identifying them in my initial close readings. Rather these initial investigations were focused around the sections that brought to the surface Jacob's neuroatypical ways of being along with the tensions between Jacob and his mother and brother to explore how they have somewhat unintentionally created a toxic and destructive family environment. However, spending more time with the text reveals interesting insights about the patterns which draw attention to areas that did not at first glance seem as important in the limited space of an academic close reading. Using the scaled readings better indicates how the text fluctuates with sentiment, and in turn emotion. By looking further into Jacob's words along with how he is viewed by society through his autistic label indicates more information about how he experiences empathy and the

importance of questioning stereotypes. As mentioned before, the unerring element of the sentiment analysis process is that the machine does not miss anything. The machine always gives an accurate answer to the question we ask of it. Thus, it is important to truly understand the questions we ask so we can better interpret the answers we get. Furthermore, how we as humans identify sentiment is crucial to understanding how a novel primes readers to respond in certain ways through text selection that, when uncovered, reveals the intended and unintended consequences of the words.

Investigating scaled readings in a novel by chapter is, I would argue, the most beneficial to understanding the intent behind the embedded sentiment in the text. However, it is also important in this process to not lose sight of the larger narrative arc and the relative sentiment distribution that occurs across the novel. Thus, returning to where the quotes occur within the 500-word intervals is a good way to review how the sections fit into the overall sentiment distribution of the text. Accordingly, I return again to the close reading quotes that I initially investigated in this dissertation, listed below in the order they appeared in my close reading and identified for scaled readings by chapter and 500-word interval segment (along with character perspective identification): Chapter 3 / Segment 6 (Theo) ; Chapter 12 / Segment 50-51 (Emma); Chapter 11 / Segment 42 (Jacob); Chapter 2 / Segment 2-3 (Emma). Segment 6 (Theo) has a positive score for net sentiment, with the two prior sections also having a positive score; however, the three following sections are all negative. This follows the trend of negatively focused initial discussions of Jacob but points out an interesting element that could be missed with investigating only the chapters. While there is certainly an initial negativity to the novel, there are specific sections that contain positive net sentiments which emerge from both Emma and Theo's perspectives. In looking further at Segment 6, it is interesting to see the positive

coding with a score of 4. The beginning of the segment captures the end of a chapter from Emma's perspective which includes descriptions about how Jacob responds to overstimulation in public settings in ways that would be (de)coded by neurotypical society as violent. And, in fact, Emma speaks to using "anger" to "shock" people into accepting Jacob's neuroatypical way of being as she has "fear" about how he would respond and be received without her physically present as his translator (Picoult 9). Her need to insert herself above Jacob again points to the neurotypical and ableist focused desire to set Jacob apart as different and in need of fixing—that he lacks something essential about being human. The next part of the segment captures Theo lamenting about how Jacob does not conform to societal expectations for a typical big brother. And that Jacob's actions are more severe than Emma admits to as evidenced by the "twenty-four stitches" that Theo has accumulated over two altercations. Considering the focus of this section centering on "fear" of being misunderstood and "violent" behavior, it is interesting to see the net sentiment score is positive. However, it is also worth noting that the positive score is not very high which further indicates the complexity of language used to describe both the highs and lows that are signified by Jacob's way of being that does not conform to neurotypical expectations. And, importantly, both Emma's (and Theo's) fixation on Jacob points more to their own "fear" of difference—that they focus on this instead of finding commonalities which would enable them to move towards a more beneficial family structure.

Looking to the next section brings up Segments 50-51, both of which occur in the same chapter from Emma's perspective. In these segments, there is an increased amount of total sentiment occurring (33/35) which is well above the 25.6 average sentiment score for segments in the novel. But looking at the net sentiment (-1/3) indicates that the increased total sentiment nearly gets cancelled out when the positive minus the negative is combined. Earlier in the

segment is a phone conversation between Jacob's math teacher and Emma, who has called to discuss Jacob's behavior. The teacher relates that Jacob shoved him during class. Emma then discusses this altercation with Jacob and finds that the teacher belittled him with derogatory comparisons about the quality of his penmanship. So Jacob did what his mother told him to do— stick up for himself. Thus, who is at fault in this situation—Jacob, his teacher, or his mother? All seem to have played a part in the situation and each was working accordingly to the logic associated with their way of being. The error, then, lies with the faulty instructions that all three were following and the fault is at least partially shared. But primarily, neither the teacher nor Emma accounted for how to translate neurotypical instructions for neuroatypical translation and instruction.

The complex ambiguity of the miscommunications between Jacob, his teacher, and Emma is what leads into her extended discussion on empathy. Following her empathy thoughts, there is an example of how Jacob does not relate to Mother's Day through neurotypical social customs as well as an example of how he got confused and lost control while in a toy store. All of these interactions point towards Emma's views on Jacob which are filtered through a construct that he lacks fundamental abilities. Yet she feels that the main aspect Jacob lacks is empathy. And she decides that he is unable to express this key component of being human, marking him as less than human. While these specific words are never mentioned, they are latent in the embedded sentiment that generates the narrative feelings for readers. One would hope that rather than accepting Emma's views at face value, this leads to a questioning about the readers beliefs and expected narrative feelings. But to engage in this questioning requires an exploration on beliefs about empathy which has long been considered a gold standard in humanity through a high emphasis on its development and attainment. Yet it is not without problematic issues as not

everything about humanity, and in turn empathy, is good. There are many excessively negative elements which, if taken into someone's worldview through empathy, can lead to the creation of more evil and destruction. Thus, it is important to understand that not all empathy looks and feels the same. Also, that not all empathy is good. By having people who empathize and process emotion in different ways provides a check and balance to the evil and destruction that can propagate from misplaced and/or negatively focused empathy.

Switching over to Segment 42 from Jacob's perspective reveals that there is both high total sentiment (34) and an increased net positive sentiment score (6). Additionally, the preceding and following segments comprise one of the highest sustained positive points in the novel in both total and net sentiment. The positivity in Segment 42 arises from two related but distinctive elements that occur; part of a social skills lesson between Jess and Jacob at a pizza parlor as well as details about Jacob's desire for Jess to be his girlfriend. Accordingly, there is sustained positivity threading through the segment that aligns with the word "love" being used five times to identify and describe his feelings. While Jess may not reciprocate these feelings, Jacob does show that he actively tries to think through how she would feel, along with his desire to provide her with viscerally felt joy rather than the mistreatment she experiences with her boyfriend Mark. Thus, despite the many instances in which Emma discusses Jacob's actions as lacking empathy, this segment clearly shows how much Jacob does feel and connect with people. Additionally, the high sentiment points again to the construct in which to translate his neuroatypical way of being into words understandable by a neurotypical majority, he needs to use many descriptive words. The need to translate points towards how the neurotypical majority takes for granted their situatedness and overestimates their capabilities. And while autism is often discussed in terms of lacking or being impaired in certain abilities, there is no reciprocal

discussion about how neurotypical social norms can also cause lack and impairment. Because the majority gets to set the societal rules, the neurotypical way of being is taken for granted and not critically examined to understand what is lost and gained from this perspective. Instead of perpetuating this cycle, diversity in thinking should be discussed, as through better communications we might be able to understand, instead of being fearful or ignorant of, what makes us different.

The last segments to revisit are a combination of 2 and 3 which both fall in the same chapter told from Emma's perspective. These segments both have negative net sentiment (-7/-12) but the following three are positive. Part of this negativity arises with a crime scene scenario Jacob set up at home that created a mess and also damaged Theo's sneakers (that over many months he had saved money to purchase). Yet the largest part of the negativity in these segments is attributable to the various descriptions Emma makes about Jacob which include his early years and autism diagnosis that she views through more negatively focused language. In fact, the most telling quote of this segment, which perhaps reveals most clearly the framing and focus of the novel, comes from Emma's reflection: "In my mind, Asperger's is a label to describe not the traits Jacob *has* but rather the ones he lost" (Picoult 5, emphasis in original). Emma does not want to see what Jacob has; she instead fixates (perseverates?) on what he lacks. She cannot accept Jacob's difference and finds herself as embracing (reluctantly) her role as his mother. Yet Jacob is not "lost"—that falls to Emma who has created a position of loss. And the implications of this rhetorical move are telling as she does not want to find what he has that is beneficial. Rather, she wants to focus on the son she does not have, what makes him in her mind as unfixable and different.

While these sections from Emma's perspective are negative, the ones that follow turn

towards positive. Some of that is attributable to the following sections being told from Theo's perspective, but the positive trend starts towards the end of Emma's sections. The switch from the negative initial focus to a positive ending brings up an interesting dilemma. While the embedded sentiment primes a highly charged response towards the negativity that rises out of the sentiment, the ending positive note can make the section seem less negative than the word totals would imply. Thus, the result is a positive narrative feeling which is obtained from the method of talking about negative and/or dark subjects quickly followed by positive words. Often, in my professional experiences, the goal is to always end on a positive note so that the takeaway from a discussion (even if critical and/or negative) is a positive feeling. And while I would agree that having a positive feeling is in general a good thing, in this case it points to the harmful silences that this stereotypical representation of autism as loss brings out through Emma's reflection. In other words, she experiences her role as Jacob's mother through descriptive negative language, but she tries to overwrite her more truly felt feelings by always ending with positive notes.

The patterns from *House Rules* indicate a significant shift from the previous two novels that I investigated in my last chapter. From the more evenly balanced sentiment in *The Rosie Project* and the patterns of positivity with growth across the chapters in *The Eagle Tree*, there is a distinctive difference between the representations from their respective genres and that which emerges through the intense negativity of *House Rules* in the mystery genre. The differences in patterns confirms a couple of key insights that are both obvious and at the same time not as clear as they may seem. First, there are ways to quantify literature despite traditions which have long considered fiction qualitatively too far removed from numbers and incompatible with quantitative approaches. The numbers that emerge from quantification lead to differing insights about the texts that confirm moments that occur through close reading but also reveal insights

that may be missed when focusing on themes and/or looking through a specific lens to interpret the narrative acts. Second, each novel reveals a unique pattern with no two being exactly the same. While there are differences, the patterns seem to align to certain genres rather than any specific narrative element of the novel. How exactly genre is visualized through the patterns would require a deeper investigation across multiple novels of the same genre. Thus, perhaps a large-scale investigation of embedded sentiment through scaled readings can provide better insights about genre classifications. Furthermore, this algorithmic work could even possibly reveal different genre alignments that diverge from publishing conventions and categorizations. While this large scope of genre investigation is not feasible for this dissertation, I do intend to conduct a later project that will build upon the scaled readings method that I have defined and described to expand how sentiment analysis can provide further insights into novels.

To continue exploring different representations and genres, I look now towards *The Boy on the Bridge* to further investigate sentiment patterns through scaled readings. In my close reading from Chapter 2 of this dissertation, I argued that the complex cast of neurodiverse characters in the novel intensively heightens the mistrust between Greaves and the neurotypical members of the Rosie team in their pursuit to find a cure for the *Cordyceps* fungus; yet it is Greaves's neuroatypicality, in ways clearly seen and unseen, which pulls from the embedded sentiment to call upon the reader's inlaid passions and pleasure to generate complex narrative feelings about whether or not they would be willing to think as differently as Greaves and go as far to unselfishly make the ultimate sacrifice to maintain the spirit of humanity. Needless to say, *The Boy on the Bridge* is markedly different from all three of my previously investigated texts. The novel delves into a future in which the pandemic generating *Cordyceps* fungus, once contained to ants in tropical jungles, has crossed over into humans. The fungus highjacks the

brain rendering the person effectively dead but still animated and controlled by the fungus. Accordingly, the majority of the human race now exists in a dead but alive state as they have been transformed into fast-paced zombies looking to devour the rest of the living creatures through their ravenous appetite for blood directed by the fungus.

As might be expected, the current state of this post-apocalyptic world is cast in dark and negative tones to capture how the human race is struggling for survival. The story is centered around a team of scientists and military members, the crew of the Rosalind Franklin "Rosie" exploration laboratory, as they search for a cure to the fungus that has taken over the world. The chapter structure encapsulates the search and research conducted by the Rosie team with 61 chapters and an epilogue. The structure is further divided in three parts of varying lengths as the chapters progress with 3 chapters, 40 chapters, and 18 chapters respectively. For my scaled readings of the chapters, I divided the novel into 62 sections to align with one per chapter and one additional for the epilogue. As with my previous scaled reading investigations above, there are two sets of scaled readings. The first set looks at the net sentiment, total sentiment, positive sentiment, and negative sentiment by partitioning the text into 500-word intervals. And this novel contains 236 of these intervals (around 118,000 words). The second set looks again at the net sentiment, total sentiment, positive sentiment, and negative sentiment by partitioning the text into the 62 chapters (Table 7 contains the data that generates the graphs in Figures 25-28 and Table 8 contains the data that generates the graphs in Figures 29-32; both tables are listed in their entirety in the Appendix).

Figure 25: *The Boy on the Bridge* - Net Sentiment by 500-Word Intervals

The Boy on the Bridge
Net Sentiment - Positive minus Negative
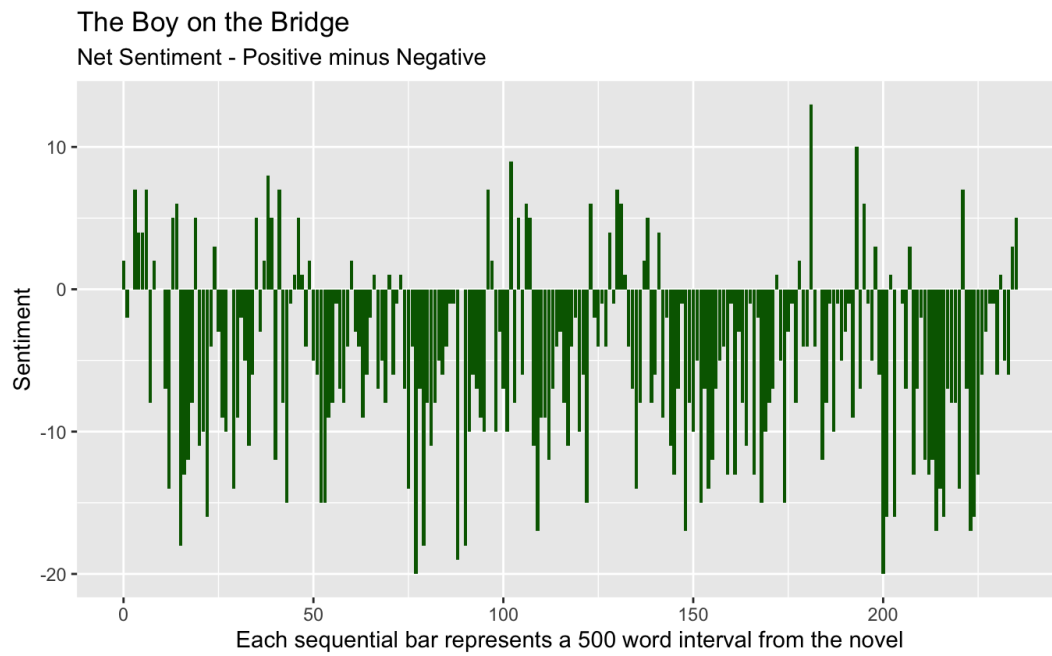
Figure 26: *The Boy on the Bridge* - Total Sentiment by 500-Word Intervals

The Boy on the Bridge
Total Sentiment - Positive plus Negative
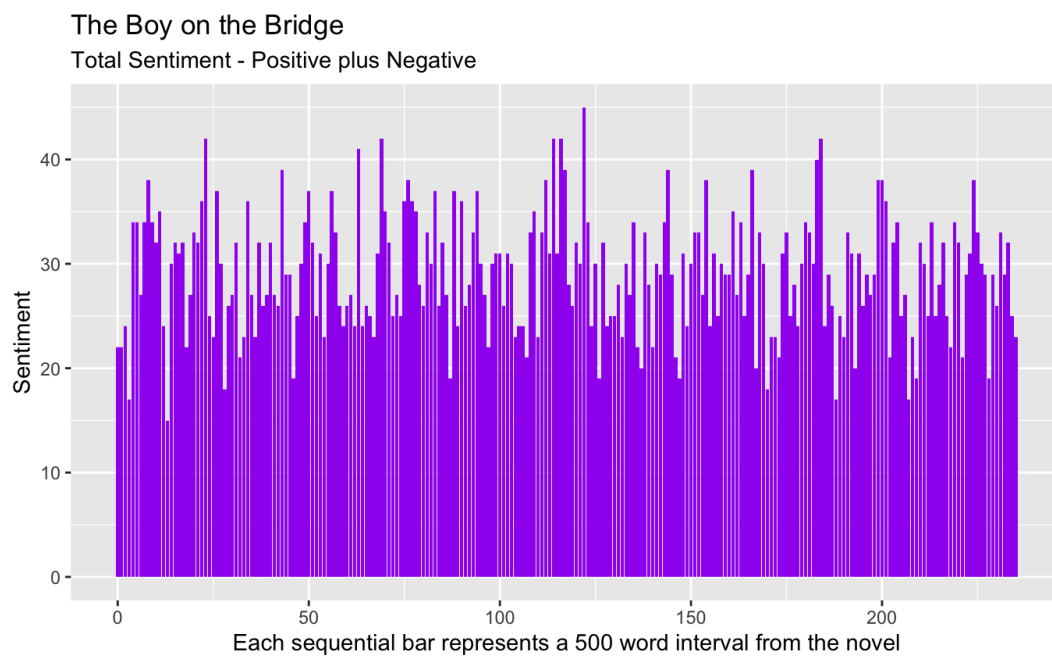
Figure 27: *The Boy on the Bridge* - Positive Sentiment by 500-Word Intervals
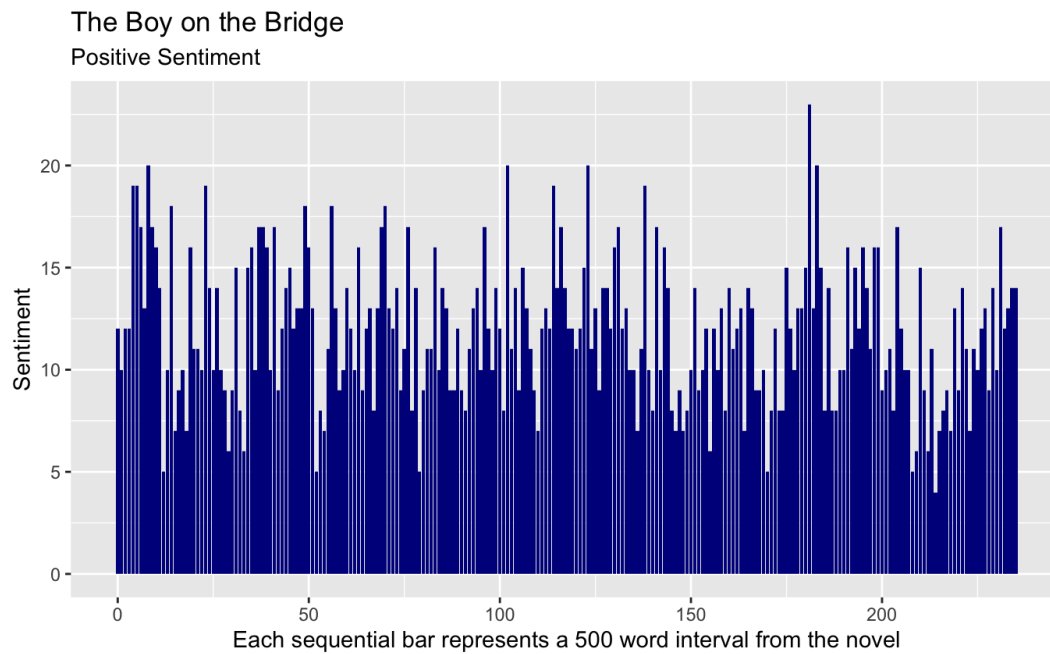
Figure 28: *The Boy on the Bridge* - Negative Sentiment by 500-Word Intervals
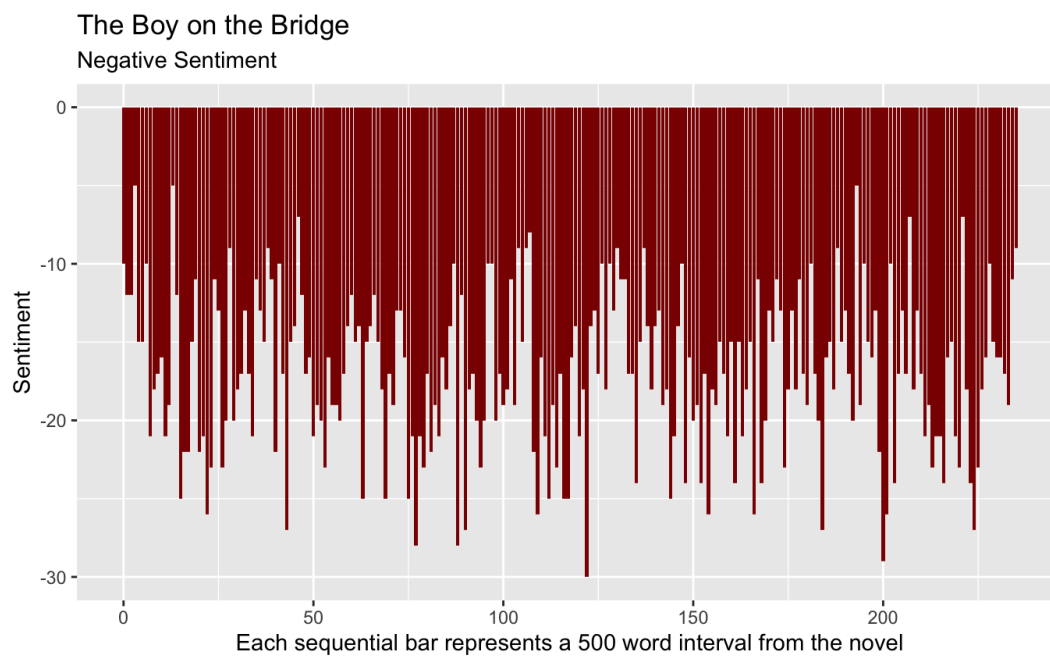
Figure 29: *The Boy on the Bridge* - Net Sentiment by Chapter

The Boy on the Bridge
Net Sentiment - Positive minus Negative
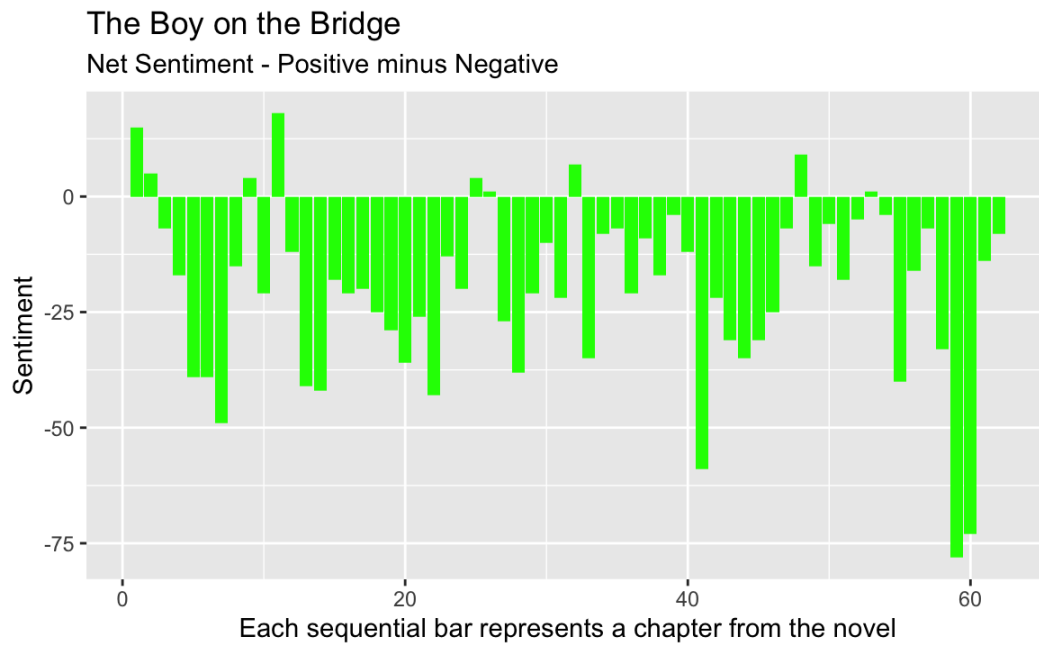
Figure 30: *The Boy on the Bridge* - Total Sentiment by Chapter

The Boy on the Bridge
Total Sentiment - Positive plus Negative
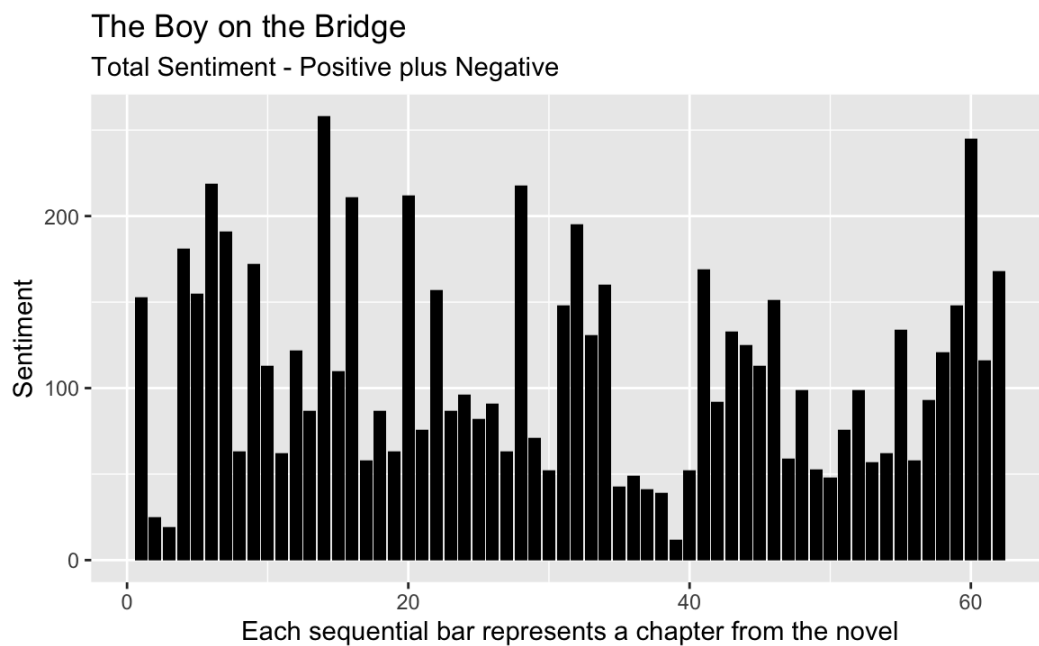
Figure 31: *The Boy on the Bridge* - Positive Sentiment by Chapter

The Boy on the Bridge
Positive Sentiment

Each sequential bar represents a chapter from the novel
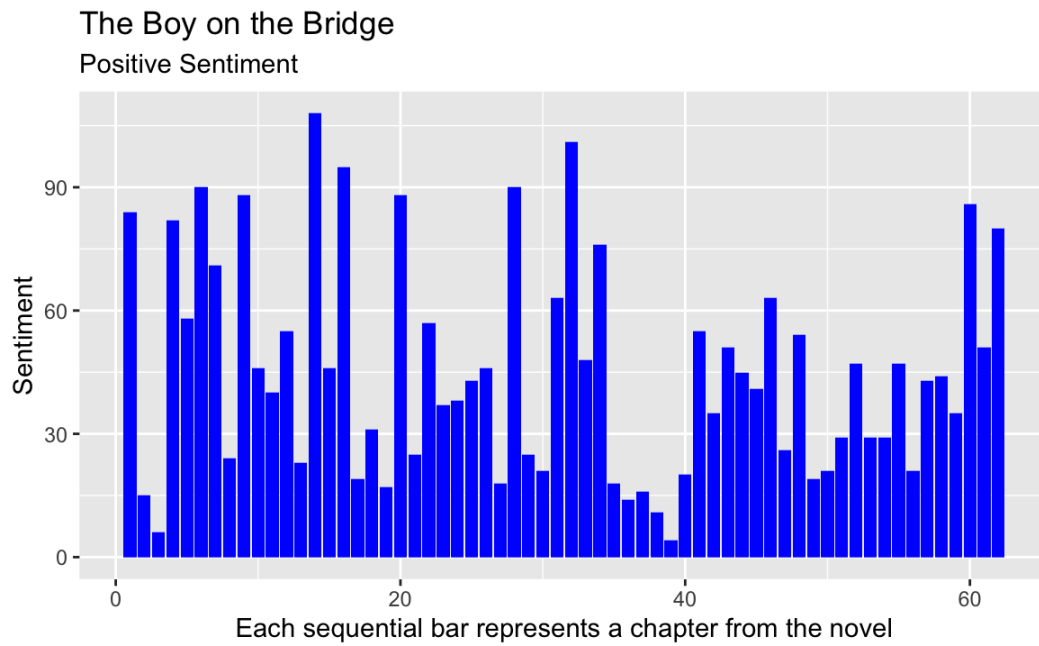
Figure 32: *The Boy on the Bridge* - Negative Sentiment by Chapter

The Boy on the Bridge
Negative Sentiment

Each sequential bar represents a chapter from the novel
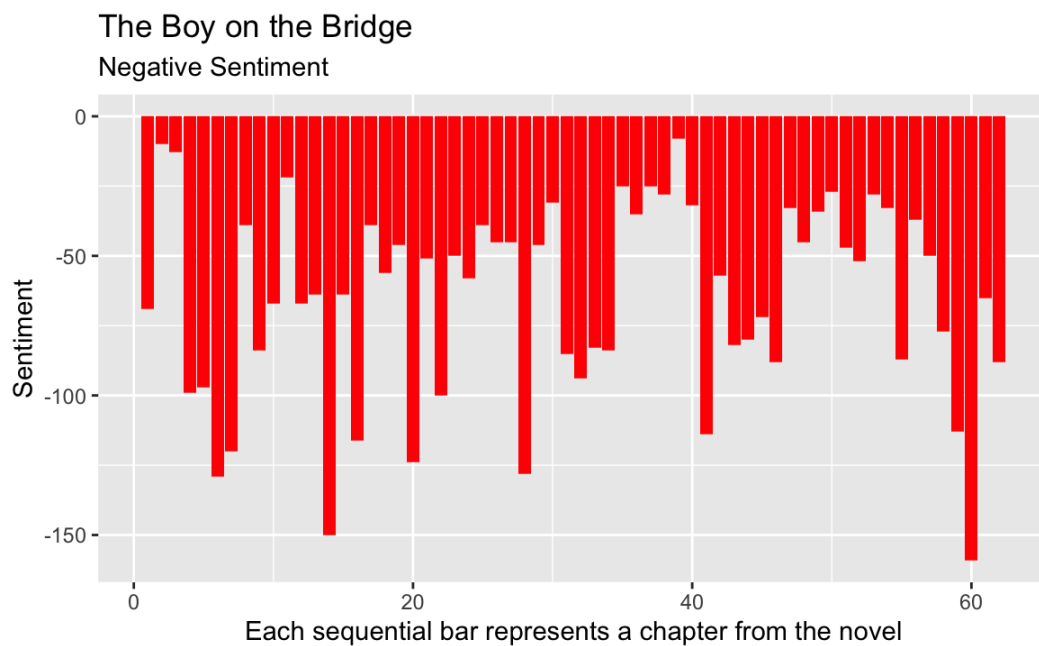
My set of scaled readings that investigates *The Boy on the Bridge* in successive 500-word intervals (each represented by a bar on the graph), uncovers myriad insights across an evenly spaced breakdown of the text. The first visualization of net sentiment shows the general trend emerging through an extremely negative focus; there are very few groupings of positivity, with only 49 positive segments out of the 236 that comprise the novel. And when divided by the total amount of 500-word intervals, this trend accounts for 79% of the novel being coded negatively. Switching over to the total sentiment reveals a different visualization. As the total sentiment measures the positive plus the absolute value of the negative, the numbers from this graph indicate that the total averages around 29 words of sentiment in every 500 words of text from the novel, resulting in 5.8% of words being charged with sentiment. Interestingly, this accounts for the highest sentiment amount of all the novels investigated in this dissertation as it is more than either *House Rules*, *The Rosie Project*, or *The Eagle Tree*. Additionally, there are significant moments of peak sentiment intensity within the 236 sections in *The Boy on the Bridge*; 8 sections contain 40 or more sentiment words, leading to approximately 3.4% of the text containing peak moments of high total sentiment (as a reference, the percentage from *House Rules* was 1.7% and *The Rosie Project* was 5.3%). The differences in peak moments of total sentiment between the novels are largely attributable to the different genres that they represent. The higher amount of these moments within *The Rosie Project* aligns with romance genre expectations of descriptive words that detail a love story in intense moments. The not quite as high amount within *The Boy on the Bridge* most likely stems from the horror genre in which the sentiment does peak at moments with large amounts of negative sentiment in certain parts that are action focused but these are not overly frequent. Despite the differences in these peak sentiment moments, each novel utilizes unique blends of sentiment to fit within the narrative arc and genre. In looking at

the last two visualizations of the 500-word intervals, positive only sentiment and negative only sentiment, patterns are revealed of isolated positivity and negativity that are separated for easier identification. The two visualizations reveal a breakdown of the isolated sentiments which indicates there are 63 negative sections which measure above 20, whereas there is less intense positive sentiment with only one section above 20. Thus, when looking at these two graphs side by side, the pattern of increased negative sentiment continues to be visible through the sentiment distribution.

In looking at the scaled readings that interpret *The Boy on the Bridge* by the 62 chapters reveals similarities to the 500-word interval patterns but also sheds different insights about how looking at the novel through the lens of chapters indicates additional trends. The patterns from the net sentiment chapter graph indicate a highly focused use of negative sentiment; there are only nine chapters with a positive net sentiment score, marking 85% of the novel as negative (when divided by chapters). Furthermore, the intensity of the negative sentiment in these chapters is far above the positive. The average net sentiment score across the nine positive chapters is 7.1 whereas the average score across the fifty-three negative chapters is -24.4. Moving to the total sentiment chapter graph reveals the general trend of intense peaks followed by multiple chapters with much lower total sentiment. Yet in the total sentiment graph of 500-word intervals, this pattern did not manifest. Thus, the increase of intense peaks on the chapter breakdown of total sentiment is partly attributable to the differing length of chapters. But more importantly, it highlights that the novel structure is designed for sentiment to increase in intensity in certain chapters of the text followed by a break from that high level of sentiment. The increase that emerges across the story arc indicates that certain chapters prime the readers to respond with increased feelings towards certain narrative events but the intensity does not remain at peak

levels continuously.

Each of the eight graphs for *The Boy on the Bridge* discussed above reveal noteworthy similarities and differences to investigate. Yet the trends most interesting to further explore are how the text is structured with high uses of negative sentiment as well as how the total sentiment peaks followed by significantly lower sentiment before and afterwards. The patterns in this novel are different from the first three novels investigated in this dissertation. However, the extensive negativity does have similarities to *House Rules*, which was also negatively focused but with slightly less intensity. As mentioned previously, direct comparison is not a very useful method to discuss the differences of novels in a visual reading. However, the one application that could provide beneficial use is to look at groupings of novels within different genres. By comparing the generalized patterns and trends of multiple horror novels with *The Boy on the Bridge* perhaps reoccurring patterns will be revealed that more closely identify the genre. Or perhaps what the different graphs will reveal is that genre breakdowns transcend publisher distinctions. While *The Boy on the Bridge* is identified as a horror novel, that is a human based decision to place it in that human created category. Thus, the scaled reading graphs might reveal that novels do adhere to these predetermined categories. But perhaps instead the visualizations will reveal unique insights into how we have assumed genres are defined and work.

The patterns of construction in *The Boy on the Bridge* most likely align to expectations of works in the horror genre which accounts for the increased use of negative sentiment and the peak moments of total sentiment that occur during the course of the novel. Post-apocalyptic stories within the horror genre tend to signal negativity associated with the "what if?" scenarios brought about by a depiction of the end of the world. Thus, there is a logical link to using increased negative sentiment to indicate destruction and the use of highly charged sentiment in

certain moments to signal increased intensity or significance of life or death scenarios. And because readers expect to feel specific narrative feelings when reading from a chosen genre, authors most likely follow patterns of embedded sentiment that fulfill reader expectations to in turn make them successful in sales and popularity. How much of this is done consciously or subconsciously probably differs from author to author based on background and experiences. Additionally, authors probably gravitate towards writing in certain genres because stories within these genres satisfy their pleasurable enjoyment and/or intellectual curiosity.

To further investigate the complex significance of the embedded sentiment numbers that emerge from *The Boy on the Bridge*, I look back at the sections identified in the close readings from the second chapter of this dissertation to see if they are represented in moments of significance from the scaled reading graphs. In addition, I look into sections of the text that are in the visually identifiable outliers to unpack what words contribute to the increased sentiment levels from the novel to better understand why certain sections manifest with higher amounts of sentiment. In Chapter 2 of this dissertation, I looked at quotes from *The Boy on the Bridge* that occurred in the following sections, listed in the order they appeared in my close reading and identified for scaled readings by chapter and 500-word interval segment: Chapter 9 / Segment 39; Chapter 15 / Segment 67-68; Chapter 17 / Segment 75; Chapter 60 / Segment 226. The first quotation from Chapter 9 occurs in one of the few positively scored chapters of net sentiment. The score is positive at 4 but not significantly so which falls in line with the general lack of positivity that comprises the visualization of the narrative. The context of the chapter reveals that Greaves is trying to understand his recent observation of a "hungry" child as her behavior marks an anomaly from expected "hungry" patterns. Through his mental processing in which he contemplates the differences of behavior, he reflects on his friendship with Dr. Khan through

which "he learned the pleasure of stories" that have helped to provide him with an outlet to escape from the dismal daily reality he faced as an orphan in the post-apocalyptic and un-utopian society of Beacon. Additionally, during this reflection he remembers how the doctor sought him out after they arrived in Beacon to return his broken toy, Captain Power, which she had repaired for him. Through these acts of kindness and non-touching connections their bond grows and flourishes. Because Greaves determines that rather than trying to make himself invisible, he can survive and thrive through his closely detached connection to Dr. Khan as it is compatible with his neuroatypical way of being. During his extended reflection, he states that his experiences with Dr. Khan have made her a fully embodied person in his mind and "like the ["hungry"] girl at the water-testing plant, she sits in a category of one. An anomaly" (Carey Location 886). Thus, through investigating the behavioral patterns Greaves discovers that his greatest joys, connections, and trust come from the outliers in which people see and appreciate him for his true neuroatypical self rather than place him into a predetermined category.

As Greaves reflects on these past experiences of pleasure derived from connections, it makes sense that the chapter would be more positively coded as the embedded sentiment is meant to generate happy feelings about friendship. Yet because it takes place within the reality of the post-apocalyptic world, there still remains a negative baseline of sentiment that is inescapable within the narrative. And in thinking through how Greaves does connect with people who can truly see and appreciate his neuroatypical way of being, looking to how these deeply felt connections occur without the need for physical contact allows for a deeper investigation of the complex construction. The (de)coding of the sentiment that marks Greaves as he observes and experiences the world around him reveals that he connects through nonverbal gestures that often create more meaning than traditional ways of touching and feeling. And his introspection on the

development of his friendship with Dr. Khan shows that they connect through objects and ideas rather than through physical touch which "the experience of slipping sideways into another world" through fiction evokes. The pattern of connecting through objects and ideas continues through to his interactions with the "hungry" girl he first observes at the water-testing plant as they communicate through a series of nonverbal gestures rather than touch. And the autistically focused way of being to not touch is crucial, as any physical contact between a "hungry" and a human would have fatal consequences.

The ideas that Greaves evokes with his desires to connect through objects and ideas that are often nonverbal and without physical contact have connections into the insights Lauren Berlant provides through her work in *Cruel Optimism*. Her book evokes details about the affective gestures which are most clearly seen when she discusses her method of investigating affect, as the gestures she talks about link towards interpretations of the (de)coding of sentiment and contact:

> This is part of my method, to track the becoming general of singular things, and to give those things materiality by tracking their resonances across many scenes, including the ones made by nonverbal but still linguistic activities, like gestures. Aesthetics is not only the place where we rehabituate our sensorium by taking in new material and becoming more refined in relation to it. But it provides metrics for understanding how we pace and space our encounters with things, how we manage the too closeness of the world and also the desire to have an impact on it that has relation to its impact on us. (9)

As Berlant details, the patterns that provide detail to our lives open up and outwards. Because in thinking about gestures, what is encountered through the closeness and echoes of these movements reveals stunning insights about how we navigate and interact in the world. We are constantly redefining ourselves and relationships to others as we simultaneously move too close and far away yet still find impact and resonance. Thus, Greaves with his neuroatypical way of being makes close connections at a distance which reveals just how much he can see and

understand without the need to touch. And, as mentioned previously, touching and physical contact in a pandemic world can be devastatingly detrimental. Accordingly, the connections in a post-apocalyptic world should be carefully considered to think through how gestures often provide more intense meaning than touch which can obscure the real message. Further, in many ways this is not limited to this fictional world but transcends beyond fiction. Because an over reliance on touch and contact to feel can at times disable fully embodied experiences.

Moving now to Chapter 15, the scaled reading graph indicates a net sentiment score which measures -18. This chapter, along with the previous three and the following nine chapters are all negatively coded. In particular, this chapter is the least negative of this streak of chapters which comprise two moments of intense negative sentiment that peak on each side. The less intense negative is mainly attributable to the shorter length of the chapter, as it is about half as long as the preceding and following chapters. Thus, the chapter is intended to be a short reflective break from the action of the narrative which details Greaves experiences with the Rosie team when he returns from his secret (and unapproved) mission to observe the "hungry" children. He felt compelled to undertake the unapproved mission in order to gather more data about the "hungry" children to investigate their non-conforming behavior. For his mission, he designed and created a special suit to mask his heat and bodily odors making him invisible to "hungries." While the suit had good theoretical properties, he failed to consider that the "hungry" children can sense much more than the typical "hungries"—thus the first negative peak prior to Chapter 15 emerges from his near death due to the malfunctions of his specially made suit. The only reason Greaves survives his encounter with the children is because the "hungry" girl he observed at the water-testing plant steps in to save his life from the rest of her clan. Because unlike the "wariness and mistrust" Greaves experiences from the Rosie crew who "can't see

him," the children represent the opportunity for trust through understanding and actually seeing others. With the exception of Dr. Khan, the Rosie crew members are unable to decipher Greaves's actions or see his unique neuroatypical traits for the benefits that they provide the team. Yet the "hungry" girl could see his beneficial traits and chooses to let him go and survive as a human. Even though Greaves and the "hungry" girl comprise different versions of life, they are bound together by similar neurodivergent traits that provide them with the skills to survive in a hostile world.

There are many connections to the objects we create and use which help us to navigate the world. Most of these connective individual objects are designed and intended to enhance our experiences and provide us with an easier way to engage. However, as Greaves design suit malfunctions point out, we often fail to consider the sensory affects of our environment and objects. Greaves way of being creates his desire to observe and not touch. And his neurotypical crew members seem to not appreciate the beneficial (and live saving) aspects of being able to connect without physically touching and feeling. Accordingly, there continues to be misunderstandings about the affect of the sensory that permeates in many threads through the narrative. Yet to get closer to an understanding about the impact of affective touching requires an engagement with the work of Eve Kosofsky Sedgwick. Throughout her book *Touching Feeling*, she gestures towards sensory entanglements and that how we classify our connections with the sensory realm is a vexed construction: "*Touching Feeling*, records the intuition that a particular intimacy seems to subsist between textures and emotion. But that same double meaning, tactile plus emotional, is already there in the single word 'touching'; equally it's internal to the word 'feeling.' I am also encouraged in this association by the dubious epithet 'touchy-feely,' with its implication that even to talk about affect virtually amounts to cutaneous contact" (17). Thus, as

Sedgwick gestures toward, our sensory engagements already always have tactile implications with or without direct contact. And even if we fail to imagine the affective reach and implications, it is there to reach back nonetheless.

While Greaves does experience a failure to translate the theoretical into the practical with his body suit design, it points towards a larger failure in society which constantly misinterprets the sensory implications of the environment and objects. Further, Greaves way of being, which created such a suit and engages with Dr. Khan through ideas and objects, indicates his desire to connect through gestures and observations in which he experiences connection without physical contact. Even though these connections diverge from neurotypical customs, they still create impactful meaning that while not physical evokes motor neuron processes that mirror the physical. And in thinking further about the mind and body relationship reveals that Greaves engagement with ideas through stories creates direct connections. Accordingly, there is an impact in the contact of reading that exists and makes moves within the world even without direct physical contact. This points towards the "touchy-feely" movements that are constantly present even though a neurotypical and ableist focused society tries (and often fails) to make sense of a sensory presence.

Looking now to Chapter 17 with its score of -20 provides a continuation of the discussion as it captures part of the nine chapters that encompass the second negative peak. The chapter follows the Rosie team as they go on a mission to investigate Invercrae, a small town near their current stopping point along their research expedition route. And of important note, this is the same town where Greaves was almost killed by the children "hungries" during his unapproved mission when his specially made suit malfunctioned. But the team does not know about Greaves's botched attempt and the implications it reveals because he has not yet disclosed that

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information. Thus, when the team starts out on their standard mission run, they follow the usual protocols for their research operation. But this is the moment where Greaves breaks from his role in the team "lured astray by the urgency of his desire" as he pursues his own plan. The breakdown of the mission is largely attributed to Greaves being too intrigued by the children "hungries" to follow the usual order of operations—he is propelled towards "explanations" in order to interpret and understand the world. He cannot accept what someone else has told him unless it is backed up with logical explanations and scientific reasoning. While this is what creates the essence of his unique neuroatypical way of being that eventually leads to him discovering a cure for the *Cordyceps* fungus, it also creates tension with the neurotypical members of the Rosie team who are unable to accept that his "passion" differs from their conceptions of the world. Yet Greaves's logic is not without fault as his decision to abandon the mission later culminates with Private Brendan Lutes being killed when the mission falls apart. Thus, the negative mark of this chapter indicates a priming of embedded sentiment that is a precursor to the darker moments of this death that climax within the following chapters. While this eventual death is not solely the fault of Greaves, there is some blame that falls to him as he does not follow through on the pre-planned mission orders.

Furthermore, the description of Greaves following "his strongest passion" as he is "lured astray by the urgency of his desire" points towards a construction in which he is unable to change course for the greater good of the team if it conflicts with his worldview. In turn, this marks Greaves as lacking emotion or affective fellow feeling which is often how neuroatypical characters are depicted. Yet this stereotypical casting fails to capture how much Greaves does care—he cares about a much greater good than just his team as he sees the larger implications within the human race which is slowly self-destructing as he experienced during his time in

Beacon. Thus, he is seeking a "cure" not to the fungus as much as searching for a better way

forward that embraces diversity instead of belittling and overlooking important facets of life.

Accordingly, the lack of emotion that Greaves supposedly manifests is filled with affective

gestures in which he wants what is best for the world even when the world does not want what is

best for him. Thus, with the embedded sentiment that describes his experiences, there is a

indirect connection to his feelings but it often miscodes how that emerges. Because there is

meaning in the choices that Greaves makes that go beyond the tragic death of Lutes into a much

greater good that is filled with deeply felt feelings.

The last section of text that I investigated in my close reading occurs in Chapter 60 near

the end of the narrative. With a negative net score of -73, this is the second lowest mark, just

behind the preceding chapter which has a negative net score of -78. The preceding chapter

encompasses the culmination of a series of events which ultimately lead to an ambush of the

Rosie team. The ambush is carried out by a group of rogue Beacon military leadership under

Brigadier General Fry working with junkers (people not infected with the *Cordyceps* fungus who

have established micro communities outside of Beacon). Yet the Rosie team uses their fortunes

and misfortunes in the unexpected attack to their advantage. Just as Dr. Khan finally succumbs to

the fungus without the antidote/cure that Greaves provided her for a time, she begins to infect the

junkers who do not suspect she is transitioning to a "hungry." After she sets off the chain of

infection which saves the Rosie team, and just prior to the fungus completely taking over her

mind, she asks Colonel Carlisle to kill her, to which he is reluctant but eventually complies with

her wishes. Following these very significant infections and death, Chapter 60 follows with the

fallout of these events as Greaves chooses to become a "hungry" by letting "go of his humanity

with much more relief than fear" as he would rather transition than provide the Rosie team and

the Beacon community with the knowledge for a "cure" to the fungus.

Thus, these two chapters together mark the largest negative sentiment peak from the novel as it captures the climax of the narrative. And as the two chapters combined capture multiple deaths and "hungry" transitions, it is understandably dark with an extreme negative focus. But perhaps the negativity is even more significant as it marks the termination of neurodiversity within the Rosie team as both neuroatypical Greaves and neuroatypical ally Dr. Khan meet their respective ends of being human. Yet it is not a complete closure as, for the first time, the team finally heeds the benefits and wisdom of Greaves and Dr. Khan. The remaining Rosie team sets out on a different course, where they ultimately find the last habitable place free from the fungus. But they were only able to find and access the place by diverging from their neurotypical patterns of looking for solutions. In other words, despite the end for Greaves and Dr. Khan, their legacy carries forward to more inclusive possibilities beyond. As such, perhaps the ending negativity is meant to mark the unfortunate loss. But it can also be symbolic of the hope that can emerge through positive change.

One of the major reasons the Rosie team failed to embrace and appreciate neurodiversity until the very end is because of their inability to see past their "fear" of differences and the unknown. In my investigations thus far on both autism and sentiment, one of the most frequently occurring terms is "fear." There are many ways that we might (de)code, interpret, and react to fear—and further, this brings up the eventual questions of what should we fear, or should we be fearful? As a jumping board into this discussion, perhaps one of the best affect theorists to invoke is Sara Ahmed and her book, *The Cultural Politics of Emotion*. Throughout her work, she provides important insights into how people experience, or are excluded from, a variety of emotions. But in getting back to "fear," in her chapter "The Affective Politics of Fear," she

details and investigates the affective gestures of fear:

> Fear's relation to the object has an important temporal dimension: we fear an object that approaches us. Fear, like pain, is felt as an unpleasant form of intensity. But while the lived experience of fear may be unpleasant in the present, the unpleasantness of fear also relates to the future. Fear involves an anticipation of hurt or injury. Fear projects us from the present into a future. But the feeling of fear presses us into that future as an intense bodily experience in the present. (Ahmed 65)

As this argument points towards, fear might never be touched but it can certainly be felt in its affective gestures. And the presence of negatively focused "fear" is always felt as a future possibility that takes over the present. With Greaves, he does not project into the future of fear as he views what he does not yet know as something interesting to discover. Even when he gives himself over to the "hungries" to protect their future from the human race, he does not fear for himself. Rather the decision he makes to let "go of his humanity" is to avoid the "fear" of what would come if the knowledge of the cure were to fall into the wrong human hands that embark on a course of malicious actions. He envisions a future where good might survive without all the "fear" as the changes brought about by the fungus could be a signal towards a neurodiverse restructuring that benefits the world.

The total sentiment graphs provide a variation on the interpretations that add insights to the net sentiment graph analysis. Chapter 17 marks one of the lower sentiment marks with a score of 58 total, well below the average of 110. As this chapter captures Greaves when he decides to break away from the mission orders, the low sentiment indicates that his decision is not based around active emotion but rather from logical disagreements with directives. The (lack of) embedded sentiment captures the narrative feeling which is meant to appeal to logic. Interestingly, the earlier Chapter 15 which was short in length sits right at the average of 110, the only chapter that is on that line. As this chapter captures Greaves after his botched mission to observe the "hungry" children unnoticed, the higher use of sentiment that stems from his point of

view indicates that his failure affected him both logically and emotionally. While many might see those who are neuroatypical as lacking emotion, this chapter indicates that the assumption is false. In fact, Greaves feels emotion deeply, just in patterns that differ from social expectations. Looking back to the earlier Chapter 9, the total is on the higher side with a score of 172. As this chapter captures Greaves reflections on his friendship with Dr. Khan, the increased total sentiment aligns with him trying to articulate how he feels. As previously mentioned, Greaves does feel deeply just in differing ways—and to translate his feelings requires him to use more sentiment encoded words. Lastly, Chapter 60 has the second highest total sentiment score at 245 (the highest occurs in Chapter 14 with a total of 258). As Chapter 60 captures the process of Greaves making the decision to let "go of his humanity" to safeguard his knowledge about the antidote/cure, it is understandably dark but also a section high in overall sentiment. This high sentiment is interesting as it marks the culmination of Greaves development and growth in which he both processes problems with his laser sharp logic as well as with his uniquely tuned emotion. He possesses the capability to understand how others will use his knowledge in negative ways that fall in line with their neurotypical privileged view; a view that sees anyone or anything without ablenormative qualities as less than or not at all human, perpetuating damaging biases. Thus, Greaves lets go of his "humanity" in the final culmination that captures his anguish but also his surety in knowing that the "hungry" children provide more hope than the current human race could achieve.

As with *House Rules*, *The Rosie Project*, and *The Eagle Tree*, the scaled readings from *The Boy on the Bridge* reinforce moments of close reading, but also point to different moments in the text separate from initial close readings. One of the moments that bears closer investigation arises from the total, positive, and negative sentiment graphs which reveal that

Chapter 14 has the highest total and positive scores as well as the second highest negative score (just behind Chapter 60). In my close readings, I explored the fallout of events from Chapter 14 with my investigations of Chapters 15 and 17. However, a closer look at the specifics of Chapter 14 allows for a more detailed picture to surface of Greaves ill-fated attempt to observe the "hungry" children unnoticed. In the moment when he discovers that his custom-made suit does not work to mask him from the gaze of the children, he realizes the potentially fatal error of not considering that they would have different sensory receptivities. While Greaves initially thinks that this error will result in his death, he is shocked and surprised when one of the "hungry" children, the red-haired girl from the water-testing plant that is their group leader, saves him from the rest of the children. It is through an affective feeling and touching gesture, without direct contact, in which Greaves and the girl assess each other through prolonged eye contact. And through this sensory medium, they exchange information to come to a common ground, an understanding despite the increased sensitivity he experiences through visual stimuli: "The only thing that makes this bearable is that the girl is still uncategorised in his mind. There is no defined place in his highly organised mental landscape where he can set her down and feel that she fits. She might be nobody, devoid of meaning or value. But it does not feel like that. If anything, it feels like the opposite. She is supercharged with potential meanings, none of which can be subtracted until he knows her better" (Carey Location 1381). Greaves, like many would expect from neuroatypical autistic stereotypes, has a strong distaste for eye contact. But in the moment of his encounter with the girl, he realizes that he connects with her differently—that the eye contact means both less and more than typical encounters. She represents something new and full of potential power for positive change, which he can feel and touch even when there is no direct contact between the two. Accordingly, the sentiment that emerges from this chapter comes

through a combination of Greaves's observations of the "hungry" children and his rescue by the girl. Most importantly, he learns from the encounter a detailed understanding of the unique behaviors of "hungry" children that fall on the spectrum of behavior between "hungry" and human. He sees that their behaviors are not in a binary, one or the other, but rather a combination of the better elements of both. His insights provide him with the initial thoughts about the children offering a better way forward for the future than the current version of humanity that he has experienced in his own life within the human race.

Another moment of significance that the scaled reading patterns point towards is Chapter 41, which captures the third highest negative net sentiment score of -59 (outside of Chapters 59 and 60 as previously discussed with scores of -78/-73 respectively). In this chapter, the Rosie crew is dealing with the aftermath of three deaths: John Sealey, Elaine Penny, and Private Gary Phillips. The deaths are the culmination of a chain of events set into motion when Dr. Fournier gives orders for the crew to proceed overland (outside of their armored laboratory) after experiencing a mechanical failure on Rosie. Yet the mechanical problem was not caused through a typical lifecycle fatigue failure from overuse of the machinery. Rather, the problem arises when the group of "hungry" children conspire and execute a plan to break specific components of the machinery in order to create problems for the Rosie crew. The children execute their plot in order to get the crew's attention and demand the release of a dead "hungry" child who was taken as a research specimen sample. This marks a critical turning point in the narrative as the crew realizes that the "hungry" children represent a much different and fully sentient version of "hungries" which vastly diverges from expected behaviors. While Greaves came to this realization much earlier, he never fully shared the information with the crew out of fear they would use it for malicious ends. And these fears were well founded as the neurotypical crew

members engaged in a vicious act when they captured and did not release the corpse of the "hungry" child.

The other major significance of the crew realizing that the "hungry" children possess different characteristics and patterns than the usual "hungries" is that it creates new possibilities for causes and cures to the fungal pandemic that has thrown the world into a post-apocalyptic state. And the first urge from the neurotypical crew is to report this information to the leadership back in Beacon as soon as possible. However, they are not within range of Beacon to pass along the knowledge. And while they realize it opens up new possibilities, they do not know how to use it constructively as they are stuck beyond both their range of communications and abilities. In this way, the opening lines of Chapter 41 sum up the crew's predicament: "Rosie has stalled. And the people inside her, likewise" (Carey Location 3255). The knowledge of the "hungry" children has altered the original mission of the crew and at the same time confirms that their tenuous bonds are starting to disintegrate with each individual contemplating their own survival. Adding to the charged situation is Dr. Khan who is emotionally distraught because her baby's father, John Sealey, is dead and she was also injured in the fray. The combination of high levels of embedded sentiment that capture these many emotions results in highly intensive narrative feelings that generates a complex response to the crew's state of disarray.

The last two sections I investigated, Chapters 14 and 41, were parts of the text that I went back to look at more closely as a result of my scaled readings. But I did not miss these chapter sections in my close readings. Rather, my close readings focused around Greaves's character and representation of his neuroatypical characteristics—to best show how they both conform to and break away from societal expectations creating mistrust between him and the neurotypical members of the Rosie crew during their journey to find a cure for the *Cordyceps* fungus. The

sections that I discussed in this chapter, however, reveal more about Greaves from different interactions. And furthermore, they provide context about the troubles faced by the Rosie crew which intertwine into Greaves's development and growth of knowledge about the cure that he ultimately chooses to hide. The combination of close readings and scaled readings from the novel blend together to show a more complex picture of Greaves to indicate alternate moments to consider when investigating his character. And the full narrative arc is necessary for him to reach and make the sacrifice of his own humanity for a potential better future with and for the children. Yet the multiple sections about his character illuminate the journey he undertakes of development through knowledge and human/non-human connections to make a sacrifice that transcends his limitations as human. While in the end Greaves makes the hard decision of empowering an alternate version of life, his journey reinscribes and brings to the forefront the importance of neuroatypical value and perspective. Because only through accepting diversity can a better human race be enabled and empowered to embrace neurodiversity.

As previously mentioned, investigating by chapter provides a better interpretation of how an author uses embedded sentiment to generate narrative feeling. But this approach also needs to be considered in the context of the 500-word segments as to not let the chapters disproportionally skew the interpretations. In the second chapter of this dissertation, I looked at quotes from *The Boy on the Bridge* that occurred in the following sections, listed in the order they appeared in my close reading and identified for scaled readings by chapter and 500-word interval segment: Chapter 9 / Segment 39; Chapter 15 / Segment 67-68; Chapter 17 / Segment 75; Chapter 60 / Segment 226. I now further look to how the segments provide more context to the discussion I have started about the chapters through scaled readings. The first section to investigate is Segment 39 with a positive net sentiment score of 8 (and the preceding and following segments

are positive as well). In particular, Segment 39 captures the reflective joy that Greaves feels when revisiting his memories that encompass the development of his friendship with Dr. Rina Khan. Snippets emerge from when they met while fleeing towards Beacon and follow with Rina becoming the maternal figure in his life, a "semantic substitution" in his mind for his mother who died while trying to reach Beacon. Accordingly, this section encapsulates a positive moment amidst a plethora of negativity within the zombie post-apocalypse landscape as it highlights the happy moments that have significant power over memories of death and loss. Additionally, this segment captures a key aspect in which the stereotypes that often create a neurotypical and neuroatypical divide become challenged when the autistic character articulates pleasure from fictional stories and human connection. All too often, autistics are seen through stereotypes perpetuated throughout popular culture as emotionless and lacking empathy. In the cycle of mass consumption, these beliefs are taken as truth, often without questioning their accuracy. While there are certainly some autistic individuals who do not visibly show emotion and empathy, that does not mean they lack these qualities but rather that they experience and articulate them differently. In the case of Greaves, he does not outwardly display many feelings or emotions yet his introspective reflections clash against these lacking stereotypes which troubles the predominantly ablenormative view. Thus, the positivity in the moment of Greaves pleasure points to a re-imagining of what autistic pleasure already always has been—uniquely diverse and not all that different from neurotypical constructions.

Switching over to Segments 67-68 reveals a measurement in the net sentiment scores of 1 and -7 respectively. While the quote from my close reading does straddle the two segments, it largely falls within Segment 68 which is more negatively focused. This later segment aligns with Greaves's reflection on the team and Beacon as a whole when he articulates how they are unable

to see his diverse perspective that engages differently from the neurotypical norm. Additionally, the segment continues into the beginning paragraphs of Chapter 16 in which the Rosie team is preparing for their mission to explore the small town of Invercrae. As this part captures Greaves reflections on his near-death experience when his custom-made suit failed to mask him from the gaze of the "hungry" children along with the team's inability to appreciate his perspective, it is understandably more negative than positive. And the descriptions of the events aligns to the negativity which arises from the words such as "wariness," "mistrust," "dislike," "frightening," and "scared"—all of these words indicate how the balance is shifting within Greaves, just as it is tipping within the team, just as it is twisting out of control in Beacon. Yet, if anything, Greaves transcends the negativity as his main engagement is through the affective gestures of observation that does not need an outwardly displayed emotion to touch and feel in a situation. And importantly, as discussed before, he does touch and feel deeply even without direct contact to reinforce his connections to the world. This places Greaves in a similar situation to Don from *The Rosie Project*, as neither character is overwhelmed by their processing of emotions to make errors of logic in their decisions, the very errors that typically plague neurotypical engagements with emotion.

Looking next to Segment 75 reveals another negative score of -7 from the net sentiment. And as this segment includes the closing sentences of Chapter 16 as well as the beginning part of Chapter 17, it captures the continuation from mission planning to mission execution of the team's exploration through the town of Invercrae. The segment overall is negative, but the decision for Greaves to stray away from the plan is marked with positivity that arises from the words "strongest" and "passion." Thus, Greaves decision to not let his emotional connections with his fellow crew members interfere with finding vitally important logical solutions is in fact

positive even though neurotypical society would condemn his different processing of emotions as lacking feeling. And the freeing feeling he experiences with being beyond the direct contact of the team creates pleasure because in the moment "he pauses now to savour that feeling" as "privacy and anonymity appeal to him strongly." While this could be read as a diminished or missing connection, for Greaves it indicates that he is finally able to utilize his many senses when he is not overwhelmed through neurotypically created sensory overload. He can in fact be a better teammate through his different sensory presence that allows him to feel strongly through affective gestures. Thus, his character points towards a reversal in which it is shown that emotions can lead to negative choices while logical solutions provide more positive outcomes. Accordingly, the supposed minimized or missing emotional processing attributed to autistic individuals actually points to a potentially greater strength, as they are not adversely inclined to make poor choices that are tainted by engagement with touching and feeling too much emotion.

The last segment I initially investigated was 226, which occurs near the end of the novel and measures a net sentiment score of -13. The preceding two sections are even more negative and the following five sections are also negative but not as intensely. As the segment captures Greaves human death with his transition to a "hungry," a consequence of his decision to let the "hungry" children take his "humanity" and knowledge, it is captured through negatively coded words such as "plague," "fear," and "burden" to name a few. While there are a few words of positivity such as "safely" and "relief," these are in reference to Greaves's death which seems to mark them as false positives. In other words, despite their positive connotations, they are in reference to the negatively coded event of Greaves death. Yet in looking through his perspective, death is far from negative as the "safely" and "relief" allude towards when he provides the first meal for Dr. Khan's baby "hungry" boy Sam. But if this same event was re-seen through the lens

of ablenormative constructions that privilege neurotypical power, it certainly would seem to be negative. Because Greaves death marks the continuation of a slow death for the remaining uninfected human race as they have no hope of finding a cure without his knowledge. However, looking at his death through a neurodiverse lens that appreciates the beneficial blend of a variety of mental constructions, it marks a logical step to lead towards a more positive future that still holds the potential for productive change. This can clearly be seen through his thoughts in which he comes to the logical conclusion that the children represent potential through an analogy about seeds: "It's a seed. A dead tree can stand for years or decades as it hollows out. A seed has places to be and things to do." When he later references "he's with the seeds," he is pointing towards a future that he cannot touch or feel. Not because of his neuroatypical sensory sensitivities but rather because he can never be a "hungry" child. Yet he sacrifices himself for their future which he finds represents a better version of "humanity"—a version that understands difference and works together rather than apart. Greaves death posits an enigma and challenge. The reader might be influenced by their previous knowledge to code it as negative as it marks the eventual death of the human race. But the reader may be influenced by the narrative, rethinking their positions on emotion and logic to see that there is a beneficial perspective in processing them differently, which can provide better solutions for all rather than the best solution for a limited group. Accordingly, how the reader (de)codes the affective gesture signaled through the death might reveal more about the reader than Greaves as an autistic character.

The patterns from *The Boy on the Bridge* with the darkly negative construction indicates a shift from the previous three novels I investigated. From the more negatively (but not as negatively) focused *House Rules*, to the more evenly balanced sentiment in *The Rosie Project*, and then to the patterns of positivity with growth across the chapters from *The Eagle Tree*; each

from their respective genres represents differing patterns of construction. With *The Boy on the Bridge*, there is dark negativity but from that depth emerges questions about what is negative and why it is coded through those terms. The lingering questions leave the reader with complex and not easily definable narrative feelings; and, consequently, they must interrogate their own beliefs and desires. As I finish this chapter in which I explored the affective gestures of autistic characters surrounded by neurotypical counterparts that further delves into the path of scaled readings to blend quantitative analysis with qualitative analysis, it is important to note a trend long observed across many disciplines. While binaries may be beneficial as an initial way to understand complex concepts, binaries alone are poor methods that prohibit the ability to more deeply understand multifaceted issues. I cannot use an either or binary of autism or not autism to describe the unique qualities of my two sons; both are autistic, yet each represents a different positionality from a very complex spectrum which makes up neurodiversity in the vast experience of human life. At the same time, I cannot use binaries to describe neuroatypical versus neurotypical characters—to do so would mean sacrificing the complex differences that deserve more consideration and conversation. Thus, while the positive/negative that emerges from sentiment analysis provides some great patterns to initially explore, it also reveals troubling biases within the sentiment sets that emerge from the inabilities for binaries to represent diverse concepts. Accordingly, the turn towards using affective gestures to re-see these diverse moments that need further interpretation is necessary and provides needed color to the spectrum represented through diversity. Because the highly charged and coded words provide unique insights about the embedded sentiment classifications that generate narrative feelings. And perhaps in the future rather than an either or binary, which can be misleading and cause damage, there will be a further opening to better understandings surrounding the emotional affect of

feeling and touching that does not require direct contact to connect. As the words we use every day have powerful consequences, to build towards something better we need to be in constant conversation that allows for a continuing critical inquiry into how we can all benefit from a spectrum of difference—a spectrum that brings beneficial perspectives rather than using difference as a wedge that drives us further apart.

CONCLUSION

(De)coding the Ableist Cycles in Narrative Feelings

There seem to be times when writing that world events surface into the forefront and become grafted onto narratives. As this dissertation explores the influences of society on literature and literature on society, it seems inevitable that current events would press into this critical analysis. Yet this grafting became even more prominent and pressing as I was dissertating and finishing my first draft of this document. Because at that time, the end of February 2020, the world was met with a pandemic on a scale unseen in generations that brought nearly everything we thought was "normal" and took for granted in our daily lives to a grinding halt. Businesses were shuttered with mass amounts of people being furloughed or laid off and suddenly finding themselves unemployed and out of work. Schools at all levels were temporarily closed before being permanently transitioned to an online curriculum for the foreseeable future. As an Air Force officer whose tuition was sponsored to get my academic degree, I found myself in an extremely fortunate position of having employment and not facing financial insecurity. Yet I was also in a position as a mother to two autistic sons who no longer had access to their Applied Behavioral Analysis (ABA), Speech, and Occupational therapies and Individual Education Plan (IEP) paraprofessional and therapy supports. While I was financially secure, everything else seemed to have dropped out of the bottom. I was pulled away from writing for a time to provide security for my two sons who struggled to grasp why their routine was changing and why they could not go back to school or physically be with their friends. I was thrust into new roles in order to provide them with needed and necessary instruction on their academic and

behavioral subjects—to be the conduit for them to maintain their momentum in which they could continue building upon all of the hard work they accomplished through their many years of multiple therapies. In essence, within a span of about a week I found myself as a behavioral aide, paraprofessional, and teacher—new identities and roles that suddenly overtook everything else academically, professionally, and personally in my life.

But what was perhaps even more ironic is that people were trying to make sense of the concept of social distancing, and, in the process, finding that this construct was so very different from socially constructed societal norms to which they were accustomed. Seemingly overnight, people were no longer allowed to be social in the ways that society had trained them to act. And there was anxiety and frustration over learning how to operate and function in ways that were contradictory to their way of being. People were no longer allowed to touch and be in physical contact with friends and extended family outside of the core family unit (and sometimes even within the core if there was someone infected with the pandemic inducing virus). Society was asked to operate by rules that minimized their capability to function through direct sensory inputs. In other words, society was asked to operate through more autisticly focused ways of being in order to survive and allow the medical system to not be overwhelmed by a virus that flourished in social interactions, infecting all without discrimination. But by minimizing, if not removing the face-to-face/in-person social aspects of their lives, people could have a better chance of survival. And this survival depended upon acting in autisticly focused ways of being, the same ways that are stereotyped and often diminished as lacking validity. Thus, society had to refocus their views to embrace an autistic presence, because it became a way of being that could save and preserve life.

After I adjusted to the newly established rules put into place to protect people from

contracting the virus and providing my sons with the help they continued to need as many temporary changes became more permanent, I slowly found my way back to my writing. And during the pandemic that redefined societies, I was revisiting the ideas and working through the concepts that first drew me to the mix of digital humanities along with disability studies and literary cognitive studies. As I found my writing voice again, it seemed that my research was even more urgent to highlight how important neurodiverse perspectives and ways of being are to society as a whole. Rather than trying to make everything conform, we should understand and embrace multiple modalities of being. Furthermore, the importance of using a digital humanities approach to investigate autistic characters became even more apparent. Because the affective gestures that are coded into the embedded sentiment that generate narrative feelings, strongly influence our knowledge of the world. By clearly re-seeing, and without error through machine reading, what is already in literature, we can grapple with the biases present in attempts to address the problematic structures. With the case of autistic character representations, how they are imbued with sentiment strongly influences how they are received, and this should be positively centered in order to actively promote diversity of thought and being. Thus, having these characters written through language that cherishes their ways of being which add value to society can help change the narrative and insert new knowledge into the cycle of popular culture understandings of autism. And, I would argue, autistically focused ways of being are even more crucial now as we relearn how to navigate society at close but distinctly separate distances through affective and non-touching gestures.

If anything good might emerge from the trauma the COVID-19 virus continues to bring upon society as I finish this dissertation in December 2020, it could be the acceptance and understanding of different ways of being in the world. That the neurotypical and ableist focused

social way of being is only one way to be with many of its own inherent strengths and flaws. That is not to say everything about the socially and physically connected way of being is bad or wrong, but it should be recognized as a majority and no longer privileged as the only way we should be and act. In looking to autistically focused ways of being, we can gain insight on how to navigate through the world without direct physical contact but still have very meaningful and important connections to each other. And as we continue to work through the many successes and failures of social distancing, we can better understand and see how society has been structured in socially and physically connected ways. Because if we do understand these constructs, perhaps we might truly recognize what we want to put back into the social when necessary safety measures for the virus no longer influence how we are allowed to connect and interact with each other. We might just find that autistic ways of being provide beneficial diversity that our previous neurotypically focused connections were lacking.

In thinking back over the many aspects of this dissertation, I am drawn back to one of the first scholars that pulled me into wanting to learn more about the field of disability studies with a focus on autism. Stuart Murray is a scholar, author, and father to an autistic son. His books *Representing Autism: Culture, Narrative, and Fascination* and *Autism* both strongly impacted my work. And I invoke a small but important point from his book *Autism* as I look towards the future: "Autism is frequently talked about, but it is rarely listened to" (Murray, XIII). Reflecting on the work throughout my research process, I would have to agree. As is seen in both *House Rules* and *The Boy on the Bridge* which employ various neurodiverse narration styles, it is so easy for a majority to take power and control over a smaller minority group/viewpoint. It becomes almost rhetorically expected to talk about difference but not listen to people who embody difference and action upon their needs and desires. For our society to survive and

hopefully one day better thrive, we need to look more towards returning power to the minority groups and not speak for them but rather listen and provide support. Looking more towards neuroatypical narration styles such as from *The Rosie Project* and *The Eagle Tree* provide a couple of glimpses of how things can begin to become better as we listen to the autistic characters rather than those who talk about or try and speak for them. As we move forward from this pandemic maybe we can focus less on what things should return to and more on what things should be. We should listen to a widely diverse group of people and not make them want to be different but embrace a common understanding in which differences bring value rather than tear us apart.

In listening and understanding what is already in society and what we desire in the future, we should think back to how our relationship with technology has permanently altered our engagements with the world. The machines and algorithms that we interact with constantly throughout our day has changed our neurological constructions in how we seek information and how that influences our perspectives and values. And more closely thinking about how the machine interprets the codes of the text in novels inevitably brings up further conversations about the machine and its place as a "reader." One might argue that scaled readings is less human reading and more machine reading. Yet the machine is an extension of the human mind in that the codes it "executes" to provide answers to the questions we ask of scaled readings are all framed around the instructions a human has provided. The machine provides a precise reply which unerringly picks up everything based upon those instructions given. Thus, to critique a machine for a result is to call out the problematic structures provided by the humans who generated the many different aspects of the instructional code and the society that generates these humans who hold uniquely biased beliefs:

> The further one goes along the spectrum that ends with 'machine reading,' the more one implicitly accepts the belief that large-scale multi causal events are caused by confluences that include a multitude of forces interacting simultaneously, many of which are nonhuman. One may observe that humans are notoriously egocentric, commonly perceiving themselves and their actions as the primary movers of events. If this egocentric view were accurate, it would make sense that human interpretation should rightly be primary in analyzing how events originate and develop. If events occur at a magnitude far exceeding individual actors and far surpassing the ability of humans to absorb the relevant information, however, 'machine reading' might be a first pass toward making visible patterns that human reading could then interpret. (Hayles 29)

As Hayles articulates, in our society the human is already always centered in their perceptions of the world but the machine and human are inexorably intertwined. And at this point in history, while the human has been the primary actor in coding instructions into the machine, the vast and sheer scale of data that have now accumulated has made the machine the primary or first tier interpreter of the data. Thus, we should critically analyze the instructions we have coded and what that may mean for the patterns that are generated which we in turn interpret. The machine is human and the human is machine—it is only as good as we can make ourselves as we become more enmeshed and extend into and beyond each other. And rather than accept the biased and stereotyped conceptions, we should think through how we represent ourselves and others in writing the code that will determine the future. We should find ways to make this process inclusive rather than divisive as we learn to code for difference that is not changed to fit a standard but rather respected for those unique qualities.

As I conclude this dissertation, I offer a few thoughts regarding how I see the (de)coding of embedded sentiment surrounding autistic characters following this stage of my research journey. The sentiment that lies coded within texts does contribute to narrative feelings about those texts in ways that we can pull apart through qualitative close readings and quantitative scaled readings. The qualitative close readings provide essential insight into fictional autistic characters which are further enhanced through the lens of disability studies and literary cognitive

studies. The quantitative scaled readings exponentially enhance insight about fictional autistic characters which confirm the validity of traditional methods but at the same time point towards new patterns which can be seen because of viewing a novel on a visual scale. Both qualitative and quantitative methods of readings reveal insight about narrative feelings and how the text is constructed. Sometimes these feelings generated through the words of the text reaffirm stereotypes and biases while at other times they break away from this cycle to reinscribe new meanings. Yet it is the combination of close readings and scaled readings that provide new ways of seeing texts which contribute to understanding the coded meanings of words—words that lie within the code revealed by looking at the charged sentiment within novels. Because in identifying the many patterns that are beneficial as well as those that are malicious further insight about how autistic characters are constructed reveals what might be changed to more fully and accurately represent them in the future. Thus, by looking towards the sections of readings which are ableist focused in their constructions of literature there is hope to break away from the cycles that perpetuate harm against and contribute to the silencing of neuroatypical autistic communities power and authority. Thinking through the wide-ranging and diverse fields that my research touches upon, the blend of close reading and scaled reading does provide benefit to literary analysis both with autistic characters and far beyond to even more diverse and unique groups. And while I have used scaled readings in this dissertation to discuss autistic characters, this is a method that is not limited to this specific research but has much broader applications. Because this is a method that could possibly enhance many if not most close readings through being able to step back from a text and visually interpret the patterns in ways that were previously unavailable prior to machine learning methods. And while the machine is only as perfect as the human, it can be used for more beneficial applications which reflect the potential for

development and growth towards acceptance of many methods and ways of being.

APPENDIX

APPENDIX

Scaled Reading Data Tables

Table 1: *The Rosie Project* - Sentiment by 500-Word Intervals

doc_id	index	negative	positive	net_sentiment	total_sentiment
r1.txt	1	14	16	2	30
r1.txt	2	23	19	-4	42
r1.txt	3	18	10	-8	28
r1.txt	4	11	14	3	25
r1.txt	5	21	15	-6	36
r1.txt	6	16	18	2	34
r1.txt	7	18	11	-7	29
r1.txt	8	12	16	4	28
r1.txt	9	14	14	0	28
r1.txt	10	10	13	3	23
r1.txt	11	6	12	6	18
r1.txt	12	17	11	-6	28
r1.txt	13	24	13	-11	37
r1.txt	14	9	17	8	26
r1.txt	15	18	15	-3	33
r1.txt	16	8	10	2	18
r1.txt	17	9	14	5	23
r1.txt	18	10	15	5	25
r1.txt	19	11	20	9	31
r1.txt	20	10	11	1	21
r1.txt	21	17	17	0	34
r1.txt	22	14	15	1	29
r1.txt	23	25	12	-13	37
r1.txt	24	8	16	8	24
r1.txt	25	17	8	-9	25
r1.txt	26	16	14	-2	30
r1.txt	27	20	11	-9	31
r1.txt	28	11	15	4	26

Table 1 (cont'd)

r1.txt	29	13	10	-3	23
r1.txt	30	14	17	3	31
r1.txt	31	11	16	5	27
r1.txt	32	11	15	4	26
r1.txt	33	24	15	-9	39
r1.txt	34	19	18	-1	37
r1.txt	35	8	15	7	23
r1.txt	36	7	15	8	22
r1.txt	37	8	13	5	21
r1.txt	38	16	15	-1	31
r1.txt	39	12	15	3	27
r1.txt	40	17	17	0	34
r1.txt	41	14	14	0	28
r1.txt	42	15	17	2	32
r1.txt	43	17	18	1	35
r1.txt	44	21	14	-7	35
r1.txt	45	9	9	0	18
r1.txt	46	21	7	-14	28
r1.txt	47	9	5	-4	14
r1.txt	48	22	20	-2	42
r1.txt	49	5	12	7	17
r1.txt	50	16	15	-1	31
r1.txt	51	19	8	-11	27
r1.txt	52	10	10	0	20
r1.txt	53	13	9	-4	22
r1.txt	54	14	9	-5	23
r1.txt	55	16	16	0	32
r1.txt	56	15	19	4	34
r1.txt	57	16	17	1	33
r1.txt	58	14	12	-2	26
r1.txt	59	16	17	1	33
r1.txt	60	13	17	4	30
r1.txt	61	13	10	-3	23
r1.txt	62	9	15	6	24
r1.txt	63	16	12	-4	28
r1.txt	64	13	23	10	36
r1.txt	65	12	13	1	25

Table 1 (cont'd)

r1.txt	66	18	6	-12	24
r1.txt	67	17	26	9	43
r1.txt	68	9	13	4	22
r1.txt	69	16	24	8	40
r1.txt	70	25	20	-5	45
r1.txt	71	8	14	6	22
r1.txt	72	12	12	0	24
r1.txt	73	9	19	10	28
r1.txt	74	11	13	2	24
r1.txt	75	11	10	-1	21
r1.txt	76	16	13	-3	29
r1.txt	77	17	8	-9	25
r1.txt	78	19	18	-1	37
r1.txt	79	12	11	-1	23
r1.txt	80	11	19	8	30
r1.txt	81	14	10	-4	24
r1.txt	82	20	16	-4	36
r1.txt	83	15	12	-3	27
r1.txt	84	15	9	-6	24
r1.txt	85	14	20	6	34
r1.txt	86	21	10	-11	31
r1.txt	87	22	9	-13	31
r1.txt	88	8	17	9	25
r1.txt	89	18	11	-7	29
r1.txt	90	13	5	-8	18
r1.txt	91	15	5	-10	20
r1.txt	92	8	11	3	19
r1.txt	93	5	6	1	11
r1.txt	94	25	16	-9	41
r1.txt	95	26	9	-17	35
r1.txt	96	16	11	-5	27
r1.txt	97	9	18	9	27
r1.txt	98	10	19	9	29
r1.txt	99	5	21	16	26
r1.txt	100	9	12	3	21
r1.txt	101	16	18	2	34
r1.txt	102	14	13	-1	27

Table 1 (cont'd)

r1.txt	103	6	10	4	16
r1.txt	104	9	11	2	20
r1.txt	105	11	12	1	23
r1.txt	106	11	18	7	29
r1.txt	107	12	16	4	28
r1.txt	108	8	10	2	18
r1.txt	109	12	15	3	27
r1.txt	110	14	16	2	30
r1.txt	111	10	9	-1	19
r1.txt	112	14	12	-2	26
r1.txt	113	12	10	-2	22
r1.txt	114	17	14	-3	31
r1.txt	115	16	17	1	33
r1.txt	116	16	10	-6	26
r1.txt	117	12	10	-2	22
r1.txt	118	6	18	12	24
r1.txt	119	16	12	-4	28
r1.txt	120	15	9	-6	24
r1.txt	121	21	12	-9	33
r1.txt	122	15	11	-4	26
r1.txt	123	18	12	-6	30
r1.txt	124	14	24	10	38
r1.txt	125	22	29	7	51
r1.txt	126	22	13	-9	35
r1.txt	127	22	14	-8	36
r1.txt	128	21	13	-8	34
r1.txt	129	9	15	6	24
r1.txt	130	8	19	11	27
r1.txt	131	10	15	5	25
r1.txt	132	15	14	-1	29
r1.txt	133	17	14	-3	31
r1.txt	134	24	13	-11	37
r1.txt	135	10	13	3	23
r1.txt	136	10	28	18	38
r1.txt	137	7	16	9	23
r1.txt	138	22	13	-9	35
r1.txt	139	17	13	-4	30

Table 1 (cont'd)

r1.txt	140	11	15	4	26
r1.txt	141	9	8	-1	17
r1.txt	142	16	14	-2	30
r1.txt	143	26	18	-8	44
r1.txt	144	24	10	-14	34
r1.txt	145	12	11	-1	23
r1.txt	146	8	14	6	22
r1.txt	147	13	12	-1	25
r1.txt	148	16	10	-6	26
r1.txt	149	8	8	0	16

negative	positive	net	total	
-2118	2065	-53	4183	sentiment words in the novel
			74,365	words in the novel
			149	number of 500-word interval sections in the novel

-14.21	13.86	-0.36	28.07	average number of sentiment words in every 500 words of text

-2.85	2.78	-0.07	5.62	% of words with sentiment in text

Table 2: *The Rosie Project* - Sentiment by Chapter

doc_id	index	negative	positive	net_sentiment	total_sentiment
r1.txt	1	72	62	-10	134
r1.txt	2	77	75	-2	152
r1.txt	3	55	45	-10	100
r1.txt	4	44	56	12	100
r1.txt	5	26	42	16	68
r1.txt	6	80	68	-12	148
r1.txt	7	58	48	-10	106
r1.txt	8	63	66	3	129
r1.txt	9	42	54	12	96
r1.txt	10	76	88	12	164
r1.txt	11	83	55	-28	138
r1.txt	12	56	51	-5	107
r1.txt	13	67	60	-7	127
r1.txt	14	68	71	3	139
r1.txt	15	92	95	3	187
r1.txt	16	49	61	12	110
r1.txt	17	96	102	6	198
r1.txt	18	49	48	-1	97
r1.txt	19	68	61	-7	129
r1.txt	20	67	45	-22	112
r1.txt	21	36	27	-9	63
r1.txt	22	62	31	-31	93
r1.txt	23	49	82	33	131
r1.txt	24	50	63	13	113
r1.txt	25	30	41	11	71
r1.txt	26	23	28	5	51
r1.txt	27	69	62	-7	131
r1.txt	28	38	39	1	77
r1.txt	29	86	63	-23	149
r1.txt	30	71	69	-2	140
r1.txt	31	44	52	8	96
r1.txt	32	63	52	-11	115
r1.txt	33	66	83	17	149
r1.txt	34	30	36	6	66

Table 2 (cont'd)

r1.txt	35	71	40	-31	111
r1.txt	36	42	44	2	86

negative	positive	net	total	
-2118	2065	-53	4183	sentiment words in the novel
			74,365	words in the novel
			36	number of chapters in the novel

-58.83	57.36	-1.47	116.19	average number of sentiment words in each chapter

-2.85	2.78	-0.07	5.62	% of words with sentiment in text

Table 3: *The Eagle Tree* - Sentiment by 500-Word Intervals

doc_id	index	negative	positive	net_sentiment	total_sentiment
tet.txt	1	2	8	6	10
tet.txt	2	3	12	9	15
tet.txt	3	9	5	-4	14
tet.txt	4	5	6	1	11
tet.txt	5	11	7	-4	18
tet.txt	6	11	13	2	24
tet.txt	7	8	8	0	16
tet.txt	8	6	10	4	16
tet.txt	9	11	9	-2	20
tet.txt	10	15	10	-5	25
tet.txt	11	3	7	4	10
tet.txt	12	9	10	1	19
tet.txt	13	6	7	1	13
tet.txt	14	14	10	-4	24
tet.txt	15	8	10	2	18
tet.txt	16	4	11	7	15
tet.txt	17	3	11	8	14
tet.txt	18	8	9	1	17
tet.txt	19	2	5	3	7
tet.txt	20	11	15	4	26
tet.txt	21	4	6	2	10
tet.txt	22	2	13	11	15
tet.txt	23	12	3	-9	15
tet.txt	24	7	21	14	28
tet.txt	25	6	16	10	22
tet.txt	26	6	19	13	25
tet.txt	27	6	19	13	25
tet.txt	28	2	16	14	18
tet.txt	29	4	13	9	17
tet.txt	30	8	9	1	17
tet.txt	31	10	21	11	31
tet.txt	32	11	8	-3	19
tet.txt	33	13	9	-4	22
tet.txt	34	12	14	2	26

Table 3 (cont'd)

tet.txt	35	3	22	19	25
tet.txt	36	9	9	0	18
tet.txt	37	6	18	12	24
tet.txt	38	2	22	20	24
tet.txt	39	6	12	6	18
tet.txt	40	9	18	9	27
tet.txt	41	7	15	8	22
tet.txt	42	8	4	-4	12
tet.txt	43	3	7	4	10
tet.txt	44	10	11	1	21
tet.txt	45	22	15	-7	37
tet.txt	46	8	8	0	16
tet.txt	47	13	7	-6	20
tet.txt	48	7	5	-2	12
tet.txt	49	6	3	-3	9
tet.txt	50	10	15	5	25
tet.txt	51	3	18	15	21
tet.txt	52	2	13	11	15
tet.txt	53	7	8	1	15
tet.txt	54	6	6	0	12
tet.txt	55	14	9	-5	23
tet.txt	56	5	10	5	15
tet.txt	57	2	6	4	8
tet.txt	58	21	8	-13	29
tet.txt	59	4	10	6	14
tet.txt	60	9	17	8	26
tet.txt	61	16	8	-8	24
tet.txt	62	5	12	7	17
tet.txt	63	6	9	3	15
tet.txt	64	7	7	0	14
tet.txt	65	9	9	0	18
tet.txt	66	13	5	-8	18
tet.txt	67	5	13	8	18
tet.txt	68	9	8	-1	17
tet.txt	69	7	18	11	25
tet.txt	70	16	12	-4	28
tet.txt	71	12	9	-3	21

Table 3 (cont'd)

tet.txt	72	6	15	9	21
tet.txt	73	12	4	-8	16
tet.txt	74	11	3	-8	14
tet.txt	75	17	18	1	35
tet.txt	76	17	8	-9	25
tet.txt	77	7	13	6	20
tet.txt	78	7	10	3	17
tet.txt	79	14	11	-3	25
tet.txt	80	8	11	3	19
tet.txt	81	16	7	-9	23
tet.txt	82	10	14	4	24
tet.txt	83	3	9	6	12
tet.txt	84	3	9	6	12
tet.txt	85	13	13	0	26
tet.txt	86	11	16	5	27
tet.txt	87	1	5	4	6
tet.txt	88	8	5	-3	13
tet.txt	89	13	17	4	30
tet.txt	90	17	15	-2	32
tet.txt	91	23	4	-19	27
tet.txt	92	2	12	10	14
tet.txt	93	4	10	6	14
tet.txt	94	2	15	13	17
tet.txt	95	5	12	7	17
tet.txt	96	6	8	2	14
tet.txt	97	13	6	-7	19
tet.txt	98	16	10	-6	26
tet.txt	99	8	10	2	18
tet.txt	100	22	13	-9	35
tet.txt	101	12	11	-1	23
tet.txt	102	6	14	8	20
tet.txt	103	6	16	10	22
tet.txt	104	8	15	7	23
tet.txt	105	1	6	5	7
tet.txt	106	8	5	-3	13
tet.txt	107	3	9	6	12
tet.txt	108	2	16	14	18

Table 3 (cont'd)

tet.txt	109	6	4	-2	10
tet.txt	110	4	9	5	13
tet.txt	111	6	12	6	18
tet.txt	112	4	19	15	23
tet.txt	113	10	13	3	23
tet.txt	114	6	10	4	16
tet.txt	115	11	6	-5	17
tet.txt	116	4	12	8	16
tet.txt	117	8	18	10	26
tet.txt	118	0	12	12	12
tet.txt	119	4	22	18	26
tet.txt	120	7	11	4	18
tet.txt	121	9	17	8	26
tet.txt	122	8	8	0	16
tet.txt	123	5	11	6	16
tet.txt	124	13	6	-7	19
tet.txt	125	5	14	9	19
tet.txt	126	7	12	5	19
tet.txt	127	2	4	2	6
tet.txt	128	1	6	5	7
tet.txt	129	8	7	-1	15
tet.txt	130	16	9	-7	25
tet.txt	131	9	19	10	28
tet.txt	132	16	20	4	36
tet.txt	133	8	12	4	20
tet.txt	134	7	7	0	14
tet.txt	135	9	23	14	32
tet.txt	136	7	12	5	19
tet.txt	137	7	11	4	18
tet.txt	138	7	13	6	20
tet.txt	139	7	15	8	22
tet.txt	140	8	6	-2	14
tet.txt	141	6	13	7	19
tet.txt	142	15	15	0	30
tet.txt	143	23	10	-13	33
tet.txt	144	6	13	7	19
tet.txt	145	14	16	2	30

Table 3 (cont'd)

tet.txt	146	5	16	11	21
tet.txt	147	4	21	17	25
tet.txt	148	3	12	9	15
tet.txt	149	6	20	14	26
tet.txt	150	9	15	6	24
tet.txt	151	5	7	2	12
tet.txt	152	11	12	1	23
tet.txt	153	16	9	-7	25
tet.txt	154	12	14	2	26
tet.txt	155	15	15	0	30
tet.txt	156	20	12	-8	32
tet.txt	157	23	9	-14	32
tet.txt	158	13	12	-1	25
tet.txt	159	10	14	4	24
tet.txt	160	4	3	-1	7

negative	positive	net	total	
-1349	1809	460	3158	sentiment words in the novel
			79,595	words in the novel
			160	number of 500-word interval sections in the novel

-8.43	11.31	2.88	19.74	average number of sentiment words in every 500 words of text

-1.69	2.27	0.58	3.97	% of words with sentiment in text

Table 4: *The Eagle Tree* - Sentiment by Chapter

doc_id	index	negative	positive	net _sentiment	total_sentiment
tet.txt	1	49	58	9	107
tet.txt	2	44	47	3	91
tet.txt	3	43	59	16	102
tet.txt	4	18	35	17	53
tet.txt	5	39	95	56	134
tet.txt	6	56	69	13	125
tet.txt	7	39	120	81	159
tet.txt	8	34	33	-1	67
tet.txt	9	42	26	-16	68
tet.txt	10	20	47	27	67
tet.txt	11	57	51	-6	108
tet.txt	12	34	46	12	80
tet.txt	13	84	89	5	173
tet.txt	14	63	49	-14	112
tet.txt	15	90	106	16	196
tet.txt	16	64	58	-6	122
tet.txt	17	30	56	26	86
tet.txt	18	62	56	-6	118
tet.txt	19	35	73	38	108
tet.txt	20	32	59	27	91
tet.txt	21	36	95	59	131
tet.txt	22	60	78	18	138
tet.txt	23	72	106	34	178
tet.txt	24	73	78	5	151
tet.txt	25	44	116	72	160
tet.txt	26	129	104	-25	233

Table 4 (cont'd)

negative	positive	net	total	
-1349	1809	460	3158	sentiment words in the novel
			79,595	words in the novel
			26	number of chapters in the novel
-51.88	69.58	17.69	121.46	average number of sentiment words in each chapter
-1.69	2.27	0.58	3.97	% of words with sentiment in text

Table 5: *House Rules* - Sentiment by 500-Word Intervals

doc_id	index	negative	positive	net_sentiment	total_sentiment
hr.txt	1	18	4	-14	22
hr.txt	2	15	8	-7	23
hr.txt	3	19	7	-12	26
hr.txt	4	3	11	8	14
hr.txt	5	12	14	2	26
hr.txt	6	8	12	4	20
hr.txt	7	19	6	-13	25
hr.txt	8	19	11	-8	30
hr.txt	9	12	8	-4	20
hr.txt	10	10	11	1	21
hr.txt	11	11	15	4	26
hr.txt	12	7	7	0	14
hr.txt	13	12	10	-2	22
hr.txt	14	15	12	-3	27
hr.txt	15	14	11	-3	25
hr.txt	16	17	12	-5	29
hr.txt	17	13	11	-2	24
hr.txt	18	11	17	6	28
hr.txt	19	19	13	-6	32
hr.txt	20	14	9	-5	23
hr.txt	21	14	8	-6	22
hr.txt	22	15	17	2	32
hr.txt	23	16	11	-5	27
hr.txt	24	18	8	-10	26
hr.txt	25	31	6	-25	37
hr.txt	26	14	10	-4	24
hr.txt	27	12	2	-10	14
hr.txt	28	9	7	-2	16
hr.txt	29	16	16	0	32
hr.txt	30	18	8	-10	26
hr.txt	31	14	10	-4	24
hr.txt	32	6	10	4	16
hr.txt	33	11	21	10	32
hr.txt	34	9	15	6	24

Table 5 (cont'd)

hr.txt	35	9	16	7	25
hr.txt	36	8	15	7	23
hr.txt	37	17	10	-7	27
hr.txt	38	18	15	-3	33
hr.txt	39	11	14	3	25
hr.txt	40	15	10	-5	25
hr.txt	41	13	17	4	30
hr.txt	42	14	20	6	34
hr.txt	43	6	18	12	24
hr.txt	44	13	23	10	36
hr.txt	45	13	13	0	26
hr.txt	46	14	14	0	28
hr.txt	47	10	18	8	28
hr.txt	48	6	7	1	13
hr.txt	49	15	18	3	33
hr.txt	50	17	16	-1	33
hr.txt	51	16	19	3	35
hr.txt	52	7	8	1	15
hr.txt	53	11	12	1	23
hr.txt	54	6	6	0	12
hr.txt	55	12	11	-1	23
hr.txt	56	16	6	-10	22
hr.txt	57	15	10	-5	25
hr.txt	58	17	11	-6	28
hr.txt	59	19	14	-5	33
hr.txt	60	18	16	-2	34
hr.txt	61	18	5	-13	23
hr.txt	62	14	13	-1	27
hr.txt	63	16	10	-6	26
hr.txt	64	8	12	4	20
hr.txt	65	20	3	-17	23
hr.txt	66	18	4	-14	22
hr.txt	67	10	7	-3	17
hr.txt	68	16	11	-5	27
hr.txt	69	11	14	3	25
hr.txt	70	10	12	2	22
hr.txt	71	25	13	-12	38

Table 5 (cont'd)

hr.txt	72	18	11	-7	29
hr.txt	73	10	12	2	22
hr.txt	74	11	14	3	25
hr.txt	75	11	11	0	22
hr.txt	76	10	15	5	25
hr.txt	77	13	6	-7	19
hr.txt	78	10	15	5	25
hr.txt	79	9	6	-3	15
hr.txt	80	9	6	-3	15
hr.txt	81	9	7	-2	16
hr.txt	82	10	9	-1	19
hr.txt	83	18	8	-10	26
hr.txt	84	18	12	-6	30
hr.txt	85	13	17	4	30
hr.txt	86	12	13	1	25
hr.txt	87	25	11	-14	36
hr.txt	88	10	19	9	29
hr.txt	89	12	12	0	24
hr.txt	90	10	13	3	23
hr.txt	91	13	10	-3	23
hr.txt	92	6	15	9	21
hr.txt	93	13	11	-2	24
hr.txt	94	13	16	3	29
hr.txt	95	12	6	-6	18
hr.txt	96	7	9	2	16
hr.txt	97	19	11	-8	30
hr.txt	98	11	6	-5	17
hr.txt	99	6	9	3	15
hr.txt	100	25	9	-16	34
hr.txt	101	14	8	-6	22
hr.txt	102	22	10	-12	32
hr.txt	103	7	14	7	21
hr.txt	104	12	10	-2	22
hr.txt	105	19	20	1	39
hr.txt	106	17	11	-6	28
hr.txt	107	19	10	-9	29
hr.txt	108	13	17	4	30

Table 5 (cont'd)

hr.txt	109	11	10	-1	21
hr.txt	110	16	8	-8	24
hr.txt	111	15	8	-7	23
hr.txt	112	15	17	2	32
hr.txt	113	14	15	1	29
hr.txt	114	16	17	1	33
hr.txt	115	16	9	-7	25
hr.txt	116	12	16	4	28
hr.txt	117	13	13	0	26
hr.txt	118	13	9	-4	22
hr.txt	119	12	19	7	31
hr.txt	120	15	8	-7	23
hr.txt	121	13	11	-2	24
hr.txt	122	18	8	-10	26
hr.txt	123	19	13	-6	32
hr.txt	124	10	12	2	22
hr.txt	125	9	10	1	19
hr.txt	126	15	4	-11	19
hr.txt	127	8	8	0	16
hr.txt	128	12	9	-3	21
hr.txt	129	13	10	-3	23
hr.txt	130	10	15	5	25
hr.txt	131	14	15	1	29
hr.txt	132	22	11	-11	33
hr.txt	133	7	9	2	16
hr.txt	134	13	11	-2	24
hr.txt	135	11	13	2	24
hr.txt	136	13	15	2	28
hr.txt	137	17	8	-9	25
hr.txt	138	21	13	-8	34
hr.txt	139	16	10	-6	26
hr.txt	140	9	9	0	18
hr.txt	141	11	8	-3	19
hr.txt	142	10	11	1	21
hr.txt	143	6	8	2	14
hr.txt	144	7	7	0	14
hr.txt	145	14	8	-6	22

Table 5 (cont'd)

hr.txt	146	17	9	-8	26
hr.txt	147	16	13	-3	29
hr.txt	148	13	15	2	28
hr.txt	149	14	11	-3	25
hr.txt	150	7	10	3	17
hr.txt	151	11	9	-2	20
hr.txt	152	10	7	-3	17
hr.txt	153	11	11	0	22
hr.txt	154	4	7	3	11
hr.txt	155	15	10	-5	25
hr.txt	156	12	10	-2	22
hr.txt	157	14	6	-8	20
hr.txt	158	18	18	0	36
hr.txt	159	15	17	2	32
hr.txt	160	13	15	2	28
hr.txt	161	7	11	4	18
hr.txt	162	14	17	3	31
hr.txt	163	16	9	-7	25
hr.txt	164	13	20	7	33
hr.txt	165	18	10	-8	28
hr.txt	166	26	9	-17	35
hr.txt	167	5	12	7	17
hr.txt	168	11	10	-1	21
hr.txt	169	21	6	-15	27
hr.txt	170	15	5	-10	20
hr.txt	171	24	13	-11	37
hr.txt	172	13	12	-1	25
hr.txt	173	18	6	-12	24
hr.txt	174	24	8	-16	32
hr.txt	175	11	11	0	22
hr.txt	176	12	12	0	24
hr.txt	177	11	9	-2	20
hr.txt	178	14	16	2	30
hr.txt	179	18	13	-5	31
hr.txt	180	18	16	-2	34
hr.txt	181	12	11	-1	23
hr.txt	182	13	13	0	26

Table 5 (cont'd)

hr.txt	183	19	12	-7	31
hr.txt	184	14	8	-6	22
hr.txt	185	17	14	-3	31
hr.txt	186	6	9	3	15
hr.txt	187	15	12	-3	27
hr.txt	188	18	12	-6	30
hr.txt	189	19	13	-6	32
hr.txt	190	18	15	-3	33
hr.txt	191	19	12	-7	31
hr.txt	192	14	14	0	28
hr.txt	193	12	13	1	25
hr.txt	194	16	14	-2	30
hr.txt	195	18	13	-5	31
hr.txt	196	15	6	-9	21
hr.txt	197	14	10	-4	24
hr.txt	198	15	16	1	31
hr.txt	199	18	14	-4	32
hr.txt	200	10	16	6	26
hr.txt	201	5	15	10	20
hr.txt	202	10	12	2	22
hr.txt	203	10	11	1	21
hr.txt	204	10	12	2	22
hr.txt	205	22	14	-8	36
hr.txt	206	8	3	-5	11
hr.txt	207	10	7	-3	17
hr.txt	208	7	18	11	25
hr.txt	209	10	12	2	22
hr.txt	210	20	13	-7	33
hr.txt	211	12	16	4	28
hr.txt	212	14	18	4	32
hr.txt	213	15	15	0	30
hr.txt	214	6	8	2	14
hr.txt	215	11	11	0	22
hr.txt	216	16	4	-12	20
hr.txt	217	17	9	-8	26
hr.txt	218	20	5	-15	25
hr.txt	219	21	12	-9	33

Table 5 (cont'd)

hr.txt	220	16	4	-12	20
hr.txt	221	9	8	-1	17
hr.txt	222	15	10	-5	25
hr.txt	223	15	8	-7	23
hr.txt	224	11	9	-2	20
hr.txt	225	14	11	-3	25
hr.txt	226	16	6	-10	22
hr.txt	227	21	11	-10	32
hr.txt	228	12	13	1	25
hr.txt	229	8	17	9	25
hr.txt	230	12	11	-1	23
hr.txt	231	13	11	-2	24
hr.txt	232	18	13	-5	31
hr.txt	233	7	13	6	20
hr.txt	234	8	6	-2	14
hr.txt	235	15	13	-2	28
hr.txt	236	13	13	0	26
hr.txt	237	19	14	-5	33
hr.txt	238	9	21	12	30
hr.txt	239	7	19	12	26
hr.txt	240	14	17	3	31
hr.txt	241	12	13	1	25
hr.txt	242	10	14	4	24
hr.txt	243	16	7	-9	23
hr.txt	244	14	8	-6	22
hr.txt	245	11	9	-2	20
hr.txt	246	13	13	0	26
hr.txt	247	20	6	-14	26
hr.txt	248	15	14	-1	29
hr.txt	249	15	10	-5	25
hr.txt	250	17	16	-1	33
hr.txt	251	12	17	5	29
hr.txt	252	18	7	-11	25
hr.txt	253	12	16	4	28
hr.txt	254	15	8	-7	23
hr.txt	255	12	11	-1	23
hr.txt	256	14	11	-3	25

Table 5 (cont'd)

hr.txt	257	10	8	-2	18
hr.txt	258	13	19	6	32
hr.txt	259	8	13	5	21
hr.txt	260	15	17	2	32
hr.txt	261	11	15	4	26
hr.txt	262	12	17	5	29
hr.txt	263	24	12	-12	36
hr.txt	264	14	8	-6	22
hr.txt	265	20	13	-7	33
hr.txt	266	10	19	9	29
hr.txt	267	14	21	7	35
hr.txt	268	10	17	7	27
hr.txt	269	10	10	0	20
hr.txt	270	11	4	-7	15
hr.txt	271	14	12	-2	26
hr.txt	272	10	19	9	29
hr.txt	273	13	11	-2	24
hr.txt	274	12	8	-4	20
hr.txt	275	15	6	-9	21
hr.txt	276	8	8	0	16
hr.txt	277	13	10	-3	23
hr.txt	278	21	11	-10	32
hr.txt	279	33	13	-20	46
hr.txt	280	32	16	-16	48
hr.txt	281	25	17	-8	42
hr.txt	282	5	8	3	13
hr.txt	283	8	3	-5	11
hr.txt	284	10	4	-6	14
hr.txt	285	9	8	-1	17
hr.txt	286	10	12	2	22
hr.txt	287	16	9	-7	25
hr.txt	288	14	14	0	28
hr.txt	289	5	16	11	21
hr.txt	290	12	16	4	28
hr.txt	291	9	11	2	20
hr.txt	292	18	6	-12	24
hr.txt	293	24	14	-10	38

Table 5 (cont'd)

hr.txt	294	11	13	2	24
hr.txt	295	12	16	4	28
hr.txt	296	15	8	-7	23
hr.txt	297	9	18	9	27
hr.txt	298	9	12	3	21
hr.txt	299	11	16	5	27
hr.txt	300	5	13	8	18
hr.txt	301	7	14	7	21
hr.txt	302	12	9	-3	21
hr.txt	303	6	14	8	20
hr.txt	304	15	15	0	30
hr.txt	305	10	10	0	20
hr.txt	306	13	16	3	29
hr.txt	307	18	7	-11	25
hr.txt	308	26	11	-15	37
hr.txt	309	9	11	2	20
hr.txt	310	22	9	-13	31
hr.txt	311	19	12	-7	31
hr.txt	312	21	9	-12	30
hr.txt	313	21	11	-10	32
hr.txt	314	17	11	-6	28
hr.txt	315	21	14	-7	35
hr.txt	316	9	13	4	22
hr.txt	317	18	16	-2	34
hr.txt	318	16	11	-5	27
hr.txt	319	14	11	-3	25
hr.txt	320	16	17	1	33
hr.txt	321	18	16	-2	34
hr.txt	322	9	15	6	24
hr.txt	323	15	13	-2	28
hr.txt	324	11	16	5	27
hr.txt	325	28	17	-11	45
hr.txt	326	31	10	-21	41
hr.txt	327	23	13	-10	36
hr.txt	328	20	11	-9	31
hr.txt	329	29	10	-19	39
hr.txt	330	8	18	10	26

Table 5 (cont'd)

hr.txt	331	15	10	-5	25
hr.txt	332	17	16	-1	33
hr.txt	333	16	11	-5	27
hr.txt	334	11	9	-2	20
hr.txt	335	6	13	7	19
hr.txt	336	12	19	7	31
hr.txt	337	13	11	-2	24
hr.txt	338	8	8	0	16
hr.txt	339	12	12	0	24
hr.txt	340	19	16	-3	35
hr.txt	341	29	17	-12	46
hr.txt	342	15	12	-3	27
hr.txt	343	23	5	-18	28
hr.txt	344	16	11	-5	27
hr.txt	345	9	17	8	26
hr.txt	346	12	23	11	35
hr.txt	347	12	5	-7	17
hr.txt	348	15	4	-11	19
hr.txt	349	10	11	1	21
hr.txt	350	23	6	-17	29
hr.txt	351	11	6	-5	17

negative	positive	net	total	
-4884	4089	-795	8973	sentiment words in the novel
			175,169	words in the novel
			351	number of 500-word interval sections in the novel

-13.91	11.65	-2.26	25.56	average number of sentiment words in every 500 words of text

-2.79	2.33	-0.45	5.12	% of words with sentiment in text

Table 6: *House Rules* - Sentiment by Chapter

doc_id	index	negative	positive	net_sentiment	total_sentiment
hr.txt	1	5	2	-3	7
hr.txt	2	80	59	-21	139
hr.txt	3	61	47	-14	108
hr.txt	4	131	103	-28	234
hr.txt	5	89	51	-38	140
hr.txt	6	12	8	-4	20
hr.txt	7	8	0	-8	8
hr.txt	8	83	85	2	168
hr.txt	9	21	37	16	58
hr.txt	10	56	46	-10	102
hr.txt	11	100	140	40	240
hr.txt	12	60	64	4	124
hr.txt	13	22	19	-3	41
hr.txt	14	56	33	-23	89
hr.txt	15	36	26	-10	62
hr.txt	16	9	3	-6	12
hr.txt	17	36	33	-3	69
hr.txt	18	41	7	-34	48
hr.txt	19	67	56	-11	123
hr.txt	20	41	38	-3	79
hr.txt	21	21	26	5	47
hr.txt	22	28	24	-4	52
hr.txt	23	20	15	-5	35
hr.txt	24	5	4	-1	9
hr.txt	25	52	41	-11	93
hr.txt	26	41	28	-13	69
hr.txt	27	16	20	4	36
hr.txt	28	13	18	5	31
hr.txt	29	17	18	1	35
hr.txt	30	46	50	4	96
hr.txt	31	38	28	-10	66
hr.txt	32	15	6	-9	21
hr.txt	33	46	21	-25	67
hr.txt	34	15	19	4	34

Table 6 (cont'd)

hr.txt	35	46	42	-4	88
hr.txt	36	37	34	-3	71
hr.txt	37	21	7	-14	28
hr.txt	38	26	23	-3	49
hr.txt	39	57	55	-2	112
hr.txt	40	32	35	3	67
hr.txt	41	51	34	-17	85
hr.txt	42	12	5	-7	17
hr.txt	43	39	34	-5	73
hr.txt	44	78	67	-11	145
hr.txt	45	109	89	-20	198
hr.txt	46	82	60	-22	142
hr.txt	47	66	63	-3	129
hr.txt	48	3	7	4	10
hr.txt	49	98	93	-5	191
hr.txt	50	23	23	0	46
hr.txt	51	7	4	-3	11
hr.txt	52	121	75	-46	196
hr.txt	53	71	42	-29	113
hr.txt	54	60	52	-8	112
hr.txt	55	38	33	-5	71
hr.txt	56	38	28	-10	66
hr.txt	57	57	48	-9	105
hr.txt	58	26	21	-5	47
hr.txt	59	26	18	-8	44
hr.txt	60	49	45	-4	94
hr.txt	61	16	12	-4	28
hr.txt	62	14	5	-9	19
hr.txt	63	26	23	-3	49
hr.txt	64	28	24	-4	52
hr.txt	65	42	64	22	106
hr.txt	66	100	103	3	203
hr.txt	67	68	38	-30	106
hr.txt	68	27	11	-16	38
hr.txt	69	14	6	-8	20
hr.txt	70	6	1	-5	7
hr.txt	71	13	10	-3	23

Table 6 (cont'd)

hr.txt	72	6	1	-5	7
hr.txt	73	15	15	0	30
hr.txt	74	10	3	-7	13
hr.txt	75	37	24	-13	61
hr.txt	76	36	24	-12	60
hr.txt	77	35	44	9	79
hr.txt	78	24	23	-1	47
hr.txt	79	64	74	10	138
hr.txt	80	36	49	13	85
hr.txt	81	48	31	-17	79
hr.txt	82	43	26	-17	69
hr.txt	83	56	53	-3	109
hr.txt	84	18	10	-8	28
hr.txt	85	32	29	-3	61
hr.txt	86	66	76	10	142
hr.txt	87	34	31	-3	65
hr.txt	88	20	12	-8	32
hr.txt	89	26	21	-5	47
hr.txt	90	58	70	12	128
hr.txt	91	46	48	2	94
hr.txt	92	31	20	-11	51
hr.txt	93	94	45	-49	139
hr.txt	94	42	28	-14	70
hr.txt	95	18	20	2	38
hr.txt	96	33	28	-5	61
hr.txt	97	13	26	13	39
hr.txt	98	82	64	-18	146
hr.txt	99	7	4	-3	11
hr.txt	100	19	31	12	50
hr.txt	101	59	83	24	142
hr.txt	102	60	40	-20	100
hr.txt	103	99	58	-41	157
hr.txt	104	12	5	-7	17
hr.txt	105	48	37	-11	85
hr.txt	106	68	68	0	136
hr.txt	107	30	37	7	67
hr.txt	108	101	52	-49	153

Table 6 (cont'd)

hr.txt	109	20	8	-12	28
hr.txt	110	37	32	-5	69
hr.txt	111	43	40	-3	83
hr.txt	112	10	10	0	20
hr.txt	113	27	33	6	60
hr.txt	114	22	26	4	48
hr.txt	115	74	36	-38	110
hr.txt	116	29	38	9	67
hr.txt	117	38	24	-14	62
hr.txt	118	10	11	1	21
hr.txt	119	34	12	-22	46

negative	positive	net	total	
-4884	4089	-795	8973	sentiment words in the novel
			175,169	words in the novel
			119	number of chapters in the novel

-41.04	34.36	-6.68	75.40	average number of sentiment words in each chapter

-2.79	2.33	-0.45	5.12	% of words with sentiment in text

Table 7: *The Boy on the Bridge* - Sentiment by 500-Word Intervals

doc_id	index	negative	positive	net_sentiment	total_sentiment
botb.txt	1	10	12	2	22
botb.txt	2	12	10	-2	22
botb.txt	3	12	12	0	24
botb.txt	4	5	12	7	17
botb.txt	5	15	19	4	34
botb.txt	6	15	19	4	34
botb.txt	7	10	17	7	27
botb.txt	8	21	13	-8	34
botb.txt	9	18	20	2	38
botb.txt	10	17	17	0	34
botb.txt	11	16	16	0	32
botb.txt	12	21	14	-7	35
botb.txt	13	19	5	-14	24
botb.txt	14	5	10	5	15
botb.txt	15	12	18	6	30
botb.txt	16	25	7	-18	32
botb.txt	17	22	9	-13	31
botb.txt	18	22	10	-12	32
botb.txt	19	15	7	-8	22
botb.txt	20	11	16	5	27
botb.txt	21	22	11	-11	33
botb.txt	22	21	11	-10	32
botb.txt	23	26	10	-16	36
botb.txt	24	23	19	-4	42
botb.txt	25	11	14	3	25
botb.txt	26	13	10	-3	23
botb.txt	27	23	14	-9	37
botb.txt	28	20	10	-10	30
botb.txt	29	9	9	0	18
botb.txt	30	20	6	-14	26
botb.txt	31	18	9	-9	27
botb.txt	32	17	15	-2	32
botb.txt	33	13	8	-5	21
botb.txt	34	17	6	-11	23

Table 7 (cont'd)

botb.txt	35	21	15	-6	36
botb.txt	36	11	16	5	27
botb.txt	37	13	10	-3	23
botb.txt	38	15	17	2	32
botb.txt	39	9	17	8	26
botb.txt	40	11	16	5	27
botb.txt	41	22	10	-12	32
botb.txt	42	10	17	7	27
botb.txt	43	17	9	-8	26
botb.txt	44	27	12	-15	39
botb.txt	45	15	14	-1	29
botb.txt	46	14	15	1	29
botb.txt	47	7	12	5	19
botb.txt	48	12	13	1	25
botb.txt	49	17	13	-4	30
botb.txt	50	16	18	2	34
botb.txt	51	21	16	-5	37
botb.txt	52	19	13	-6	32
botb.txt	53	20	5	-15	25
botb.txt	54	23	8	-15	31
botb.txt	55	16	7	-9	23
botb.txt	56	19	11	-8	30
botb.txt	57	19	18	-1	37
botb.txt	58	20	13	-7	33
botb.txt	59	17	9	-8	26
botb.txt	60	14	10	-4	24
botb.txt	61	12	14	2	26
botb.txt	62	15	12	-3	27
botb.txt	63	14	10	-4	24
botb.txt	64	25	16	-9	41
botb.txt	65	15	9	-6	24
botb.txt	66	14	12	-2	26
botb.txt	67	12	13	1	25
botb.txt	68	15	8	-7	23
botb.txt	69	18	13	-5	31
botb.txt	70	25	17	-8	42
botb.txt	71	17	18	1	35

Table 7 (cont'd)

botb.txt	72	19	13	-6	32
botb.txt	73	13	12	-1	25
botb.txt	74	13	14	1	27
botb.txt	75	16	9	-7	25
botb.txt	76	25	11	-14	36
botb.txt	77	21	17	-4	38
botb.txt	78	28	8	-20	36
botb.txt	79	21	14	-7	35
botb.txt	80	23	5	-18	28
botb.txt	81	17	9	-8	26
botb.txt	82	22	11	-11	33
botb.txt	83	19	11	-8	30
botb.txt	84	21	16	-5	37
botb.txt	85	16	10	-6	26
botb.txt	86	18	14	-4	32
botb.txt	87	14	13	-1	27
botb.txt	88	10	9	-1	19
botb.txt	89	28	9	-19	37
botb.txt	90	12	12	0	24
botb.txt	91	27	9	-18	36
botb.txt	92	18	8	-10	26
botb.txt	93	17	11	-6	28
botb.txt	94	20	13	-7	33
botb.txt	95	23	14	-9	37
botb.txt	96	20	10	-10	30
botb.txt	97	10	17	7	27
botb.txt	98	10	12	2	22
botb.txt	99	20	10	-10	30
botb.txt	100	17	14	-3	31
botb.txt	101	19	12	-7	31
botb.txt	102	18	8	-10	26
botb.txt	103	11	20	9	31
botb.txt	104	19	11	-8	30
botb.txt	105	9	14	5	23
botb.txt	106	15	9	-6	24
botb.txt	107	9	15	6	24
botb.txt	108	8	13	5	21

Table 7 (cont'd)

botb.txt	109	22	11	-11	33
botb.txt	110	26	9	-17	35
botb.txt	111	16	7	-9	23
botb.txt	112	21	12	-9	33
botb.txt	113	25	13	-12	38
botb.txt	114	19	12	-7	31
botb.txt	115	23	19	-4	42
botb.txt	116	17	14	-3	31
botb.txt	117	25	17	-8	42
botb.txt	118	25	14	-11	39
botb.txt	119	16	12	-4	28
botb.txt	120	14	12	-2	26
botb.txt	121	21	11	-10	32
botb.txt	122	18	12	-6	30
botb.txt	123	30	15	-15	45
botb.txt	124	14	20	6	34
botb.txt	125	13	11	-2	24
botb.txt	126	17	13	-4	30
botb.txt	127	10	9	-1	19
botb.txt	128	18	14	-4	32
botb.txt	129	10	14	4	24
botb.txt	130	13	12	-1	25
botb.txt	131	9	16	7	25
botb.txt	132	11	17	6	28
botb.txt	133	11	12	1	23
botb.txt	134	17	13	-4	30
botb.txt	135	17	10	-7	27
botb.txt	136	24	10	-14	34
botb.txt	137	15	7	-8	22
botb.txt	138	9	11	2	20
botb.txt	139	14	19	5	33
botb.txt	140	18	10	-8	28
botb.txt	141	14	8	-6	22
botb.txt	142	13	17	4	30
botb.txt	143	19	10	-9	29
botb.txt	144	18	16	-2	34
botb.txt	145	25	14	-11	39

Table 7 (cont'd)

botb.txt	146	21	8	-13	29
botb.txt	147	14	7	-7	21
botb.txt	148	10	9	-1	19
botb.txt	149	24	7	-17	31
botb.txt	150	16	8	-8	24
botb.txt	151	20	10	-10	30
botb.txt	152	19	14	-5	33
botb.txt	153	24	9	-15	33
botb.txt	154	17	10	-7	27
botb.txt	155	26	12	-14	38
botb.txt	156	18	6	-12	24
botb.txt	157	19	12	-7	31
botb.txt	158	15	10	-5	25
botb.txt	159	17	13	-4	30
botb.txt	160	21	8	-13	29
botb.txt	161	15	14	-1	29
botb.txt	162	24	11	-13	35
botb.txt	163	15	12	-3	27
botb.txt	164	21	13	-8	34
botb.txt	165	18	7	-11	25
botb.txt	166	15	14	-1	29
botb.txt	167	26	13	-13	39
botb.txt	168	11	9	-2	20
botb.txt	169	24	9	-15	33
botb.txt	170	20	10	-10	30
botb.txt	171	13	5	-8	18
botb.txt	172	15	8	-7	23
botb.txt	173	11	12	1	23
botb.txt	174	13	8	-5	21
botb.txt	175	23	8	-15	31
botb.txt	176	18	15	-3	33
botb.txt	177	13	12	-1	25
botb.txt	178	18	10	-8	28
botb.txt	179	11	13	2	24
botb.txt	180	17	13	-4	30
botb.txt	181	19	15	-4	34
botb.txt	182	10	23	13	33

Table 7 (cont'd)

botb.txt	183	17	13	-4	30
botb.txt	184	20	20	0	40
botb.txt	185	27	15	-12	42
botb.txt	186	16	8	-8	24
botb.txt	187	15	14	-1	29
botb.txt	188	18	8	-10	26
botb.txt	189	9	8	-1	17
botb.txt	190	15	10	-5	25
botb.txt	191	13	10	-3	23
botb.txt	192	17	16	-1	33
botb.txt	193	20	11	-9	31
botb.txt	194	5	15	10	20
botb.txt	195	19	12	-7	31
botb.txt	196	10	16	6	26
botb.txt	197	15	14	-1	29
botb.txt	198	16	11	-5	27
botb.txt	199	13	16	3	29
botb.txt	200	22	16	-6	38
botb.txt	201	29	9	-20	38
botb.txt	202	26	10	-16	36
botb.txt	203	10	11	1	21
botb.txt	204	24	8	-16	32
botb.txt	205	17	17	0	34
botb.txt	206	13	12	-1	25
botb.txt	207	17	10	-7	27
botb.txt	208	7	10	3	17
botb.txt	209	18	5	-13	23
botb.txt	210	13	6	-7	19
botb.txt	211	17	15	-2	32
botb.txt	212	21	9	-12	30
botb.txt	213	19	6	-13	25
botb.txt	214	23	11	-12	34
botb.txt	215	21	4	-17	25
botb.txt	216	21	7	-14	28
botb.txt	217	24	8	-16	32
botb.txt	218	16	9	-7	25
botb.txt	219	15	7	-8	22

Table 7 (cont'd)

botb.txt	220	21	13	-8	34
botb.txt	221	23	9	-14	32
botb.txt	222	7	14	7	21
botb.txt	223	18	11	-7	29
botb.txt	224	24	7	-17	31
botb.txt	225	27	11	-16	38
botb.txt	226	23	10	-13	33
botb.txt	227	18	12	-6	30
botb.txt	228	16	13	-3	29
botb.txt	229	10	9	-1	19
botb.txt	230	15	14	-1	29
botb.txt	231	16	10	-6	26
botb.txt	232	16	17	1	33
botb.txt	233	17	12	-5	29
botb.txt	234	19	13	-6	32
botb.txt	235	11	14	3	25
botb.txt	236	9	14	5	23

negative	positive	net	total	
-4035	2808	-1227	6843	sentiment words in the novel
			117,802	words in the novel
			236	number of 500-word interval sections in the novel

-17.10	11.90	-5.20	29.00	average number of sentiment words in every 500 words of text

-3.43	2.38	-1.04	5.81	% of words with sentiment in text

Table 8: *The Boy on the Bridge*: - Sentiment by Chapter

doc_id	index	negative	positive	net_sentiment	total_sentiment
botb.txt	1	69	84	15	153
botb.txt	2	10	15	5	25
botb.txt	3	13	6	-7	19
botb.txt	4	99	82	-17	181
botb.txt	5	97	58	-39	155
botb.txt	6	129	90	-39	219
botb.txt	7	120	71	-49	191
botb.txt	8	39	24	-15	63
botb.txt	9	84	88	4	172
botb.txt	10	67	46	-21	113
botb.txt	11	22	40	18	62
botb.txt	12	67	55	-12	122
botb.txt	13	64	23	-41	87
botb.txt	14	150	108	-42	258
botb.txt	15	64	46	-18	110
botb.txt	16	116	95	-21	211
botb.txt	17	39	19	-20	58
botb.txt	18	56	31	-25	87
botb.txt	19	46	17	-29	63
botb.txt	20	124	88	-36	212
botb.txt	21	51	25	-26	76
botb.txt	22	100	57	-43	157
botb.txt	23	50	37	-13	87
botb.txt	24	58	38	-20	96
botb.txt	25	39	43	4	82
botb.txt	26	45	46	1	91
botb.txt	27	45	18	-27	63
botb.txt	28	128	90	-38	218
botb.txt	29	46	25	-21	71
botb.txt	30	31	21	-10	52
botb.txt	31	85	63	-22	148
botb.txt	32	94	101	7	195
botb.txt	33	83	48	-35	131
botb.txt	34	84	76	-8	160

Table 8 (cont'd)

botb.txt	35	25	18	-7	43
botb.txt	36	35	14	-21	49
botb.txt	37	25	16	-9	41
botb.txt	38	28	11	-17	39
botb.txt	39	8	4	-4	12
botb.txt	40	32	20	-12	52
botb.txt	41	114	55	-59	169
botb.txt	42	57	35	-22	92
botb.txt	43	82	51	-31	133
botb.txt	44	80	45	-35	125
botb.txt	45	72	41	-31	113
botb.txt	46	88	63	-25	151
botb.txt	47	33	26	-7	59
botb.txt	48	45	54	9	99
botb.txt	49	34	19	-15	53
botb.txt	50	27	21	-6	48
botb.txt	51	47	29	-18	76
botb.txt	52	52	47	-5	99
botb.txt	53	28	29	1	57
botb.txt	54	33	29	-4	62
botb.txt	55	87	47	-40	134
botb.txt	56	37	21	-16	58
botb.txt	57	50	43	-7	93
botb.txt	58	77	44	-33	121
botb.txt	59	113	35	-78	148
botb.txt	60	159	86	-73	245
botb.txt	61	65	51	-14	116
botb.txt	62	88	80	-8	168

Table 8 (cont'd)

negative	positive	net	total	
-4035	2808	-1227	6843	sentiment words in the novel
			117,802	words in the novel
			62	number of chapters in the novel

negative	positive	net	total	
-65.08	45.29	-19.79	110.37	average number of sentiment words in each chapter

negative	positive	net	total	
-3.43	2.38	-1.04	5.81	% of words with sentiment in text

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